VERSION 5.2 10.28.2003

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Functions considered of primary importance have a dot (•) in the "Min" column, indicating that the function described by the statement represents a minimum requirement. Features considered desirable but not mandatory have a dot (•), in the "Opt" (Optional) column. The vendor should review each of these requirements against their proposed system. Where the function is provided, the vendor should indicate that capability by placing an "X" in the "Yes" column, followed by the name of the proposed software module or menu function that provides the stated capability under the <u>Module Name</u> column.

If the proposed product does not currently satisfy the requirement but will in the future, enter version number and the approximate date it will be available in the Future Version & Date column (e.g. V3.1/May 2004).

If the product does not satisfy the requirement but the vendor is aware of any third party product that does satisfy the requirement and can be interfaced with the vendor's product, enter the third-party product(s) name in the 3rd Party Provided (Name) column, <u>providing</u> that the vendor has secured an agreement from the third party vendor that the product and <u>its required interface(s) will be provided</u>. Note that the vendor submitting the proposal shall be responsible for all third party products included in the proposal.

VENDOR PROFILE

A. Company Name:	Cerner Corporation
B. Address (City, State, Zip):	2800 Rockcreek Parkway Kansas City, MO 64117
C. Contact Name:	Kevin McDonald, Advisory Client Executive
D. Contact Phone:	407-616-6318
E. Contact Fax Number:	816-571-2840
F. Contact E-mail Address:	kmcdonald@cerner.com
G. Company Web Site:	www.cerner.com
H. Annual Revenue:	\$751,852,000
I. Years in Business:	Cerner has been in business for 24 years.
J. Years Serving Community Health Care Market:	Cerner's Physician Practice software, PowerChart Office, was first released in 1997.
K. Total Current Health Care Customers:	Cerner has clients around the world. The client participation ranges from single systems to the full suite of Cerner Millennium systems. Cerner has 231 clients at 528 sites, running
	2,399 Cerner Millennium applications.
L. Total Current Community Health Center Customers:	Cerner has two community health center clients with one to many sites having installed PowerChart Office.
M. Electronic Medical Record (EMR)	PowerChart Clinical Office

Product Name(s):	
N. Largest System Installed (in terms of number of users and sites): O. Product Licensing Terms:	Cerner's largest client currently using our PowerChart Clinical Office solution has more than 4,000 users at 38 sites. This particular client has implemented PowerChart Clinical Office with PowerNote as well as our practice management solution, PowerChart Support Office.
	All aligness was Manthly Linemand Coft years
Is Maintenance Included?	All clients pay Monthly Licensed Software Support fees for the ongoing use of their Cerner software system. These fees apply only to Cerner licensed software and are not for hardware (equipment) or sublicensed software support. These monthly support fees are collected one month in advance and fund our services delivery organizations (Client Services) as well as the development of future releases and improvements to Cerner software. The Monthly Licensed Software Support fee entitles the client to continuous support, including periodic updates of the licensed software products.
Is Training Included?	Yes
P. Frequency of Upgrades	Cerner plans to introduce a new major release every 18 - 24 months. The next scheduled release is Cerner Millennium 2004.01; scheduled for Q1 2004. Installation of revisions and updates is the client's responsibility; it does not require Cerner's assistance.

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Revisions are cumulative to include any fixes, modifications and improvements. Clients are notified of these revisions via e-mail. Alternatively, the Cerner Desktop Manager can be configured to automatically "keep current" on Cerner software. When a new revision of software is placed in the repository, a PC utilizing the Desktop Manager can automatically download the new version at the time of login. Because many revision levels require schema changes, new rev levels are applied to a client's Millennium system in their entirety. Revision Updates are engineered passively, to preserve the functionality of the previous automated program interface (API) and do not introduce schema changes. The PowerChart Office Advisory Group, comprised of several PowerChart Office clients, meets on a quarterly basis. In addition, Regional User Groups are held on a quarterly basis. Cerner's User Group is called the Cerner Client Community. Membership in the Cerner Client Community is available to all Cerner clients at no charge. The Cerner Client Community serves a very important role in shaping future product development plans. The Special Interest Groups and Focus Groups within the user group concentrate on specific areas of the healthcare industry and the potential impact of current healthcare issues on the Cerner systems. These groups provide Cerner with input about future

Legend: Min = Required Opt=Optional

Q. User Groups:

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enhancements and suggestions for making our

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products even more versatile and adaptable. The Cerner Client Community is a highly motivated and functional advisory group to Cerner.

In 1998, all Cerner clients were made members of the Cerner Client Community. Prior to 1998 Cerner clients paid to receive this beneficial means of communication, however clients are now able to participate in this community free of charge. Current members include radiologists, pharmacists, physicians, information system directors, database coordinators, respiratory therapists, medical records personnel, histotechnologists, cytotechnologists, pathologists, medical technologists, radiology technologists, pharmacy technologists, nurses, and healthcare executives representing all areas of healthcare.

Regional User Groups (RUGs)

RUGs were developed to allow better communication between clients within a region to address enterprise-wide issues such as technology, Cerner's new initiatives, and regional support. This is a unique low-cost opportunity for our clients to gain knowledge on their specific topics of interest.

Each Regional User Group has a RUG chairperson, who is a Cerner client. The RUG chairperson is responsible for holding RUG meetings throughout the year and contributing articles for the Regional newsletter.

