S46C

County Executive Office

Memorandum

October 25, 2006

RECEIVED
06 OCT 27 AM 8:59
CLERK OF THE BOARD
BOARD OF SUPERVISORS

To: Bill Campbell, Chairman

From: Thomas G. Mauk, County Executive Officer for

Subject: Exception to the Rule 21

The County Executive Office is requesting a supplemental for the October 31, 2006 Board Hearing Meeting

Agency: Health Care Agency
Subject: Approval of Agreement with Cerner Corporation
District All

Reason for supplemental: Contract Negotiations

Concur: Bill Campbell

Bill Campbell, Chairman
Orange County Board of Supervisors

cc: Rob Richardson
Assistant to the County Executive Officer

Agenda Item (Clerk's Use Only)

S46C

SUPPLEMENTAL AGENDA ITEM
AGENDA STAFF REPORT

ASR Control

RECEIVED
06 OCT 27 AM 9:53
CLERK OF THE BOARD
BOARD OF SUPERVISORS

MEETING DATE:

LEGAL ENTITY TAKING ACTION: Board of Supervisors

BOARD OF SUPERVISORS DISTRICT(S): All Districts

SUBMITTING AGENCY/DEPARTMENT: Health Care Agency (Pending)

DEPARTMENT CONTACT PERSON(S): David Riley, (714) 834-4422

SUBJECT: Approval of Agreement with Cerner Corporation

CEO CONCUR	COUNTY COUNSEL REVIEW	CLERK OF THE BOARD
Pending Review	Pending Review	Discussion 3 Votes Board Majority

Budgeted: Yes **Current Year Cost:** $732,951 **Annual Cost:** N/A

Staffing Impact: No **# of Positions:** **Sole Source:** No

Current Fiscal Year Revenue: N/A

Funding Source: GF: 15%, FED: 10%, State: 61%, Fees/Licenses: 14%

Prior Board Action: Minute Order dated January 24, 2006 - Approval of Price Agreement with Cerner Corporation; Minute Order dated April 18, 2006 - Approval of Amendment to Agreement with Cerner Corporation

RECOMMENDED ACTION(S)

Authorize the Purchasing Agent or designee to issue Amendment #5 to Price Agreement S4000000250 with Cerner Corporation to increase the Agreement in the amount of $732,951 for a new not to exceed amount of $4,815,005, through December 31, 2008.

SUMMARY:

The Health Care Agency requests approval of Amendment #5 to the Price Agreement with Cerner Corporation for the provision of a Health Management Information System, including professional fees for the implementation of the Clinic Scheduling and Public Health Registration systems.

BACKGROUND INFORMATION:

On January 24, 2006, your Honorable Board directed the County Executive Office (CEO) and the Health Care Agency (HCA) to negotiate professional rates with Cerner Corporation (Cerner) for the implementation of the Public Health laboratory system, the Public Health registration and scheduling systems and the Behavioral Health scheduling system. On April 18, 2006, your Board approved the establishment of a pool of 12,100 hours at $110 per hour to be provided by Cerner and approved the corresponding funding of 4,400 of those hours for the implementation of the laboratory system. The

remaining 7,700 hours would be available for the implementation of the Public Health registration and scheduling and Behavioral Health scheduling components. Currently, the laboratory implementation is on schedule and within budget.

Negotiations have been concluded for implementation of the clinic scheduling and Public Health registration systems. The proposal calls for use of 5,400 of the remaining 7,700 hours pool balance for the implementation of these components as discussed below.

Registration

Depending on the program, patient registration for the Public Health programs is currently a mix of paper forms and outdated database systems at 25 locations planned for this implementation. The proposed application will automate and standardize patient registration for these Public Health clinics. These programs provide services to immunize children, conduct health screenings and assessments, identify and refer children exposed to lead, screen children for physical and sexual abuse, and to treat persons with HIV/AIDS and tuberculosis, among others.

Cerner's registration application is currently in use in over 170 sites nation-wide, including in HCA's Behavioral Health Services Programs. Automated registration will substantially improve the collection and access of client information which will enhance the coordination of clinical care. Compliance with the Health Insurance Portability and Accountability Act (HIPAA) will be maintained with this system.

Clinic Scheduling

Across both Public Health and Behavioral Health, scheduling of client appointments is done by front office staff or directly by clinicians through methods that include paper based systems or personal computer-based systems that are not integrated. The proposed clinic scheduling application will facilitate this activity electronically using a standardized system that ensures efficient use of staff time at 25 Public Health and at 50 Behavioral Health locations planned for this implementation. The system will also reduce appointment no-show rates by implementing an automated appointment reminder system.

Cerner's scheduling application is currently in use in over 230 sites nation-wide. The clinic scheduling system will also automate productivity reports that will include information such as number of clients seen and types of services provided by each clinic, as well as by each clinician. This information will be used by management to monitor clinic operations and manage clinic staff resources.

Funding and Timeline

The County owns the software and licenses for the registration and clinic scheduling systems, therefore the amendment only includes $726,906 necessary for professional staff time and associated expenses. If this implementation is completed in less than 5,400 hours, the vendor will be paid only for actual hours worked plus 50% of the remaining hours, capped at a maximum of 500 hours or $55,000. The amendment also contains financial safeguards including a 20% withhold of each monthly payment due the contractor until the scheduling and registration modules are completed and accepted by the County. In addition, professional fee payments may be withheld if project milestones are not met due to the vendor's fault. HCA will submit regular status reports to your Board upon commencement of the project. Preliminary planning and design for this project will begin in January, 2007 and the project will be fully engaged after the completion of the laboratory system which is currently scheduled to be in April of 2007.

The next planned Integrated Records and Information System (IRIS) component after Public Health registration and scheduling and Behavioral Health scheduling is Behavioral Health Electronic Health Record (EHR). The State Department of Mental Health, as a result of the passage of the Mental Health Services Act (Proposition 63), is anticipated to release minimum standards required for counties' EHR

systems within the next few months. Funding is available through the Mental Health Services Act for the implementation of systems that meet those standards. HCA will evaluate the new requirements when they are released and assess the most effective approach to implement behavioral health electronic medical records to meet new State requirements and leverage Proposition 63 funding.

Software Upgrade

Also included in this amendment is the scheduled upgrade of a software component required for the maintenance and operation of the IRIS. The application is a monitoring tool used by HCA staff to ensure all aspects of the IRIS database including software, other sublicensed software, hardware, and interfaces are functioning efficiently and interfacing appropriately. Since the IRIS system is run on Cerner software, Cerner is uniquely qualified to perform this upgrade to ensure that its products are functioning appropriately in relationship to all other products required for the system. The cost of this upgrade is $6,045.

The Health Care Agency requests that your Board authorize the Purchasing Agent or designee to amend the Price Agreement for Health Management Information System Services with Cerner Corporation as referenced in the Recommended Action.

FINANCIAL IMPACT:

This Amendment is included in the Health Care Agency's FY 2006-07 Current Budget.

STAFFING IMPACT:

N/A

ATTACHMENT(S):

Amendment #5 to Price Agreement S4000000250 with Cerner Corporation

Amendment #5
Agreement No. S4000000250

WHEREAS, the County of Orange, hereinafter referred to as "County," and Cerner Corporation, hereinafter referred to as "Contractor," entered into Agreement S1000000250, dated December 29, 2000, as approved by the Board of Supervisors on January 23, 2001, for provision of a Health Management Information System; and

WHEREAS, this Agreement was amended September 30, 2002 as Agreement S2000000250 ("Modification 01"), June 24, 2003 as Agreement S3000000250 ("Modification 02"), January 24, 2006 as Amendment #3, Agreement S4000000250 ("Modification 03"), and April 18, 2006 as Amendment #4, Agreement S4000000250 ("Modification 04 & 05"), and

WHEREAS, each of the above-referenced documents, including all Change Orders and Arrangement Letters subsequent to the Agreement entered into between the parties, to the extent they are not inconsistent with each other or the original Agreement, constitute and are collectively referred to herein as the "Current Agreement" between County and Contractor; and

WHEREAS, the County and Contractor agree to amend the Current Agreement to make pricing modifications and purchase of additional professional services; and

WHEREAS, County and Contractor agree to amend the Current Agreement, namely Agreement No. S40000000250, by entering into this Amendment #5 to the Current Agreement and maintaining the label S4000000250 for County's business process (hereinafter "Amendment");

NOW, THEREFORE, County and Contractor mutually agree to amend the Current Agreement, S4000000250 as follows:

1. Article 2.3 is added to the Current Agreement as follows:
   "2.3 The term of this Amendment, providing for, but not limited to, implementation of additional software modules entitled 'Scheduling and Public Health Registration,' shall commence from the date of approval of said Amendment by County, through December 31, 2008. The parties do not intend, by this Amendment, to modify the provisions of Article 2.2 of Amendment #4, Agreement No. S4000000250 (Modification 04 and 05) relating to the scope of work, term, and pricing set forth therein."