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Special Interest Groups (SIGs):

Special Interest Groups were created to promote better communication between clients within a particular domain and to address specific issues. SIGs hold meetings throughout the year at national and international conventions. SIGs may also choose to hold up to two teleconferences annually and are encouraged to communicate with their SIG constituency via list-serves on CKN throughout the year. All of these opportunities allow knowledge sharing with colleagues and enable Cerner Client Community members to stay abreast of the Company's most recent announcements and achievements.

While the Cerner Client Community is an organization independent of Cerner, we provide assistance to the group. Cerner and the users enjoy a complementary yet independent relationship. Cerner supports the user group with various administrative activities and works closely with the group to develop domain specific sessions at the Cerner Health Conference. In exchange, Cerner receives the benefits of working with an active group of users and receiving invaluable input from this group on the future direction of clinical information systems. Overall, the relationship has enjoyed great success over the years.

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	Requirement General A. The system supports both a total paperless function	Min	Opt	Yes		Future	3 rd Party
				۶	Module Name	Version (Date)	Provided (Name)
A	The system supports both a total paperless function						
	and a hybrid function, where the contents of the electronic record can be printed for inclusion in the paper chart	•		х	PowerChart Clinical Office with PowerNote		
]	The system links with a variety of digital and analog dictation systems	•		X *	PowerChart Clinical Office with PowerNote		
	is capable of linking with a variety of digital and analog interface. Interface specifics would need to be discusse				tems, for the output of	transcription sy	rstems, via
	C. The system date and time stamps all entries	•		х	PowerChart Clinical Office with PowerNote		
	The system includes automatic translation of codes to data. For example:			*			
*With a	subscription to Cerner Medical Terminology (CMT), Cern	er N	liller	nniur		anslation of co	des to data.
	• ICD-9-CM	•	_	х	PowerChart Clinical Office with PowerNote		
	• CPT (4 and 5)	•		X *	PowerChart Clinical Office with PowerNote		
*CPT-5	will be supported in the future.						
	• ICD-10	•	_		PowerChart Clinical Office with PowerNote	To be Determined*	
*ICD-10	will be available when it becomes industry standard.						
	SNOMED (II and III)	•		X *	PowerChart Clinical Office with PowerNote		
	supports SNOMED II and III for our laboratory (PathNet) logy for Cerner Millennium.	clier	nts. S	SNO	MED CT is supported a	s the broad clin	ical
	• APG	•					
	• NDC	•		Х	PowerChart Clinical Office with PowerNote/ MediSource Foundation		
]	The system includes support and regular updates for the above vocabularies.	•		X *	PowerChart Clinical Office with PowerNote		
vocabu adminis updated installa used w	subscription to the Cerner Medical Terminology (CMT), varies including DRG, ICD-9-CM, CPT-4, SNOMED CT, NIC trative and clinical terminologies for import into Cerner I in accordance with the various source organizations' dition of the update, which is available on the Cerner Know thin Cerner Millennium applications, the codes must be I The system supports local, regional, and national	C/NO Mille istrik rledç	C, N nniu outic ge No	AND im. on tin	A, LOINC, APC, HCPCS The clinical and admini- netable. Your organiza rk for download. Per th	S and ready the strative termino tion is respons	logies are ble for the

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				Vendor Capabilities				
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)	
	vocabularies, updates and enhancements			X	Office with PowerNote			
	The system supports the HIPAA Standards for Electronic Transactions	•		Х	PowerChart Clinical Office with PowerNote			
]	H. The system includes the integration of third party coding programs		•	X	PowerChart Clinical Office with PowerNote		Х	
]	The system includes extensive error checking of all user input data, including, but not limited to:	•						
	ICD-9 (Check diagnosis against gender, age, other as necessary) Chart Clinical Office with PowerNote provides Advanced			X *	PowerChart Clinical Office with PowerNote		InfoX	
happen they are	otified if the procedure and diagnosis do not match up for s, an ABN form can be printed for the patient to sign state responsible for payment. Licensing of InfoX is require sis and procedure pairs.	ting	that	he c	or she understands that	Medicare will	not pay and	
	ICD-9 procedure checking against diagnosis			^	PowerNote/Discern Expert			
	 Extensive date checking for validity as well as ensuring a valid chronological order of events (dx before treatment, scheduling after birth, etc.) 	_	_	X	PowerChart Clinical Office with PowerNote/Discern Expert			
J	The system includes an integrated standard nomenclature of clinical terms.		•	X	PowerChart Clinical Office with PowerNote			
]	The system provides sufficient storage and processing power to efficiently operate on the initial patient load plus 5% yearly growth for five (5) years without additional hardware.	•	_		*See comments			
CPU an needs of upon in provide needs, process As with the ave It is pos But it is degrada	statistics and formulas we can closely determine a num d the amount of memory needed. Using this information of your organization. Cerner's System Consultants are e formation from our clients. However, it is very important to us are as accurate as possible in order to help ensur strategic objectives, and budget. The statistics are very sing power, Cerner will work with you to a mutually satis any RDBMS, as the database increases in size over time rage amount of time necessary to access a single discressible to design the initial hardware configuration so that a not especially cost-effective to build a 'day one' data certain for longer than this, however technically possible in Demographics	n, a Coxtreint that important the date of the date of the enter	Cerne mely t the at we ortar g res d sp ata e futu that	er Sy acc star cornt an olut read leme will	ystem Consultant desigurate in hardware confitistics and other procestigure and propose a state of an error is made the ion. Its across an increasing ent increases as well. Inhancement stages car protect the users from	ins a system s igurations that ssing informati system that me at results in in number of sto	pecific for the are based fon that you ets your adequate prage devices, al in nature.	
I	The system has the capability of importing patient	•		Х	PowerChart Clinical Office with			
	Legend: Min =Required Opt =Optional				Pag	ge 10 of 37		
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				Vendor C	Capabilities	
Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
demographic data via HL7 interface from an existing Practice Management System, Patient Registration System, or any such system used for patient registration and/or scheduling			*	PowerNote		
*Cerner systems are capable of interfacing with any HL7 compli- further.	ant s	syste	m.	Interface specifics wou	ld need to be d	iscussed
B. The system has the capability to import/create, review, update, and delete patient demographic information as well as other non-clinical information from the patient record	•		X *	PowerChart Clinical Office with PowerNote/ PowerChart Support Office		
*Demographic information can be imported and reviewed in Pov Interface specifics would need to be discussed further. In addit and updated in our practice management system, PowerChart S supported, however, the ability to inactivate is supported within foreign system at the person or encounter level.	ion, upp	dem ort C	ogra Offic	iphic information can ea e. The ability to delete բ	asily be created patient informa	d, reviewed tion is not
C. The system captures permanent patient address	•		X *	PowerChart Clinical Office with PowerNote/ PowerChart Support Office		
*Permanent patient address can be captured with PowerChart S captured with PowerChart Clinical Office with PowerNote via the be discussed further.	uppo app	ort C orop	ffice riate	e. In addition, permaner HL7 interface. Interfac	nt patient addre e specifics wo	ess can be uld need to
D. The system captures temporary patient addresses		•	X *	PowerChart Clinical Office with PowerNote/ PowerChart Support Office		
*Temporary patient address can be captured with PowerChart S captured with PowerChart Clinical Office with PowerNote via the be discussed further.				e. In addition, temporar		
3. Medical History						
The system supports rapid capture of patient history and physical exam data	•		X	PowerChart Clinical Office with PowerNote		
B. For each new patient, the system captures and stores risk factors. For example:	•					
 Tobacco use and history including number of years and packs per day (PPD) 			X	PowerChart Clinical Office with PowerNote/ PowerForms		
Alcohol use, history			X	PowerChart Clinical Office with PowerNote/ PowerForms		
Drug use, history			X	PowerChart Clinical Office with		
Legend: Min =Required Opt =Optional				Page	e 11 of 37	

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					Vendor Capabilities				
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)		
					PowerNote/ PowerForms				
	Occupational environment			X	PowerChart Clinical Office with PowerNote/ PowerForms				
C.	For each new patient, the system captures and stores the following social history elements:	_							
	Marital status	•		Χ	PowerChart Clinical Office with PowerNote/ PowerForms				
	Occupation	•		X	PowerChart Clinical Office with PowerNote/ PowerForms				
	Religious preference	•	_	Х	PowerChart Clinical Office with PowerNote/ PowerForms				
	Socioeconomic status	•		Χ	PowerChart Clinical Office with PowerNote/ PowerForms				
	Native language	•	_	X	PowerChart Clinical Office with PowerNote/ PowerForms				
	Translator needed (Y/N)	•		Х	PowerChart Clinical Office with PowerNote/ PowerForms				
D.	The system has the capability to import patient health history data, including obstetrical history data, from an existing system.	•		X *	PowerChart Clinical Office with PowerNote				
erner sy rther.	stems are capable of interfacing with any HL7 compli	ant s	syste	m.	Interface specifics woul	d need to be d	iscussed		
E.	The system documents hospitalization data including:								
	Admission and Discharge dates	•		X	PowerChart Clinical Office with PowerNote				
	Chief complaint	•		X	PowerChart Clinical Office with PowerNote				
	Admitting diagnosis / Other diagnoses	•		Х	PowerChart Clinical Office with PowerNote				
	Procedures performed	•		Х	PowerChart Clinical Office with PowerNote				

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	Discharge summary	_	•	Х	PowerChart Clinical Office with PowerNote		
	Discharge disposition		•	Х	PowerChart Clinical Office with PowerNote		
F.	The system documents all existing allergies, such as:						
	• Drug	•		Х	PowerChart Clinical Office with PowerNote		
	• Food	•		Х	PowerChart Clinical Office with PowerNote		
	Drug-drug	•	_	Х	PowerChart Clinical Office with PowerNote		
	Drug-food	•		х	PowerChart Clinical Office with PowerNote		
G.	The system captures history of received immunizations.	•		Х	PowerChart Clinical Office with PowerNote		
Н.	The system has the capability of linking or grouping records of other family members on file.		•		PowerChart Clinical Office with PowerNote	To be Determined	
I.	The system has the capability to capture and store genograms		•		PowerChart Clinical Office with PowerNote	To be Determined	
J.	The system collects and stores family history, including, but not limited to:	_	•				
	 History of chronic diseases, including date of diagnosis 	_	•	Х	PowerChart Clinical Office with PowerNote		
	Disease status		•	X	PowerChart Clinical Office with PowerNote		
	Family member functional status		•	X	PowerChart Clinical Office with PowerNote/ PowerForms		
	If dead: date and cause of death		•	X	PowerChart Clinical Office with PowerNote/ PowerForms		
. Cur	rent Health Data, Encounters, Health Risk Appraisal						
A.	The system obtains test results from laboratory, radiology / imaging, or other equipment or technology related procedures via standard HL7 interface.	•	_	X	PowerChart Clinical Office with PowerNote		
В.	The system has the capability to import/create, review, and amend information about the patient's condition	•		X	PowerChart Clinical		