2. Article 6.3 is added to the Current Agreement as follows:
   "6.3. As of the date of execution of this Amendment #5, the maximum monetary limit that County shall be obligated to pay under said Amendment shall be the sum of $732,951. The sum shall include, but not be limited to, implementation of Scheduling and Public Health Registration. The scope of professional services for implementation of Scheduling and Public Health Registration is described in Attachment I to Exhibit A, as added to the Current Agreement herein. The following list sets forth the items to be purchased during the term of this Amendment, through December 31, 2008:

a. $726,906 for the implementation of Scheduling and Public Health Registration for the period from the date of execution of this Amendment through December 31, 2008.
b. $6,045 for the upgrade of BMC Patrol, with work on said upgrade to commence following the date of execution of this Amendment through June 30, 2007.

3. County and Contractor have previously agreed to the provisions set forth in Exhibit A of the Current Agreement as they pertain to the Scheduling and Registration applications. Attachment I – Scheduling and Public Health Registration, Statement of Work, is added to the Current Agreement and incorporated into Exhibit A of the Agreement, as attached hereto and incorporated by reference.
   a. The parties agree that to the extent the terms and provisions set forth in this Attachment I to Exhibit A conflict with Exhibit A, that Attachment I shall control, and shall continue to remain in effect.
   b. The parties further agree that to the extent that the terms and conditions addressed in Exhibit A are not addressed in Attachment I, that those terms and provisions shall still control and shall continue to remain in effect.

4. Amendment #4 added Attachment I-B of Exhibit C, to the Current Agreement. Amendment #5 now adds Articles E.3.a and E.3.b. to Attachment I-B to Exhibit C of the Current Agreement as follows:

"E.3.a. As of execution of this Amendment #5, 5,400 hours from the Hours Pool shall be allocated to Scheduling and Public Health Registration. County agrees to pay Contractor for the fixed scope of professional services and associated expenses, as mutually agreed upon, in writing, in Attachment I – Scheduling and Public Health Registration, Statement of Work. Payment shall be made in accordance with the timeline and schedule as set forth in Attachment I – Scheduling and Public Health Registration, Statement of Work. The total of all payments to Contractor for the Scheduling and Public Health Registration implementation, including Contractor's expenses, shall not exceed $726,906, which sum shall be constituted as follows:

1) County shall pay Contractor, monthly in arrears, at the rate established in Article E.1 of this Attachment I-B to Exhibit C, for the actual number of hours worked upon initiation of the implementation of Scheduling and Public Health Registration, not to exceed a total of $594,000. County shall withhold twenty percent (20%) of each monthly payment ('Withhold') with final payment to be made upon Acceptance, as defined in the standards set forth in Section 5 and Section 58 of the Current Agreement, of the Scheduling and Public Health Registration modules.
2) Contractor shall submit weekly reports documenting the projected hours to be worked for the subsequent week and actual hours worked for the preceding week as required by the Scheduling and Public Health Registration, Statement of Work.
3) Contractor shall separately bill County, on a monthly basis, the actual costs incurred for travel expenses directly related to the implementation of Scheduling and Public Health Registration. In no event shall the total of all costs for travel expenses related to the implementation of Scheduling and Public Health Registration exceed $132,906, except as otherwise provided for herein. Contractor agrees to the spending guidelines for allowable expenses as specified

in Article A.1.b.i. through and including Article A.1.b.v. of Attachment I-B to Exhibit C of the Current Agreement, amended as follows: hotel room service charges may be allowed upon approval of County.

a) Items exceeding the agreed upon spending guidelines or not specified as an allowable expense shall require prior County approval.
b) Contractor will use its best efforts to manage expenses according to these spending guidelines; however, expenses may occur which may be outside Contractor's control.
c) Contractor shall provide reasonable notice to County, in writing, if Contractor anticipates that it will exceed the expense limit of $132,906. In this notice, Contractor shall specify the factual justification and business necessity causing the increased estimates in expense costs. County shall evaluate said notice and may recommend additional funding to reimburse Contractor's costs, in accordance with the Current Agreement, by submitting an amendment to the Current Agreement for consideration by the Orange County Board of Supervisors. In no event shall the County make payment in excess of the expense limit of $132,906 without further Board approval.

4) Upon Final Acceptance, if the agreed upon amount of 5,400 hours are not utilized, Contractor may invoice County for an additional payment as follows:
   a) If 1,000 or less hours remain, Contractor may invoice County for no more than one-half (1/2) the remaining hours.
   b) If more than 1,000 hours remain, Contractor may invoice County for no more than five hundred (500) hours.
5) Contractor shall be responsible for providing acceptable invoices to County for payment and obtaining prior approvals as required herein. Incomplete or incorrect invoices shall be returned to Contractor for correction. Documentation, including, but not limited to, copies of receipts, as may be required by County, in its discretion, along with the supporting invoices.
6) County shall have the right to withhold and/or delay payment to Contractor for any amounts attributable to the Scheduling and Public Health Registration implementation if there are any delays in the timeline or meeting of target milestones, specifically as they relate to Acceptance, which are due to Contractor's sole fault. Payments to Contractor (less any Withhold to the extent applicable) shall resume when Acceptance is met and County has determined that Contractor is in compliance with the Current Agreement terms; provided, however that the total of all payments shall not exceed $726,906 and Contractor shall remain obligated to meet the requirements outlined in the Attachment I – Scheduling and Public Health Registration, Statement of Work. If any delay is solely the result of County's action or inaction, and which results in additional payment due Contractor beyond $726,906, County shall authorize said additional reimbursement contingent upon approval of the County's Board of Supervisors.
7) County shall not unreasonably refuse or delay its Acceptance and shall notify Contractor in writing of the reason for non-payment.
8) The parties therefore agree that remaining hours that are credited to County, after Contractor invoices County for those remaining hours in accordance with Article E.3.a.4) above, shall be added to the Hours Pool. These hours are to be added to the approximately 2,260 hours remaining in the Hours Pool after allocation of

hours for PathNet LIS Assessment and implementation of the PathNet Laboratory Information System, and after allocation of hours for implementation of Scheduling and Public Health Registration and the upgrading of BMC Patrol software. All remaining hours, until fully utilized, shall be available to County during the term of this Amendment or any subsequent Agreement between the parties, at the discretion of County, for additional components of the system not contemplated under this Amendment #5, implementation of any system upgrades for any software already installed, and/or other project planning or support work approved by County.

E.3.b. As of execution of this Amendment #5, forty (40) hours from the Hours Pool shall be allocated to upgrading BMC Patrol software and payment for the upgrade and expenses shall be as follows:

1) County agrees to pay Contractor $4,400 upon completion and County's acceptance of the upgrade to the BMC Patrol software.
2) Contractor agrees to the spending guidelines for allowable expenses as set forth above, as contained in Article E and its amendments, set forth in Attachment I-B to Exhibit C and shall separately bill County the actual costs incurred for said expenses directly related to the upgrade. Contractor shall provide reasonable notice to County, in writing, if Contractor anticipates that it will exceed $1,645. In this notice, Contractor shall specify the factual justification and business necessity causing the increased estimates in expense costs. County shall evaluate said notice and may recommend additional funding to reimburse Contractor's costs, in accordance with the Current Agreement, by submitting an amendment to the Current Agreement for consideration by the Orange County Board of Supervisors. In no event shall the County make payment in excess of $1,645 without further Board approval."

In all other respects, the terms of the Current Agreement, not specifically changed by this Amendment #5, Agreement No. S4000000250, shall remain in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment on the dates opposite their respective signatures below:

Cerner Corporation*:

Date: 10/20/06

By: MARC G NAUGHTON

Title: Senior VP + CFO

Date: 23 OCTOBER 2006

By: MARC E. ELLIS

Title: VICE PRESIDENT & ASST SECRETARY

***If Contractor is a corporation, two (2) signatures are required: one (1) signature by the Chairman of the Board, President or any Vice President; and one (1) signature by the Secretary, any Assistant Secretary, the Chief Financial Officer, or any Assistant Treasurer.**

County of Orange:

Date:_____

By:_____

Title:_____

Approved as to Form
Orange County, California
Office of the County Counsel

DATE: October 17, 2006

BY: Christopher J. Walter

Deputy County Counsel

Registration and Scheduling Statement of Work

County of Orange, Health Care Agency

October 11, 2006

Table of Contents

1.0 Introduction and Background 3
1.1 Project Scope 3
1.2 Project Objectives and Considerations 4
1.3 Definitions 4
1.4 Current Status and System Scope
1.4.1 Registration 5
1.4.2 Scheduling 6
1.4.3 PowerChart Office (PCO) 7
2.0 Contractor Responsibilities 7
3.0 County Responsibilities 9
4.0 Project Initiation 9
5.0 Organization/Administration 10
6.0 Design, Build and Testing 12
7.0 Final Acceptance Criteria 12
8.0 Security 13
9.0 Expected Benefits 13
10.0 Hardware and Software Environment 14
Attachment I ..... 22 pages

1.0 Introduction and Background

The County of Orange Public Health Services and Behavioral Health Services Programs are two of the five service areas that make up the Health Care Agency (HCA) and collectively serve over 500,000 community patients per year (2004). HCA's ultimate client is the entire County population. While providing direct services to individual clients or patients, the Health Care Agency's primary focus is to protect and promote the health and safety of the community as a whole.