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	obtained from laboratory, radiology/imaging, or other equipment or technology-related tests and/or procedures.			*	Office with PowerNote		
*Cerner sy further.	stems are capable of interfacing with any HL7 compli	ant s	yste	m.	Interface specifics wou	ld need to be d	scussed
C.	The system has the capability to capture and monitor patient health risk factors in a standard format.	•			Clinical Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability isQ1 04*	
create repo	nization can take data elements in Clinical Outcomes ort level groupings and variables to use as risk factor ght decision support family of solutions.						
D.	The system shall display encounter data using a problem-oriented format.	•		Х	PowerChart Clinical Office with PowerNote		
Е.	The system supports online completion of the Health Survey (SF-36) or similar measure for measuring health status and outcomes		•	X	PowerChart Clinical Office with PowerNote/ PowerForms		
F.	The system includes plotter support capability.		•		PowerInsight	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04	
G.	The system supports the capture, graphic display and plotting of "Growth Chart" information, as well as other forms requiring graphic representation.	•		X	PowerChart Clinical Office with PowerNote		
	The system has the capability of reproducing and displaying a variety of end user patient and treatment forms.		•	X *	PowerChart Clinical Office with PowerNote/ PowerForms		
*Your orga	nization can create an unlimited number of PowerFor	ms f	or p	atier	nt and treatment forms.	I	
I.	The system has the capability to update other portions of the record with captured vital signs data. At minimum, the system collects:	•					
	• Height	•		X	PowerChart Clinical Office with		

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					Vendor Capabilities			
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)	
					PowerNote			
	• Weight	•	_	Х	PowerChart Clinical Office with PowerNote			
	• Pulse	•	_	X	PowerChart Clinical Office with PowerNote			
	Respiratory rate	•		X	PowerChart Clinical Office with PowerNote			
	Blood pressure (including multiples)	•	_	X	PowerChart Clinical Office with PowerNote			
	Different position blood pressure	•		X	PowerChart Clinical Office with PowerNote			
	• Other		•	X	PowerChart Clinical Office with PowerNote			
J.	The system incorporates one or more accepted measure of functional level.	•		X	PowerChart Clinical Office with PowerNote			
K.	The system supports at least one standard health status measure.	•		X	PowerChart Clinical Office with PowerNote			
L.	The system stores automatic measurements of health status.	•		X *	PowerChart Clinical Office with PowerNote			
*PowerFor	m data entry can calculate and store automatic health	ı sta	tus r	neas	surements.			
М.	The system has the capability to import/create, review, update, and amend health data (objective and subjective) regarding the patient's current health status, including (as applicable):							
	Chief complaint	•		X	PowerChart Clinical Office with PowerNote			
	Onset of symptoms	•		X	PowerChart Clinical Office with PowerNote			
	Injury mechanism	•		Х	PowerChart Clinical Office with			

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
					PowerNote		
	Physical examination findings	•	_	X	PowerChart Clinical Office with PowerNote		
	Psychological and social assessment findings	•	_	Х	PowerChart Clinical Office with PowerNote		
N.	The system provides a flexible mechanism for retrieval of encounter information that can be organized in variety of 'views'. For example:						
	By name (last, first; first, last; etc.)	•		Х	PowerChart Clinical Office with PowerNote		
	By date of birth	•		X	PowerChart Clinical Office with PowerNote		
	Chronological by encounter date	•		X	PowerChart Clinical Office with PowerNote		
	By diagnosis, problem, problem type	•			PowerChart Clinical Office with PowerNote	To Be Determined	
	By chart number	•		X	PowerChart Clinical Office with PowerNote		
	By family group / linkage		•		PowerChart Clinical Office with PowerNote	To Be Determined	
0.	The system provides a flexible, user modifiable, search mechanism for retrieval of information captured during encounter documentation.	•	_	X *	PowerChart Clinical Office with PowerNote		
*Our struct	tured clinical documentation solution, PowerNote, is s	sear	chab	le.			
P.	The system provides a mechanism to capture, review, or amend history of current illness.	•		X	PowerChart Clinical Office with PowerNote		
Q.	The system ensures dynamic documentation during the encounter complying with all standard coding rules	•		X *	PowerChart Clinical Office with PowerNote		
to the Cent	e's Care Design templates present appropriate docun ter for Medicare and Medicaid Services (formerly HCF cumentation. Your organization can specify recomme	A) d	ocur	nent	ation standards to enc	ourage consiste	
R.	The system captures the following referral information:						

Legend: Min = Required Opt = Optional

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	Type of referral	•		x	PowerChart Clinical Office with PowerNote		
	• Date	•		x	PowerChart Clinical Office with PowerNote		
	• Reason	•		x	PowerChart Clinical Office with PowerNote		
	Provider	•	_	Х	PowerChart Clinical Office with PowerNote		
S.	The system tracks consultations and referrals	•		X *	PowerChart Clinical Office with PowerNote		
	art Clinical Office with PowerNote is capable of record g' is requested to respond appropriately.	ling	whe	n co	nsultations and referral	s are made. Yo	our definition
T.	The system has the capability of printing consultations / referrals forms	•		Х	PowerChart Clinical Office with PowerNote		
5. Enc	ounter – Progress Notes						
A.	The system records progress notes utilizing a combination of system default, provider customizable, and provider-defined templates.	•		X *	PowerChart Clinical Office with PowerNote		
patient rec pathways. encounter with a mou	te is our unique, patented Structured Clinical Docume cord, document, and order from one screen and utilize A series of options or smart pick lists present sympt pathways present recommended options, but allow the use or pen. A textual clinical note is created, accurate thin PowerNote is saved as discrete structured data to	s pro om-, ne pl	oble gui nysic nd in	m-sp delin cian istan	ion. PowerNote allows becific templates called ne-relevant documentat to select the appropriate tly, as a by-product of the select the appropriate the select the select the appropriate the select the select the select the select the select the selec	Care Designs of ion and plan electrons by posteriors	or encounter ements. The bint-and-click
В.	The system has the capability to automatically update other sections of the record with data entered in the progress note	•		x	PowerChart Clinical Office with PowerNote		
C.	The system requires that the progress note be electronically signed at the end of the encounter prior to being allowed to continue	•		X *	PowerChart Clinical Office with PowerNote		
continue.	m allows a PowerNote to be electronically signed; ho PowerNote can be saved if the user needs to move to e to complete and sign.						
D.	The encounter - progress note template includes space for entering performed and planned procedures. It also includes:	•		Х	PowerChart Clinical Office with PowerNote		
•	Performed/planned Laboratory procedures	•		Х	PowerChart Clinical Office with		

Legend: Min = Required Opt = Optional

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
•	Diagnosis	•		Х	PowerNote PowerChart Clinical Office with PowerNote		
•	Goals (provider's and patient's) and follow-up plans	•		X	PowerChart Clinical Office with PowerNote		
•	Medications prescribed	•	_	Х	PowerChart Clinical Office with PowerNote		
•	Patient education materials	•		X *	PowerChart Clinical Office with PowerNote		
URLs, fron	e encounter pathways can contain links to patient edune a third-party vendor or from your organization if con when patient education is given.						
•	Consultation/referrals	•		Х	PowerChart Clinical Office with PowerNote		
•	Patient condition or status	•	_	Х	PowerChart Clinical Office with PowerNote		
Е.	The system includes a progress note template that is problem oriented and can, at the user's option be linked to either a diagnosis or problem number.	•		X *	PowerChart Clinical Office with PowerNote		
customize architectur	e templates are problem-oriented. If the encounter ac d documentation template. The clinician can documer e, data elements are retrievable by encounter or data o be built dynamically without requiring manual linkin	nt a d type	code e, alle	d dia	agnosis or problem. Un g a problem-focused v	der our Millenn iew of relevant	ium data
F.	The system has the capability of retrieving encounters by a variety of user-defined parameters.	•		Х	PowerChart Clinical Office with PowerNote		
G.	The system enables standard phrases to be defined/contained in tables and used as pull down menus to reduce the key entry effort.	•		Χ	PowerChart Clinical Office with PowerNote		
н.	The system automatically captures the electronic signature and title of the person entering data and date/time stamps each transaction.	•	_	X *	PowerChart Clinical Office with PowerNote	To Be Determined	
	our system automatically captures the electronic sig table to indicate title. Tracking of provider credential mined.						
I.	The system enables progress notes to be sorted for viewing in chronological or reverse chronological order by encounter date in relation to the active care plan.	•	_	X *	PowerChart Clinical Office with PowerNote		
	nt's progress notes can be viewed in chronological or counter note (i.e. Cardiology Clinic, etc.), but not in re					ganized in relat	ion to the
J.	The system applies security controls to progress notes to ensure that data cannot be deleted or altered except within the current session and by an authorized user.	•	_	Х	PowerChart Clinical Office with PowerNote		

					vendor C	apabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
K	and a spell checker within the progress notes data entry module.	•		X *	PowerChart Clinical Office with PowerNote		Stedman's Medical Dictionary
	inical notes and advanced clinical notes have spell che ended to provide spell checking within clinical notes.	cking	ј сар	abili	ities. Licensing of Sted	man's Medica	l Dictionary
L	The system supports the capability to automatically collect the data elements defined by the associated clinical practice guideline or order.		•	Х	PowerChart Clinical Office with PowerNote		
Pr	roblem Lists						
A	The system provides a problem status for each shown problem.	•	_	X	PowerChart Clinical Office with PowerNote		
В	The system organizes applicable patient data into comprehensive problem summary lists.	•	_	X	PowerChart Clinical Office with PowerNote		
C	The system provides problem descriptions based on the following standard controlled vocabularies:	•					
	SNOMED III	•		X *	PowerChart Clinical Office with PowerNote		
	riously noted, Cerner supports SNOMED II and III for ou inical terminology for Cerner Millennium.	r lab	orato	ory (I	PathNet) clients. SNOM	ED CT is supp	orted as the
	SNOMED RT	•		*			
erner s	supports the most recent version, SNOMED CT, as the	broa	d clir	nical	terminology for Cerner	Millennium.	
	• MEDCIN • 3M	•		X	PowerChart Clinical Office with		
	• ULMS		•		PowerNote		
D	The system separates active from inactive problems.	•		X	PowerChart Clinical Office with PowerNote		
	The system allows clinicians to identify and record new patient problems as well as the current status of existing problems.	•		Х	PowerChart Clinical Office with PowerNote		
Ε.					D. Ober (Oliviral		
E.			•	X	PowerChart Clinical Office with PowerNote PowerChart Clinical		