Public Health Services monitors the incidence of disease and injury in the community and develops preventative strategies to maintain and improve the health of the public. An estimated 25 Public Health locations are planned to be included in the Registration and Scheduling implementation.

Behavioral Health Services provides a client-centered system of behavioral health services for all eligible Orange County residents in need of mental health care and/or treatment for alcohol and other drug abuse. An estimated 50 Behavioral Health locations are planned to be included in the Scheduling implementation.

In addition to these clinics, both Public Health Services and Behavioral Health Services provide and/or support services in the Orange County Sheriff correctional facilities, several private hospitals and private laboratories. Most of the County locations/clinics are connected to the County HCA information technology network.

Behavioral Health Services currently uses the Millennium Registration application to register patients. This function, in conjunction with Batch Charge Entry software, allows services to be electronically entered into Charge Services and ProFit for billing. Public Health Services manually performs registration and scheduling with paper-based systems.

All electronic interfaces for both organizations are performed separately on stand-alone systems.

1.1 Project Scope

The objective of this project is to install the Millennium Registration and Scheduling in an estimated 25 Public Health Services sites and to install Scheduling in an estimated 50 County-operated Behavioral Health Services sites. In addition to Registration and Scheduling, the Millennium PowerChart Office software will be enabled for both service areas. Forms using the Millennium PowerForms software will be developed for both service areas.

Contractor will be responsible for application support, product knowledge and where necessary hands on support for the Millennium software products. County will perform the coordination, design, build activities, testing, and end-user training for the project. (See Contractor Responsibilities below)

County has conducted a requirements definition study to define the current registration and scheduling processes and forms for Public Health Services and Behavioral Health Services. These functional requirements are attached as Attachment 1.1A to this Statement of Work.

1.2 Project Objectives and Considerations

Registration and Scheduling will electronically automate the specific functions currently performed in both a paper-based and makeshift electronic processes. PowerChart Office will provide the user interface to the Scheduling system and through to the Registration system and to provide the environment for the use of PowerForms, the forms generation tool. The implementation of these software products will allow both Public Health and Behavioral Health Services to more effectively and efficiently provide the needed services to Orange County residents.

Two broad objectives bear directly on the Registration and Scheduling Systems:

1. Facilitate the quality, timeliness, and accessibility of registration and scheduling data in order to support patient care, regulatory funding and business decision processes at all County levels.

2. Allow the clinics to become more operationally efficient by streamlining procedures through effective electronic automation and the use of electronic forms instead of paper forms. To replace as many paper forms as possible in order to satisfy reporting and billing requirements, two types of patient forms (patient information and patient history) will be automated.

1.3 Definitions

The parties agree to the following terms and definitions, and to those terms and definitions that, for convenience, are set forth, elsewhere in this Statement of Work.

A. "Ad Hoc Charting" means the collection and entry of limited clinical data through PowerForms as the client is entered into the Registration application. Said clinical data is that required by County's funding sources for reporting purposes.

B. "Conversation" means a screen from the Registration application used to collect person and encounter level information to be stored in the database.
C. "Domain" means the technical environment that Contractor's code is located which varies during the implementation process (Build Domain, Test Domain, and Production Domain).
D. "Lock & Key Chain" means a type of security inside the Scheduling application to allows various areas and actions to be controlled and is separate from task level security.
E. "Organization" means a program or clinic location within the Health Care Agency (i.e., HIV Services). Within the database, an organization is used as a foundation for several key components of the core architecture, such as security.

1.4 Current Status and System Scope

1.4.1 Registration

A. Behavioral Health Services (BHS)

BHS is currently using the Millennium Registration application, which is meeting their requirements. A single registration conversation is being used to accommodate most BHS programs. A few additional conversations are used in a more limited capacity to record sensitive patient information. The registrations completed through the Registration application incorporate standard Millennium Core Security (encounter/organization). Several custom rules are effectively being used to customize data entry processes. Many user-defined fields are also used to collect clinical information, as the means for recording this data in the desired format since PowerForms is not yet available.

BHS resources on the IRIS team are trained on the design and build of the Registration application. In addition, training materials and skilled trainers are also available to facilitate in this expansion of the Millennium system. County's HCA staff resources are also available to support development of new organizations in the database, to setup security, and to make any other needed changes to the reference database.

Additional custom rules will be written to reduce the potential for input errors, to reduce required keystrokes, and to reduce the size of drop-down lists to facilitate data quality and accuracy. The County will take the lead on the custom rules and the Contractor will support standard rules from the rule library. The new Millennium Scheduling application will be integrated into the existing BHS Registration system.

B. Public Health Services (PHS)

PHS has not yet implemented the Millennium Registration application. PHS is currently using a combination of several improvised systems to accommodate data collection in order to meet reporting requirements. Staff are using paper forms and maintaining patient charts manually. Security is manually maintained by program at both the provider and facility/clinic levels based on written policies and procedures.

PHS will use the Millennium Registration application to electronically register patients. County will expand the current BHS Registration system with a simple set of registration conversations to accommodate PHS programs. County will take the lead on the design and build of these conversations.

County will be responsible for the design phase of the implementation. County will work with Contractor during the initial build phase, with Contractor training the Build team to get the implementation started. County shall request, and Contractor agrees to provide, training and/or Millennium Enterprise Registration build classes; provided, however, that County shall make any additional requests beyond the initial training(s) in consideration of the overall project plan as agreed to by both County's and Contractor's Project Managers. County has resources experienced in creating and maintaining Registration conversations.

1.4.2 <u>Scheduling</u>

Neither BHS nor PHS has implemented the Millennium Scheduling application. Client appointments are primarily scheduled using manual paper-based systems, which may vary by clinic or, in rare cases, are electronically managed through the Microsoft Outlook application. County will implement the Scheduling application for both PHS and BHS using standard best practice workflow and process, which will replace these other processes. Automated "scheduling books" set up for each BHS and PHS program will be established through the Scheduling application and will be accessible at the different locations for HCA staff to assign and modify available appointment time slots.

The version of Scheduling software installed is 8.0 or above, which supports the minimum HIPAA security requirements. Additional reference database changes may need to be designed and built to add additional security requirements that are State mandated for certain HCA programs. County may request assistance from Contractor for any such additional build activity; provided, however, that County shall make any such requests in consideration of the overall project plan as agreed to by both County's and Contractor's Project Manager. The Contractor will help the County design four

unique Lock & Key Chain for Behavioral Health Services and Public Health Services. County shall be responsible for any other refinements for security.

County will be responsible for the design phase of the implementation. County will work with Contractor during the initial build phase, with Contractor training the Build team to get the implementation started. County shall request, and Contractor agrees to provide, training, design consulting sessions, and/or Millennium Enterprise Scheduling build classes; provided, however, that County may make any additional requests beyond the initial training(s) in consideration of the overall project plan as agreed to by both County's and Contractor's Project Manager. County will be responsible for the build. In accordance with County standard practice, there will be no historical uploads for conversion.

1.4.3 PowerChart Office (PCO)

PowerChart Office and PowerForms applications are currently being used in a limited aspect in BHS to accommodate State-reporting requirements. Required reporting and billing data elements are being captured through Ad Hoc Charting and the PowerForms application for extraction and transmission of required data to the State.

County will use the PowerChart Office, PowerForms and Ad Hoc Charting applications to electronically replace the manual paper forms processes that remain currently in place for BHS and to initiate electronic forms for PHS.

County will be responsible for the design phase of the implementation and will work with Contractor on the initial Build phase and Contractor will train the HCA Build team and will assist in the implementation. County has experienced Build team resources available within HCA that are currently supporting the PowerChart Office and PowerForms applications.

2.0 Contractor Responsibilities

In accordance with Article E.3.a. of Attachment I-B to Exhibit C of the Current Agreement, as added by Amendment #5, 5,400 hours from the Hours Pool have been allocated to Scheduling and Public Health Registration implementations. Contractor shall be paid in accordance with the provisions of Amendment #5. The parties anticipate that the implementations in the targeted Public Health and Behavioral Health locations will be completed on or before December 31, 2008 or upon Final Acceptance as defined is Section 7.0 of this Statement of Work, whichever is later.

The Contractor is responsible for:

A. Providing the Scheduling and Public Health Registration functionality specified in Attachment 1.1A to this Statement of Work.

B. Ensuring its tasks, as specified in the Project Plan mutually agreed upon, in writing, between County's Project Manager and Contractor's Project Manager, are completed by the date as specified in the Project Plan, including all milestones specified therein.