Legend: Min = Required Opt = Optional

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	factors.				PowerNote		
	h Maintenance Module provides the ability to define h	ealth	ı exp	ecta	ations based upon docu	umented proble	ms,
eaure	s, diagnoses, age-range, and gender						
Н.	The system updates the active problem list from relevant data in the progress note.	•	_	X	PowerChart Clinical Office with PowerNote		
I.	The system records the patient's current health status collected in a standard format.	•	_	X	PowerChart Clinical Office with PowerNote		
J.	When capturing problem information, the system captures:						
	Diagnosis / problem date(s)	•		Х	PowerChart Clinical Office with PowerNote		
	Severity of illness	•		X	PowerChart Clinical Office with PowerNote		
К.	For each problem, the system has the capability to create, review, or amend information regarding a change on the status of a problem to include, but not be limited to, the date the change was first noticed or diagnosed.	•	_	X	PowerChart Clinical Office with PowerNote		
L.	The system archives problems complete with status history	_	•	X	PowerChart Clinical Office with PowerNote		
M.	The system continually updates the diagnosis/problem lists with the capture of each new piece of patient data in any module	•		X	PowerChart Clinical Office with PowerNote		
N.	The system automatically links problems with order and results	•			PowerChart Clinical Office with PowerNote	To Be Determined	
	The system automatically updates the problem summary lists using approved rules-based guidelines	•		*			
patie	nt's Problem List must be manually maintained.						
P.	The system has the capability of allowing the display of past interventions, hospitalizations, diagnostic procedures, and therapies for review at the option of the provider	•		X	PowerChart Clinical Office with PowerNote		
Q.	The system meets RBRVS/E&M documentation and coding guidelines art Clinical Office with PowerNote offers a unified, aut	•		X *	PowerChart Clinical Office with PowerNote		

*PowerChart Clinical Office with PowerNote offers a unified, automated E&M coding assistant that can be used to calcul level of visit and determine the appropriate E&M code. When used with PowerNote, the E&M coding assistant analyzes documentation to automatically calculate the level of history and exam supported by the documentation.

	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	The system automatically updates the problem summary lists upon detecting changes made to multi-disciplinary guidelines.	•		*			
	em list is maintained manually in PowerChart Clinical	Offi	ce w	ith F	PowerNote.		
	ical Practice Guidelines (CPG)						
PLEASE N	OTE: The questions in this section are being respond	ed to	o fro	m a	PowerNote perspective).	
Α.	The system includes standard Clinical Practice Guidelines (CPG) from the National Guideline Clearinghouse, a public resource for evidence-based clinical practice guidelines. NGC is sponsored by the Agency for Healthcare Research and Quality (formerly the Agency for Health Care Policy and Research).	•		*	PowerChart Clinical Office with PowerNote		
templates of physician to PowerNote utilize our	PowerNote, a unique patented Structured Clinical Doc called Care Designs or encounter pathways. The enc to select the appropriate ones. Includes Care Design templates that we have develowers built encounter pathways, modify these to suit you own encounter pathways.	ount ped	er p	athw ering	vays present recommen most common compla	ided actions, builded actions, builded	ut allow the
В.	The system has the capability of allowing initial authoring and revising of clinical practice guidelines	•		Х	PowerChart Clinical Office with PowerNote		
C.	The system allows linkages from the CPG to other system modules.	•		Х	PowerChart Clinical Office with PowerNote		
D.	The CPG module imports/creates the facility for rapid documentation of the patient's progress along the CPG's phases.	•		X	PowerChart Clinical Office with PowerNote		
E.	The format utilized by the guideline for documenting is intuitive, easy to use, and user customizable.	•		X	PowerChart Clinical Office with PowerNote		
F.	The CPG module utilizes pull down menus and check boxes to speed up data entry.	•		Х	PowerChart Clinical Office with PowerNote		
G.	Optionally, the CPG module can be populated by data entered elsewhere in the system.		•	X	PowerChart Clinical Office with PowerNote		
Н.	The system allows reporting and analysis of any / all components included in the CPG.	•	_	Х	PowerChart Clinical Office with PowerNote/ Discern Explorer		
I.	Included in each CPG, the system has the capability to create, review, and update information about:						
	The performance measures that will be used to monitor the attainment of objectives	•		X	PowerChart Clinical Office with PowerNote		
	The quantitative and qualitative data to be		•		PowerChart Clinical		