C. Performing support activities that will include assistance and participation in the HCA Registration and Scheduling build activities.

D. Enabling PowerChart Office to launch the following applications via desktop icons: Scheduling Appointment Book, AdHoc Charting and Form Browser.

E. Assisting County in the development of forms using the Documentation Management tools.

F. Answering questions on the HCA data model.

G. Providing documentation as requested, move/copy activities between build/testing/production domains, and CCL report programming.

   1). Unless otherwise agreed to in writing between County's and Contractor's Project Managers, Contractor will not modify data in the production database.
   2). Contractor will assist in move/copy activities in non production domains as directed by County's Project Manager. The County will take the lead for all move/copy activity to the production domain, with technical assistance from Contractor as may be requested.

H. Participating in the design activities.

I. Providing consultation and support in the integration of the Millennium products.

J. Supporting County testing activities and troubleshoot issues.

K. Assisting in the conversion of data from existing Behavioral Health Services clinical user-defined fields in Registration to PowerChart Office.

L. Providing all required/requested training including training in the project for the Millennium software products and in training the County "Train the Trainers".

M. Providing leadership and support when requested for integration, testing, for merge planning and for implementation readiness.

N. Participating in database build reviews.

O. Assisting the County in designing four unique Lock & Key Chain for Behavioral Health Services Public Health Services.

P. Developing PowerForms for those forms specified by County and detailed in the Project Plan.

Q. Developing rules and/or writing CCL (Custom Cerner Language) reports as required by County and specified in the Project Plan to customize certain functional requirements to meet needs unique to County.

3.0 County Responsibilities

The County is responsible for providing support personnel for the design, build, testing and implementation activities. The County shall also be responsible for the logistics and planning the rolling out the implementations to the planned 25 Public Health locations and 50 Behavioral Health locations.

4.0 Project Initiation

A. Registration and Scheduling project will begin with Contractor and County project planning and organization meeting. A baseline formal Project Plan, using MS Projects will be designed by County's Project Manager, reflecting the objectives from this Statement of Work. Contractor will align its resources and capabilities, as appropriate, with the objectives of the Project Plan. All future changes will be formally documented and mutually agreed to, in writing, between the Project Managers.

B. County and Contractor will mutually finalize project responsibilities for each party.

C. County and Contractor will attend project status meetings to perform review and update to the Project Plan, including, but not limited to, projected use of the assigned 5,400 hours for the project.

    1. All changes will be formally documented and mutually agreed to in writing between the Project Managers.

2. Changes which will impact the projected hours or Contractor's associated expenses shall also be reviewed by the County Contract Officer

D. Prior to project initiation, Contractor will submit professional resumes for each assigned resource prior to engagement in any activity for County. Upon County acceptance, Contractor shall ensure engagement of the resource for the duration of the project to the extent that is reasonably possible. Should it be necessary to replace a Contractor resource, Contractor will work with the County to effect a smooth transition and minimize impact on project schedule.

5.0 Administration

A. The County Project Manager will have project oversight over this project and will be directly responsible for managing tasks that are defined as County responsibilities following the agreed upon Statement of Work.

B. The County Project Manager is the central point of contact for the County with regard to this agreement and has full responsibility for the Contractor relationship, which includes all department contact and all software projects in various stages of development. All Contractor contact with the County will be directed to the County Project Manager and/or County Contract Officer as appropriate.

C. The County Project Manager will review and approve all Contractor invoices prior to the County Contract Officer authorizing payment. The County Contract Officer shall maintain for project purposes the project financials, including projections of hours used and review and approval of all travel expense invoices and receipts in accordance with Exhibit C, Attachment I-B to the Current Agreement, as added by Amendment #4, as may be amended by Amendment #5.

D. Final payment to Contractor will be made after the County Project Manager signs off as determined by Contractor meeting acceptable criteria of County.

E. The Contractor will provide an on-site application specialist, as required by County, for design, test and implementation of the first organization as defined in Section 1.3 of this Statement of Work. County may request, and Contractor agrees to provide, additional on-site application specialist for additional organizations; provided, however, that County shall make any additional requests in consideration of the overall project plan as mutually agreed to by the Project Managers.

F. The Project Plan will include a Contractor / County agreed estimate of project schedule and staffing plans, including estimates for Contractor's staff working offsite.

G. As part of the project planning activity Contractor will provide a staffing plan to County's Project Manager to support the County's request to have an application specialist assigned for each functional area of the software for design, build, test and implementation.

H. Contractor Project Manager will submit formal documentation of hours, each week, to the County Project Manager, including those hours worked by Contractor staff off-site. The County Project Manager shall review and approve these hours and provide a copy to the County Contract Officer for hours and financial tracking.

I. If County or Contractor is dissatisfied with any team member(s), the issue will be brought to the County Project Manager and Contractor Project Manager for discussion. Contractor Project Manager and County Project Manager shall agree to replace any team member upon agreement of reasonable grounds.

J. Contractor Application Specialists will be onsite (typically Monday through Thursday) per Project Plan staffing schedule at facility located at 1729 E. 17th Street Santa Ana, CA 92706 from initiation through the completion of selected critical phases of the project to be defined in Project Plan. During off site periods Contractor will provide remote support and respond to County requests for assistance within 24 hours.

K. Contractor Project Manager will be on-site at the County location for one day per week with 24-hour remote response.

L. The Contractor will publish a formal staffing plan and provide to the County as part of the project plan activity.

M. County's Project Manager will determine Contractor's compliance with Section 2.0 of this Statement of Work and will administer formal problem documentation.

N. Contractor will participate in executive level project status meetings as scheduled by the County.

6.0 Design, Build and Testing

A. The design and build activities will begin immediately after both parties agree to the project plan. Build activities will consist of Contractor supporting County Build staff in designing Millennium Scheduling, Registration and Powerforms.

B. Each HCA organization, as defined in Section 1.3 of this Statement of Work, will follow a design, build, test and implementation process.

C. Using the test strategy document, the County will develop and publish detailed test plans. The Contractor will provide example test scripts to aid in this development. The testing to be conducted by County will be based on test scenarios with representative data that is developed by the County. The scenarios are to simulate the actual business functionality, and processes/flows to validate that the system meets business requirements detailed by the Design Validation document. The testing results will be compared to predicted results that will follow test scripts. County's subject matter experts will perform the testing.

D. All software components will be installed and tested, as an integrated system environment by the County to support design and build activities. Individual test plans will be developed for each organizational unit. The testing results will be compared to predicted results that will follow test scripts.

E. The system test will test the functional software by module, ending with a successful end-to-end test.

F. Contractor will support County acceptance test activities.

G. During the testing process the County will record, publish and maintain a consolidated problem status report identifying problems and the status.

7.0 Final Acceptance Criteria

A. Contractor's role in the implementation of the Registration and Scheduling products may be deemed complete by County after successful implementation and acceptance of these modules, with all functional requirements available as specified in Attachment 1.1A to this Statement of Work, in the planned Public Health Services sites and successful implementation of the scheduling module in the planned Behavioral Health Services sites in accordance the Project Plan and with Articles 5 and 58 of the Current Agreement.

B. All Contractor training, and train-the-trainer training, will be completed.

8.0 Security

A. Contractor will assist with security access features within Registration and Scheduling that allow only authorized individuals to enter, view and/or modify data.

B. County HCA network security is the responsibility of the County.

9.0 Expected Benefits

A. Registration and Scheduling will automate the numerous and inconsistent current manual and ad hoc processes across BHS and PHS into one overall comprehensive process in one enterprise system - IRIS. This is expected to increase work productivity, response time to client needs, and response time and accuracy of reporting by reducing the potential for documentation errors.

B. Registration and Scheduling will include the ability for users at the majority of the County clinics to electronically register and schedule patients through the Person Management and Scheduling applications. Additionally, remote clinic sites will be able to direct print reports developed in accordance with this Statement of Work, in batch and real time, to other printers on the network where the information may be requested/needed.

C. Registration and Scheduling will utilize the County's HCA Information Technology infrastructure for networking and communications services.

D. Registration and Scheduling software will be designed to integrate with Millennium system that the County currently has in place.

E. PowerChart Office will enable the ADHoc PowerForm tool, which in turn, facilitates the development of electronic forms. HCA currently uses numerous forms to satisfy State and internal reporting requirements. Almost all of these forms are completed manually or require that a person key in all of the data into an Excel or Word format. Automation of these forms will allow certain fields to be populated with data already existing in the system, thereby eliminating significant manual effort and potential for input errors. The electronic capturing of this data will also facilitate the transmission of various reports to external agencies, which are now processed in paper.

10.0 Hardware and Software Environment

The Registration, Scheduling and PowerChartOffice modules will run on the HCA Millennium hardware and software environment currently located at 515 N. Sycamore Street, Santa Ana, CA, which location may be subject to change at County's sole discretion.

Registration and Scheduling and associated applications will be deployed in Millennium version, 2004.01.