Legend: Min = Required Opt = Optional

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Vendor Capabilities

						Vendor C	apabilities	
		Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
		collected			Χ	Office with PowerNote		
		Performance metrics	•			*See comments		
Furt	her cl	arification is requested in order to appropriately resp	ond	to th	is q			11.
		Collection means and origin of data to be				PowerChart Clinical		
		evaluated		•	Χ	Office with PowerNote		
	J.	The system allows the provider or other authorized user to override any or all parts of the guideline.		•	Х	PowerChart Clinical Office with PowerNote		
3.	Care	e Plan				,		
) F	1SF N	OTE: The questions in this section are being respond	ad t	o fro	m a	PowerNote nerspective		
LL	A.	The system has the capability to import/create, review, and amend information about the desired single or multi-disciplinary long / short term goals and objectives that will be accompanied by the care plan.	•		X	PowerChart Clinical Office with PowerNote	•	
	В.	The system has the capability to import/create, review, and amend information about the proposed set of single or multi-disciplinary care plan options that are based upon expected outcomes.	•		Х	PowerChart Clinical Office with PowerNote		
	C.	The system has the capability to import/create, review, and amend information about:						
	•	The provider's explanation and the patient's or patient representative's understanding of the recommended and/or alternative care plan options.	•		X	PowerChart Clinical Office with PowerNote		
	•	The medical orders, which authorize the execution of the selected, care plan.	•		Х	PowerChart Clinical Office with PowerNote		
	•	The collection of specimens (body fluids, tissue, etc.) from the patient to be used for diagnostic or treatment purposes.	•	_	X	PowerChart Clinical Office with PowerNote		
	•	The actions taken to safeguard the patient to avert the occurrence of morbidity, trauma, infection, or condition deterioration.	•		Х	PowerChart Clinical Office with PowerNote		
9.	Prev	vention						1
	Α.	The system has the capability to display prevention prompts on the summary display.	•		Х	PowerChart Clinical Office with PowerNote		
	В.	The system allows interactive prevention status documentation. At minimum:						
		Date addressed	•		Х	PowerChart Clinical Office with PowerNote		

Legend: Min = Required Opt = Optional

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					Vendor C	apabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	• Result	•		Х	PowerChart Clinical Office with PowerNote		
	Reasons for not performed	•		Х	PowerChart Clinical Office with PowerNote		
	Where performed	•		Х	PowerChart Clinical Office with PowerNote		
C	The system includes user-modifiable health maintenance templates.	•		*	PowerChart Clinical Office with PowerNote		
The Hea	Ith Maintenance Module includes the ability to create he	ealth	exp	ecta		n and location	level.
D	 The system includes a patient tracking and reminder capability (patient follow-up). 	•		Х	PowerChart Clinical Office with PowerNote		
E	The system allows the graphing of pertinent data into flow sheets for presentation/display.	•		Х	PowerChart Clinical Office with PowerNote		
F.	The system includes the incorporation of immunization protocols:						
	Universal child	•		X *	PowerChart Clinical Office with PowerNote		
The CD	C childhood immunization schedule is provided.			,	<u>'</u>		1
	Universal adult	•		X *	PowerChart Clinical Office with PowerNote		
Your or	ganization has the ability to define universal adult immu	ıniza	tion	prot		ation Module.	
	Specific foreign travel	_	•	X *	PowerChart Clinical Office with PowerNote		
Your or	ganization has ability to define foreign travel immunizat	ion p	oroto	cols	with the Immunization	Module.	
0. Pa	atient Education						
A		_	•	х	PowerChart Clinical Office with PowerNote		
В	The system has the capability of providing printed patient education materials in culturally appropriate languages on demand or automatically at the end of the encounter		•	X *	PowerChart Clinical Office with PowerNote/ MediSource Foundation		
	urce Foundation provides drug content on most commo te additional patient education materials.	n m	edic	atior	ns in both English and S	Spanish. Your	organizatio
С	 The system includes or the capability to develop patient instructions for a broad range of treatments and services delivered by providers. Examples: 						
	Care of wound	•		х	PowerChart Clinical Office with PowerNote		

					Vendor C	apabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
•	Exercise regimen	•	_	Х	PowerChart Clinical Office with PowerNote		
•	Diet guidelines	•		Х	PowerChart Clinical Office with PowerNote		
•	Administration and care of medications	•		Х	PowerChart Clinical Office with PowerNote		
from a	ystem allows patient instructions to be selected a pull down list.		•	X *	Exit Writer Patient Information Functionality/FirstNet		Exit Writer Patient Information
	ect patient instructions from a pull down list, E e required. In the future, PowerChart Clinical O e determined.						
suit in	ystem allows user modifications to instructions to dividual patient needs without altering the al content.		•	X *	Exit Writer Patient Information Functionality/FirstNet		Exit Writer Patient Information
Information funct	dify patient instructions to suit individual patie ionality with our FirstNet solution would be req ity to use Exit Writer; release date to be determ	uire	d. Ir				
to car	ystem enables the linkage of patient instructions e plans/care maps/ practice guidelines/orders, ing automatic printing.		•	х	PowerChart Clinical Office with PowerNote		
dema	ystem allows patient instructions to be printed on nd independent of care plans/care /guidelines/orders	•		X *	Exit Writer Patient Information Functionality/FirstNet		Exit Writer Patient Information
	nt patient instructions on demand, Exit Writer P ne future, PowerChart Clinical Office with Powe						
inform	ystem includes the facility to create a directory of nation for patient support groups and to include pplicable support group information in the ctions		•	X *	PowerChart Clinical Office with PowerNote		
	a directory of information for patient support gr cluded in patient instructions.	oups	s in ı	not s	supported; however, inf	ormation on pa	tient support
11. Alerts							
messa	ystem includes user customizable alert screens / ages, enabling capture of alert details, including, of being limited to:						
•	Text describing the alert	•		Х	PowerChart Clinical Office with PowerNote/ Discern Expert		
•	Date and time of the alert	•		Х	PowerChart Clinical Office with PowerNote/ Discern Expert		