Attachment 1.1A: FUNCTIONAL REQUIREMENTS SPECIFICATIONS

This section outlines major expected technical capabilities of the Registration and Scheduling System. Specific functional specifications are itemized in the following segment of this document, which has been mutually completed by County and Contractor representatives. (* Assessment)

Functional Requirement Matrix – In Scope / Out of Scope Details

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
1	**ADMINISTRATION**		
1.1	Capacity to track all registrars working on an individual record by date and time	Yes	Personnel ID & time stamp is written to database and can be retrieved by PMTransactionAudit, this information is visible on PMConversation and custom CCL reports could also be written to gather this information
1.2	Authorized users will be able to change, add, subtract or program fields within the database during build and after build to accommodate all types of registrations and patients	Yes	Registration design & build team has the ability to customize PM conversations.
1.3	Provide the ability to gather data and provide information for registrations, reporting, calculations, management reports, reimbursements, billing and inquiry.	Yes	Registration design & build team has the ability to customize PM conversations.
1.4	All data files will update immediately after new or corrected information is entered so that the next authorized user accessing that data file has access to the most current data. (real time processing)	Yes	
1.5	Authorized users will have the ability to add fields to collect registration data or research data and delete or abandon fields later.	Yes	Deleting fields from PM conversations will result in the loss of historical data that was linked to those fields. If fields are no longer required, but client wants to maintain the data linked to the field, the field can be "hidden" in the conversation rather than deleted.
1.6	Allow for the retention of all data files for 5 years.	Yes	
1.7	The user will have the ability to change data element requirements and screen formats to accommodate testing changes without software code changes.	Yes	Within the parameters of the pmdbconv.exe data source
1.8	The database must allow for numerical or alpha numeric sequence instead of patient name.	Yes	
1.9	Allow numeric and text data and/or symbols in the same field.	Yes	Within the parameters of the pmdbconv.exe data source and user defined fields
1.10	Provide for CPT codes in system dictionary	Yes	
1.11	Provide full transaction logging including operation, source and operator.	Yes	With the use of PMTransactionAudit, transaction details can be viewed.
1.12	Ability to prepare user-defined daily tickler reports.	Yes	If online worklist would meet the need

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
1.13	Provide log of patient registrations by date, type, program, service and completion status.	Yes	Again, any reporting has to be done through PowerVision, PowerInsight or custom CCL
1.14	Ability to identify user-defined results and statistics and utilize for management reports.	Yes	Again, any reporting has to be done through PowerVision, PowerInsight or custom CCL
1.15	Workflow example: Patient has an in-patient encounter. After discharge, the chart is coded for billing. Patient comes in for a clinic visit. Front desk staff "arrives" patient in Cerner by logging into the Registration application, tells the patient the co-pay required for the visit and any balance due	Yes	If the co-pay was obtained from Electronic Eligibility Management (EEM) transmission or from verification of benefits and was entered into the patient registration this workflow example is possible. Per the ProFit subject matter expert (TCHAVEZ) Yes, to the specific workflow example provided.
1.16	Provide table of Referring Physicians (name, title, license number, PIN, UPIN, SSN/EIN, etc.)	Yes	From registration there are several different physician fields that can be used.
2	**CONFIDENTIALITY**		
2.1	Allow for the use of alphanumeric data other than patient name as the primary identifier.	Yes	Note: same as 1.11
3	**CUSTOMIZATION**		
3.1	Ability of authorized user to customize data entry screens. Ability for user to add, delete and define all data entry fields and specifications for multiple types of patients	Yes	
3.2	Ability to customize patient registration screens by patient type	Yes	
3.3	Ability to customize input screens for different patient types	Yes	
3.4	Ability to enter legacy patient ID into registration screen along with system generated patient ID with both being searchable.	Yes	Enter 'old' Medical Record Numbers (MRNs) in Registration
4	**DATABASE**		
4.1	Integrate relational data base into registration software	Yes	
4.2	Ability to capture legacy patient ID along with new system generated patient ID.	Yes	
5	**DESKTOP**		
5.1	Addition of outbound field mobile computing for scheduling	Yes	Cerner is available through remote and wireless capabilities. This may be constrained by hardware needs.

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
6	EASE OF USE		
6.1	Ability to enter patient information on the same data entry screen or additional screens with a maximum of one keystroke to change screens.	Yes	Tab key can be used to move from field to field in PM conversations and other hotkeys can be used for advanced single click functions.
6.2	Ability to follow-up quick entry and complete data entry utilizing one entry screen or multiple screens with one key stroke between screens to enter remaining information.	Yes	Tab key can be used to move from field to field in PM conversations and other hotkeys can be used for advanced single click functions.
6.3	Ability to return to a previous data field or screen during data entry to change earlier entries without having to re-enter the entire record.	Yes	
6.4	Ability to revive deleted registrations and encounters without having to 'redo' everything contained in the record.	Yes	"Reactivate Cancelled Encounter" conversation would meet this need.
6.5	Automatic assignment of visit specific account number.	Yes	
6.6	Automatic message displayed for required fields if information for that field is not entered.	Yes	Required fields display in yellow and a system generated message will display if required fields are not valued.
6.7	Automatically assign patient numbers to new patients.	Yes	
6.8	Automatically check for duplicate names or medical record numbers when entering a new patient.	Yes	Patient search will display duplicate names and medical record numbers
6.9	Automatically compute age based on date of birth.	Yes	"Age" field must be added to registration screens
6.10	Look-up of patient names in patient database with soundex function.	Yes	In conjunction with EMPI
6.11	Look-up of patients by name, client id, medical record number with secondary identifiers available for confirmation. (birth date, last four social, date taken, submitter, mother's maiden name etc.)	Yes	Entire SSN must be entered for that type of search. SSN searches on entire number, not just last four digits. Submitter is not available but there are several other secondary confirmation fields available.

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
6.12	Identify duplicate and redundant patient records. Permit authorized user to override, modify and accept the duplicate records.	Yes	In conjunction with EMPI. Several pieces of searching criteria including scenario based searching can be implemented before new patients are allowed to be registered.
6.13	Provide immediate feedback to the user if response is not appropriate to request.	Yes	Based on PMRules added as Start/Finish or interfield rules
6.14	Patient medical record information and patient history must be quickly accessible	Yes	Based on appropriate person searches, system will respond accordingly. This only applies to registration and scheduling information, not clinical information (medical record).
6.15	Soundex capability for patient name lookup.	Yes	In conjunction with EMPI.
6.16	Ability to use sequentially selective criteria to narrow an inquiry and find the correct record.	Yes	
6.17	Display all patients with the same last name, first name, and/or birth date and other identifiers when searching database (inquiry).	Yes	
6.18	Ability to report registrations by on-site printing, off-site printing, FAX, phone and e-mail.	Yes	Not specifically standard functionality, but can be accomplished. Printing is only supported by Cerner certified printers that are set up on the Millennium network.
6.19	Ability to find patient information and status quickly. This may include multiple methods of looking up information - patient name, patient number, date registered, client number or combination of above. Ability to inquire on any field.	Yes	Have ability to search on different fields in scheduling and registration including patient name, MRN, resource, location. These fields are limited and do not have the ability to search on "any field" through the front end.
6.20	System prompts that registration data hasn't been updated in 30 days for example, or missing social or insurance info, etc based on some rules or logic that has been set up to prompt user with alert.	Yes	This information is held in Registration Management. Work Queues are used to maintain the accuracy of registration information and can be set up several different ways to meet the organizations needs.
7	**FORMS**		
7.1	Ability to print bar-code labels, embossed cards, face sheets etc	Yes	Can print barcode labels and face sheets. Embossed cards are custom CCL.
7.2	The ability to communicate via comments on the 'face sheet' to others in the department	Yes	Standard catalog of reports is available. Anything else may require custom CCL.
7.3	Ability to print and reprint labels automatically as part of a process or on operator's request	Yes	All registration printing is set up through document routing. Once a patient meets certain requirements, the document can be printed or reprinted.

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
8	**MAINTENANCE**		
8.1	Reliable, backed up, quickly and easily restored		Related to system set up
9	**NETWORK**		
9.1	Ability to register patients, order tests, print labels and reports, inquire and receive reports through County network.	Yes	If you have access to Cerner system, you will have access to perform registration and scheduling functions.
9.2	Ability for non HCA networked sites to access Registration tool.	Yes	HCA has the ability to grant access to anyone through their Citrix security. This does not involve any interface, only accessed via the internet.
10	**PATIENT INFO**		
10.1	Ability to automatically assign medical record numbers, patient numbers and client visit record number	Yes	
10.2	Ability to define active and inactive clients(patients).	Yes	
10.3	Ability to handle an 'Alias Name' seamlessly and link it to the real patient's name. Also need the ability to link 'AKA' names.	Yes	In conjunction with EMPI.
10.4	Need a field in the database to enter a foreign country & address	Yes	
10.5	Need an actual field in the database to store Legal Guardian & Foster Parent Name & Address with Phone Information. Need to be able to customize this screen.	Yes	
10.6	Need to have a VIP or 'No Info' patient flag	Yes	
10.7	Need to have multiple fields for Emergency Contact	Yes	
10.8	User defined client database to contain: client medical record number, client name, address, multiple contact persons, physician's name, multiple phone numbers, fax number and other information. (client=patient)	Yes	

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
10.9	Allow for separate user-defined registration screens for different programs based on unique needs	Yes	
10.10	Ability to view diagnosis	Yes	Only if diagnosis is entered into a registration field in a conversation and this field is displayed on a custom face sheet/document or can be pulled into a standard report.
11	**PROVIDERS**		
11.1	Provide for registration with multiple providers	Yes	
12	**REFERRALS**		
12.1	Ability to track information on all patients referred to or from another program.	Yes	
12.2	Ability to track time of initial referral to County service response. Mandated response period by DMH	Yes	At a minimum, can recreate BHS' process with Access Log encounter.
13	**REPORTS**		
13.1	Save time, reduce staff by scheduling reports to run automatically	Yes	Reports can be printed automatically through ops jobs (automatic timers to print certain report to specified printer)
13.2	Ability for authorized user modification of report formats to accommodate new, changed, or unusual types and reports.	Yes	
13.3	Ability to send reports to multiple clients (users).	Yes	
13.4	Allow registration, verification and report generation at workstation using a minimum of keystrokes.	Yes	
13.5	Ability to display normal ranges on reports such as date, time, patient, resource and location.	Yes	
13.6	Provide cumulative reports by patient, type, date range or program	Yes	
13.7	Print additional patient reports on demand.	Yes	
13.8	Support vertical and horizontal report formatting.	Yes	
13.9	Provide user-friendly ad-hoc report generator accessing all system fields.	Yes	PM Report builder supports a limited number of fields. You do not have the ability to access "all system fields" without using custom CCL or VE.
13.10	Ad-hoc report programs can be saved and rerun.	Yes	

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
13.11	Reports can be scheduled at user-defined intervals or on demand.	Yes	opsviewscheduler.exe
13.12	Ability to download ad hoc report output to personal computer software with graphical capabilities (Excel or Access).	Yes	Can download data from Cerner and manipulate with Excel or Access if necessary.
13.13	Ability to download files to 3rd party data analysis program.	Yes	Can export information from Cerner and FTP to 3rd party.
14	**SCREENS**		
14.1	Ability to add comments to a patient record at patient registration.	Yes	
14.2	Ability to flag patient on receipt of registration that meet user defined criteria. (e.g. type, date, program)	Yes	
14.3	The database must allow user created and modifiable data entry screens, worksheets, and reports with user's choice of information that will appear.	Yes	
14.4	Provide GUI screens at all levels of system.	Yes	
14.5	Ability to use codes and keyboard for all screen functions.	Yes	Some functions require mouse click(s).
14.6	The proposed system should have on-line help available, which can be customized and maintained by HCA staff.	Yes	Rules can be added to show pop ups and helps files can be customized.
14.7	Field options will provide for default values, required fields, numeric fields only, fields with digit length requirements (zips), time and date, dollar amount, etc.	Yes	
14.8	Allow the user to label fields on screens and reports consistently with user's terminology, without program code changes.	Yes	
14.9	Drop down menus for field choices.	Yes	
14.10	Allow user to move from one function to another and back with no loss of input.	Yes	Cannot exit a conversation without saving and still retain the information. However, you can access help screens without losing information and can also access different tabs within the conversation without loss of data.

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
14.11	Ability to print any screen.	Yes	Can use "print screen" function from a workstation however, doc routing controls what documents are printed from Millennium based on HCA's parameters.
15	**SECURITY**		
15.1	Select staff at all locations should have security options to view and register patients across programs as necessary	Yes	
15.2	After original registration is final, changes must be made only by personnel with appropriate security level.	Yes	
15.3	Allow authorized personnel to add, delete and change menu, types and codes without Contractor assistance.	Yes	
15.4	Allow authorized personnel to view listing and results of registrations.	Yes	
15.5	Only selected users may add, change & delete appointments. Complete audit trails must be available for selected users who add, change & delete. Must include backup and restore capability	Yes	
15.6	Security levels for users to allow view only, add, change or delete with auditing	Yes	
15.7	Login required by user with auditing to identify errors and areas of additional training	Yes	
15.8	Accessible to authorized staff at all times	Yes	
16	**SYSTEM**		
16.1	Provide audit trail capability for version control of software modifications.	Yes	Hot key in conversation to display latest CSP.
16.2	Provide for and distinguish developmental, test and production (live) accounts, screens, databases and libraries.	Yes	Different domains (ie: Train, Cert, Prod) will need to be available.
17	**TRACKING**		
17.1	Ability to track each patient through the clinics from time of registration and scheduling. This includes time and date of registration, scheduling, visits, history, results, eligibility, reporting, billing and or discharge.	Yes	You are able to track these times through a variety of applications - ERM, ESM, EEM, ProFit, PCO. Custom report could be built to pull information from all of these applications into a single source file.

LINE	FUNCTIONAL REQUIREMENTS-REGISTRATION	CERNER FUNCTIONALITY	CERNER COMMENTS
17.2	Allow registrar to modify pre-set billing at registration	Yes	You can add/modify/remove billing information at the time of registration. TCHAVEZ: Registrar can modify billing information at any time

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
1	**ADMINISTRATION**		
1.1	Ability to flag incorrect appointments based on user defined criteria. (e.g. pregnancy test on a male)	Yes	
1.2	Integrate relational data base into schedule software	Yes	
1.3	Automatically determine the pending workload status for a specific program or resource	Yes	
1.4	Capacity of the user to print or display a list of schedules; by program, department, workstation or provider (i.e. Appointments which are scheduled by specific type and specific day of week.)	Yes	
1.5	Ancillary departments have the ability to allow or disallow the scheduling of particular appointments	Yes	
1.6	Ability to post-schedule appointments using actual date of service of a number of days previous	Yes	
1.7	View and print appointment schedules for providers (daily, weekly, monthly) in calendar format	Yes	Appointment schedules are available from the Scheduling solution
1.8	Please allow for 'double-booking' as clinicians, especially the psychiatrists view this as useful.	Yes	
2	**ADVANCED FUNCTIONALITY**		
2.1	The capability to run an audit report on the data that has been built within	Yes	
2.2	Provide audit trails when deleting	Yes	
2.3	If a record is deleted, but connected in some way to another record, the system will warn the user through the use of audit trail	Yes	If appointments are linked or are pieces of a protocol, the system will prompt the user when canceling an appointment or the series.
2.4	If a record is inactivated, but connected in some way to another record, the system will warn the user through the use of audit trail	Yes	If appointments are linked or are pieces of a protocol, the system will prompt the user when canceling an appointment or the series.
2.5	Functionality to provide the user with a list of available primary resource times to schedule a particular appointment type	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
2.6	The user will prompt the system with the appointment type, date range, time range, and valid days of the week. The list of valid times supplied by the system will take conflict-checking rules into consideration	Yes	Suggest functionality supports this.
2.7	Ability to check both primary and secondary resources for availability prior to displaying the list of valid times	Yes	
2.8	Ability to coordinate groups of appointment types into visits for purposes of finding an optimal schedule	Yes	
2.9	Alerts the user when they have scheduled an appointment with inadequate advanced notice	Yes	
2.10	Functionality to prevent appointments from being scheduled too close to current time without enough time for proper resource preparation	Yes	
2.11	Automatically check, in a client defined range, for appointment types that have been scheduled into the past or future that may conflict with those being scheduled presently	Yes	
2.12	Allow for interactions and sequencing to be determined on appointment types that are not only scheduled in the current transaction	Yes	
2.13	Automatically check for appointment types that have been duplicated by the user in the predefined range defined by the client	Yes	Is this similar to the ability to only have one mammogram a year, and if a patient is scheduled for another one within a year, the system warns you of this? If so, the answer is yes.
2.14	Allow for duplicates to be determined for appointment types that have been scheduled in different transactions	Yes	Duplicate appointment checking can support this.
2.15	Security allows you to associate specific personnel into groups that have defined privileges concerning what actions may be taken within scheduling	Yes	
2.16	Access to or from scheduling into certain resources, as well as security against performing actions on specific appointment types	Yes	
2.17	Security will determine override access to warning messages	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
2.18	Ability to create reports to be printed out as notifications for certain actions on appointment types	Yes	
2.19	Report set to print automatically to a predefined printer if an appointment is canceled for the current day	Yes	
2.20	Appointment types that may effect the result of another appointment type can be predefined in order for the system to warn against scheduling the two together (or in a sequence that would effect each other	Yes	
2.21	Sequencing to allow the system to reorder appointment types that need to be performed in a specific sequence	Yes	
2.22	When scheduling a recurring appointment, specify the days of week the appointment is to be scheduled as well as the number of instances and the system automatically builds the series of appointments	Yes	
2.23	Protocol Appointment Types can be defined to allow a user to schedule one appointment type that in turn schedules multiple appointments with predefined time ranges separating them	Yes	
2.24	Functionality when building appointment types that require specific time spans between services	Yes	
2.25	Allow for warning types and informational warning types. Warnings will alert the user of conflicts on resources, patients, and slots	Yes	
2.26	Warning types require authorization to override and informational warnings to alert the user but not halt their scheduling process	Yes	
2.27	Allow scheduler to "shuffle" the order of appointment types from slot to slot, and resource to resource	Yes	
2.28	Shuffling done without conflict checking on each move for a single day at a time. Once the shuffling process is complete, conflict checking can be done on all appointment types that were moved from their original time	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
2.29	Allow build specific rules that will be used when displaying information associated with items defined in the database, such as appointment type comments, resource roles, slot types, and so on	Yes	
2.30	Evaluate build rules to determine how appointments should be scheduled in certain circumstances	Yes	
2.31	Use block scheduling to determine a release time for when you want the slot to expire into a different slot	Yes	
2.32	Utilization reporting block scheduling	Yes	
2.33	Blocks to allow an appointment to be scheduled across multiple slots	Yes	
2.34	Allow the user to request an appointment to be scheduled by placing an order or by pressing a Request button prior to confirming the appointment. This request will be sent to Scheduling and be placed in a Request List awaiting the determination of a scheduled date and time	Yes	
2.35	An electronic work list for schedulers to pull requested appointments from in order to schedule to valid resource(s), dates and times	Yes	
2.36	Request List may receive requested orders from the ordering system or requested through the Scheduling Management application	Yes	
2.37	Functionality that will allow for appointment to be stored awaiting available time to be scheduled into	Yes	This is supported with Request List functionality.
2.38	Appointment types can be prioritized in order of urgency as well as first in	Yes	
2.39	Integration functionality to provide the ability to view history, add, and modify previously entered Allergies	Yes	
3	**CANCELLATIONS**		
3.1	Able to cancel appointment & designate a reason for cancellation.	Yes	
3.2	Capture cancellation reason for statistical reports	Yes	
3.3	Ability to capture No Shows	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
4	**CONFLICTS**		
4.1	System needs to include rule based conflict scheduling so that conflicting appointments can be identified.	Yes	
4.2	Check for conflicts from multiple resources	Yes	
5	**CONTINGENCY**		
5.1	Appointment booking audit trail in sufficient detail to allow reentry of data should the system go down and the data lost. (audit trail should save off to some other media or?)	Yes	If the system goes down the appointment will be locked along with the slot it was in. If the appointment is not placed in a slot, the information will be lost. Audit trail will be available in scheduling.
5.2	Ability to easily backup and restore data in the event of data loss	Yes	This will be done per your downtime recovery strategy.
6	**CUSTOMIZATION**		
6.1	Ability to customize input screens for different appointment types	Yes	Client has the ability to customize the questions for each appointment type. Functionality of the accept format.
7	**EASE OF USE**		
7.1	When scheduling appointment and you are almost ready to save the information and the patient changes their mind, to NOT lose all of the comments, etc when you have to go back and search for another date/time	Yes	Appointment details entered into the accept format will remain in the Work In Progress window until appointment is confirmed.
7.2	Easy change date/session process	Yes	Group session could be used here or multiple slots for a group session. These would be rescheduled.
7.3	Ability to quickly and easily switch from a single provider time slot search to a multiple provider by location search. Now the change needs to be made from a single provider search to a dept. search and the criteria info re-entered.	Yes	Multiple locations can be selected when creating an appointment. This allows the user to select the best appointment time from multiple providers across locations.
7.4	Increase productivity of schedulers in order to handle more calls more efficiently so that fewer patients get tired of waiting and hang up	Yes	
7.5	Authorized users can schedule follow up appointments easily across all programs	Yes	
7.6	Provide for scheduling with multiple providers	Yes	
7.7	View Multiple Schedules concurrently	Yes	
7.8	Schedule and show non-clinical slots for all clinics	Yes	
7.9	View patient's current appointments	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
7.10	Ability to find patient information and status quickly. This may include multiple methods of looking up information - patient name, patient number, date scheduled, client number, appointment type or combination of above. Ability to inquire on any field.	Yes	Standard fields can be searched on but this is limited. You cannot search on "any" field in the database.
7.11	Display all patients with the same last name, first name, and/or birth date and other identifiers when searching database (inquiry).	Yes	Standard fields can be searched on but this is limited. You cannot search on just any field in the database. The speed of which the criteria is returned will vary based on the qualifiers of the search
7.12	Ability to report appointments by on-site printing, off-site printing, FAX, phone and e-mail.	Yes	Appointments can be printed, faxed and emailed. Printing is only supported by Cerner certified printers that are set up on the Millennium network.
7.13	Ability to record scheduling method, date and time of appointment on patient record.	Yes	The scheduling method (ie: phone, walk-in) can be entered into the accept format when the appointment is scheduled. A custom patient itinerary can be printed which may require CCL. Typically this information is accessed from the inquiry history view for the appointment on the patient's appointment.
7.14	Soundex capability for patient name lookup.	Yes	In conjunction with EMPI.
7.15	Ability to use sequentially selective criteria to narrow an inquiry and find the correct record.	Yes	
7.16	Ability to provide special registration instructions on-line for certain types of appointments.	Yes	Registration specific information that needs to be brought to the schedulers attention at the time of booking can be set up with guidelines.
7.17	Ability to schedule appointments for all programs into one scheduling system	Yes	
7.18	View patient's current appointments	Yes	Can view patient's current appointments in the Schedule Inquiry window.
7.19	Will there be the ability to do past and future searches?	Yes	
7.20	Searches by day, client, clinician, etc....	Yes	
7.21	It would be helpful if the appointments could be in 15 minute increments.	Yes	
7.22	If applicable, please make it possible to open up multiple windows at one time so that we can look at the schedules of different clinicians at one time.	Yes	This can be accomplished by adding multiple providers to a book or bookshelf.
7.23	Will we be able to view/utilize the calendars of clinician at other clinics?	Yes	What is viewable is based on security.

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
7.24	Will we be able to block out times for trainings, meetings, and vacations so that no one can mistakenly set up an appointment for that particular date/time.	Yes	
8	**EQUIPMENT**		
8.1	Ability to schedule a piece of equipment, tech or room at the same time patient appt is scheduled	Yes	
9	**GROUPS**		
9.1	Ability to do family scheduling. Need to be able to schedule multiple siblings for appts. in the same day for the same or different provider.	Yes	Users are able to book appointments for multiple siblings as they would for multiple patients. If the user brings all of the siblings and appointment information into the Work in Progress window, he/she can then either use the appointment book or use Suggest to find openings for the different siblings for the same day.
9.2	Ability to do group scheduling. Also need to know how many slots are left in a group booking as well as when a group booking is full. The functionality that really is needed here is to be able to have a group booking such as a 'recreation therapy session	Yes	Group scheduling functionality is available.
9.3	When canceling an appt that is in a grouping/or sequencing, scheduler should be prompted to know that the entire grouping needs to be reviewed to retain order of sequence needed	Yes	This is supported for both recurring and protocol appointment scenarios.
9.4	Find open appointment times and first available appointment slots	Yes	
9.5	Ability to initiate appointment by entering a type, or selecting from a menu of types	Yes	Able to view list of appointment types.
9.6	After scheduling is completed, instructions necessary for the visit are indicated.	Yes	Use guidelines to prompt scheduler or use preps for patient's instructions.
9.7	Ability to view previous care provider assignment	Yes	Can view patient's previous appointments (resource information) through schedule inquiry.
9.8	Print appointment roster by date range	Yes	There are standard ESM reports that would encompass this.
9.9	Mark appointments as seen, cancelled, or no show	Yes	
9.10	Support searches with custom time schedules and restricted time slots.	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
9.11	Track canceled or no show appointments and generate reports	Yes	Available through reports or inquiry.
9.121	Track patient appointment history	Yes	
9.13	View patient past appointments	Yes	
9.14	Track patient attendance	Yes	Have the ability to track appointments that have been checked in, marked as no show, canceled, etc.
9.15	Ability to report No shows.	Yes	
9.16	Schedule group appointments	Yes	
9.17	Allow to schedule multiple patients into one time slot.	Yes, see comment	You can schedule multiple patients at the same time in different slots. This is how double booking is done. Patients can also be overbooked outside of a slot.
10	**HISTORY**		
10.1	Ability to search for the last time a patient had a certain type of visit/service/test, etc easily from scheduling. (like last physical or test or....)	Yes	
11	**OVERBOOKING**		
11.1	Ability to overbook provider schedule when approved	Yes	
12	**PATIENT INFO**		
12.1	System should allow comments to be entered at different levels such as Provider, Dept, Visit type.	Yes	This is supported with scheduling appointment comments.
12.2	System should allow comments to be entered at a patient level so that when scheduling a patient special instructions such as needs a wheelchair or hearing impaired contact translator can help scheduler facilitate scheduling appt appropriately.	Yes	This is supported with person comments and can be displayed on the demographics bar in the Appointment Book.
12.3	Ability to cancel a previously scheduled appointment and document the appropriate reason. Automatically credit any charge, which may have been generated at the time of scheduled appointment.	Yes	TCHAVEZ: If they cancel a scheduled appt that has already created an order and that order is a charge on order, will the cancellation of scheduled appt also cancel the order? If so, then yes, the cancelled order should auto credit the charge.
12.4	Will there be a place for notes or reminders ("financial due," "needs to see therapist," "ns/nc") in the appointment fields?	Yes	There are comment fields for basic notes. These do not include the ability to figure the UMDAP or other calculations

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
13	**PROVIDERS**		
13.1	Ability to print provider schedules by day of the week (i.e.: all Tuesdays for the next month)	Yes	
13.2	Ability to schedule (for the provider) rounds, clinic visits, ancillary services in the same session (not limited by a schedule location)	Yes	
14	**REFERRALS**		
14.1	Ability to enter referrals on line	Yes	Referring physician and other referral information can be captured with the use of accept format fields.
15	**REIMBURSEMENT**		
15.1	System needs to support coding for CPT/ICD9	Yes	Information can be captured ESM, and charging can use this coding information.
16	**REMINDERS**		
16.1	Automate appointment reminders, recall reminders (print, e-mail and phone reminders)	Yes	We have standard documents in our catalog that can be automatically sent to patients. Automated phone messaging is supported through our Rapid Call Solution and not ESM.
17	**RECURRING**		
17.1	Flag in an appointment to identify cyclical appts	Yes	A recurring appointment icon can be displayed in the slot.
17.2	Linked recurring cyclical appointments	Yes	
17.3	When an MD orders tests or procedures to be done in the future (for example: orders a f/u x-ray & pulmonary exam while the pt. is still an inpt. to be done 2 weeks after discharge), these orders should go into the scheduling queue of the ancillary/outpt.	Yes	This is orders to scheduling and is supported by a seamless workflow involving PC or PCO and ESM.
17.4	Allow authorized users to schedule additional appointments	Yes	
17.5	Ability to schedule additional appointments for a patient already present.	Yes	
17.6	Ability to schedule reoccuring appointments based on program criteria.	Yes	
17.7	Schedule recurring appointments up to 12 months	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
17.8	Capacity to flag when certain user defined values (e.g. growth index) are attained, for follow up appointments	Yes	Depending on what fields are user defined, the information entered in the accept format can display on every appointment in a recurring series.
18	**REPORTS**		
18.1	Easy report printing from Scheduling, (pt appt list, provider schedules, receipts, etc)	Yes	
18.2	View schedules by department, provider, patient, location	Yes	
18.3	Provide user with the option to display or print a report of all scheduled appointments and canceled appointments by individual patient, client or provider.	Yes	
18.4	Need a field to flag if an interpreter is required for the Parent. This flag will trigger a task list that assists in having an interpreter available as needed on specific days.	Yes	If the interpreter is scheduled as a resource for the appointment, the schedule inquiry can be used as a "task list" of all appointments requiring an interpreter for the specific day.
18.5	Ability for management to run productivity and other reports. Designated users need ablity to schedule reports to run at specific times. System needs to track scheduling data automatically from which to run management reports.	Yes	
18.6	Print appointment schedules for providers (daily, weekly, monthly) in calendar format	Yes	
18.7	Ability to cancel and reschedule a new appt as part of the same transaction	Yes	Reschedule can involve the drag-and-drop of an appointment from one slot to another within a day or the appointment can be moved back into the Work In Progress window and a new "reschedule to" date can be selected. Once an appointment is rescheduled, the appointment is canceled/removed from the previous time slot.
18.8	Can we print a search summary?	Yes	We can print limited information such as patient list for a resource but not things like all of the patients looked up in a person search.
18.9	Will we be able to print out the schedule on a daily basis? This would be useful if/when IRIS goes down.	Yes	This can be done through ops jobs or ad hoc.

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
19	**RESCHEDULE**		
19.1	When a scheduler cancels an existing appointment and reschedules in the same transaction, the appointment information, comments, etc should flow into the rescheduled appointment to save reentering the same info again	Yes	The reschedule functionality is supported with no re-entry of data.
19.2	Selected users should be allowed to edit a provider schedule on the fly	Yes	
19.3	If you have to bump patients from a provider schedule, the process should be easy, quick and rescheduling efficient (bumped appts carry all info from original)	Yes	
19.4	Ability to globally and equitably reschedule appointments for a provider who's schedule has changed	Yes	
19.5	Ability to post reoccurring appointments easily	Yes	You can schedule recurring appointments
20	**SECURITY**		
20.1	Ability to be able to view schedules, as well as the admission listing.	Yes	
20.2	Staff at all locations should have security options to view and schedule appointments for patients across programs as necessary	Yes	
20.3	Reschedule/cancel/delete by patient or provider	Yes	
20.4	Will we be able to track the identity of who last made changes to any particular appointment?	Yes	Scheduling action history information (ie: username, date/time) can be viewed in the Appointment History View.
20.5	Appointments have been inappropriately changed on our MS Outlook calendar and rarely does someone take responsibility and it is therefore difficult to correct the issue.	Yes	Appointment's history can be used to audit who has performed actions on the appointment.
20.6	Will there be differing 'privileges' as to who can make or change appointment information?	Yes	Security can be set up to restrict certain functionality and views.

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
21	**SEQUENCE**		
21.1	Need the ability to select multiple appt. types & schedule them on the same day in the appropriate sequence. For example: ability to schedule a Radiology appt. prior to the Orthopedic clinic appt. so film is ready for MD to review.	Yes	Protocol appointment types can be defined to allow the user to schedule one appointment type that in turn schedules multiple appointments with predefined time ranges separating them.
22	**TEAM**		
22.1	Multiple user access to appointments for same day at same clinic	Yes	
22.2	Allows for concurrent user input	Yes	
22.3	Allows for multiple user viewing	Yes	
22.4	Accommodate multiple users from Centralized Appointment Team concurrently scheduling appointments for multiple locations, programs and providers	Yes	
23	**TIME SLOTS**		
23.1	Conflict checking for time should allow travel time between sites/locations (set up ability)	Yes	
23.2	Freeze/thaw slots randomly regardless of schedule design/structure. Schedulers need the ability to block appointment slots from being booked & to unblock the slots at the providers request.	Yes	Slots can be removed, added or blocked. Slots can be blocked in advance and/or released (ie: "thawed") based on a specific period or "on the fly".
23.3	Visit type durations should be able to be overridden (increase/decrease) based on patient / appointment needs	Yes	
23.4	Flexibility for scheduling visit types in slots not designated for that visit type (when approved) and be able to report out actual visit type booked/scheduled	Yes	
23.5	Ability to bump appts by appointment (visit) type	Yes	Through an inquiry, a user can view appointments for a particular resource, location or person and sort by the Appointment Type column. From here, he/she can cancel (i.e.: "bump") the appointments with this particular appointment type. The appointment information is still retained after the cancellation should the appointment need to be rescheduled in the future.
23.6	Multiple Time Slot types available in which to schedule different patient and appointment types for available providers	Yes	

LINE	FUNCTIONAL REQUIREMENTS-SCHEDULING	CERNER FUNCTIONALITY	CERNER COMMENTS
23.7	Schedule appointments by type, frequency, age, last visit and eligibility	Yes	
23.8	Appointment slots need to indicate type of appointment (annual, initial, medical, physical exam, quick check, immunization only, travel immunization, Depo, Leep, Colpo, Results, etc.).	Yes	
23.9	Include individual provider calendar views by day, week, month	Yes	
23.10	Block unavailable times	Yes	
23.11	Variable time lengths for each appointment type	Yes	
23.12	Ability to create open schedule slot by provider (Officer of Day) so that crisis or on call appts can be scheduled at night for next days rotating Officer of the Day provider at each clinic site.	Yes	
23.13	Ability to create open schedule slot by location (Cottage, jail bed, group home, foster care).	Yes	
24	**TRACKING**		
24.1	Ability to enter historical patient ID next to system generated ID. Historical IDs are varied in character and formating.	Yes, ERM	Mulitple Medical Record Numbers (MRNs) can be entered in ERM.
24.2	Ability to post more than one historical patient ID.	Yes, ERM	Mulitple MRNs can be entered in ERM.
25	**WALK-IN**		
25.1	Track walk-in appointments	Yes	The scheduling method (ie: phone, walk-in) can be entered into the accept format when the appointment is scheduled.
25.2	Ability to control walk-in appts.	Yes	We can control the amount of slots that are available to be used for a resource but we can not actually control the number of patients walking in to be seen.