						Vendor C	apabilities	
		Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	В.	The system prints an alert on demand	•		Х	PowerChart Clinical Office with PowerNote/ Discern Expert		
	C.	The system has the capability of forwarding the alert to a specific provider(s) or other authorized users via secure electronic mail or by other means of secure electronic communications	•		X	PowerChart Clinical Office with PowerNote/ Discern Expert		
2.	Ord	ers						
	A.	The system includes an electronic Order Entry module that has the capability to be interfaced with a number of key systems depending on the health center's existing and future systems as well as external linkages, through a standard, real time, HL7 two-way interface.	•		X *	PowerChart Clinical Office with PowerNote		
Cerr urth	•	stems are capable of interfacing with any HL7 compli	ant s	syste	m.	Interface specifics woul	d need to be d	liscussed
	В.	The system has the capability to print orders for manual transmission	•		X	PowerChart Clinical Office with PowerNote		
	C.	The system has the capability to fax orders.	_	•	X *	PowerChart Clinical Office with PowerNote		
Pow	erCha	art Clinical Office with PowerNote provides the ability	to fa	x pr	escr	iptions.		
	D.	The system has the capability to require that all orders be digitally signed at the completion of each order.	•		X	PowerChart Clinical Office with PowerNote		
	Е.	The system accepts orders from multiple locations.	•		Х	PowerChart Clinical Office with PowerNote		
	F.	The system has the capability to assign and display an order number for active, hold, and pending orders.	•		X	PowerChart Clinical Office with PowerNote		
	G.	During the order entry process, the system has the capability to require the user to acknowledge an error message prior to being allowed to continue with the data entry function.	•		X	PowerChart Clinical Office with PowerNote		
	Н.	The system allows the user to accept, override, or cancel an order.	•		Х	PowerChart Clinical Office with PowerNote		
	I.	The system requires the user to enter a justification for overriding, changing, or canceling an order prior to be allowed to continue	•		X	PowerChart Clinical Office with PowerNote		

Legend: Min = Required Opt = Optional

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					Vendor C	apabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
J.	The system includes the visual indication of orders in need of review.		•	X	PowerChart Clinical Office with PowerNote		
K.	The system detects and displays duplicate orders issuing visual and auditory warnings, and allows the user to override the warning after entering a justification for the override.	•	_	X *	PowerChart Clinical Office with PowerNote		
PowerCha	art Clinical Office with PowerNote provides visual aler	ts, h	owe	ver,	auditory warnings are n	ot supported.	
L.	The system includes the capability to:						
	Define order sets for each provider or service department.	•		Х	PowerChart Clinical Office with PowerNote		
	 Contain all information specific to one order in one display screen. 	•	_	Х	PowerChart Clinical Office with PowerNote		
	Include a pull-down list of all order departments to enable multiple orders		•	X	PowerChart Clinical Office with PowerNote		
	 Include a user-configurable / customizable pull- down list of tests and services from which to place one or more orders. 	_	•	Х	PowerChart Clinical Office with PowerNote		
М.	The system has the capability of displaying the most commonly used orders to assist in order placement.		•	X	PowerChart Clinical Office with PowerNote		
N.	The system can display all order sets including components, by any of the following:						
	By procedure	•	_	Х	PowerChart Clinical Office with PowerNote		
	By provider	•	_	X	PowerChart Clinical Office with PowerNote		
	By diagnosis	•		X	PowerChart Clinical Office with PowerNote		
	By date	•		X	PowerChart Clinical Office with PowerNote		
0.	The system has the capability to specify/display exploding orders	•		X	PowerChart Clinical Office with PowerNote		

						Vendor C	Capabilities	
		Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	P.	The system has the capability to enable selected orders to be recurring orders.	•		Х	PowerChart Clinical Office with PowerNote		
	Q.	The system includes an order inquiry mechanism to allow providers to inquire on the details of an order.	•	_	X	PowerChart Clinical Office with PowerNote		
	R.	The order inquiry function is accessible within the order entry flow before the session is terminated.	•		х	PowerChart Clinical Office with PowerNote		
	S.	An order, at the user's option, displays all the detail data associated with the order, including demographics, order parameters, electronic signatures, and order status	•		Х	PowerChart Clinical Office with PowerNote		
	T.	The system displays order summaries on demand to allow the clinician to review/correct all orders prior to transmitting/printing the orders for processing by the receiving entity	•	_	X	PowerChart Clinical Office with PowerNote		
3.	Res	sults						
	A.	The system accepts results via two way HL7 interface from all HL7 compliant / capable entities or through direct data entry. Specifically – Laboratory, Radiology, and Pharmacy information systems.	•	_	X *	PowerChart Clinical Office with PowerNote		
Cern urthe		ystems are capable of interfacing with any HL7 compli	ant s	syste	m.	Interface specifics wou	ld need to be d	iscussed
	В.	The system includes an intuitive, user customizable results entry screen linked to orders	•		Х	PowerChart Clinical Office with PowerNote		
	C.	The system displays results in a customizable, intuitive, and flexible format	•	_	X	PowerChart Clinical Office with PowerNote		
	D.	The system allows authorized users to copy selected results into a note		•	X	PowerChart Clinical Office with PowerNote		
	E.	When displaying results, the system, at a minimum, displays the patient name, date and time of order, date and time results were last updated, as well as any alerts identifying changes/amendments to the test or procedure, and test name	•		X	PowerChart Clinical Office with PowerNote		
	F.	The system uses visual cues to highlight abnormal results	•		Х	PowerChart Clinical Office with PowerNote		
4.	Me	dications						
	A.	The medication module includes access to the National Drug Classification (NDC) database	•		X *	PowerChart Clinical Office with PowerNote/ MediSource Foundation		

Legend: Min = Required Opt = Optional

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					Vendor C	apabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
Cerner's (drug interaction database, MediSource Foundation, m	aps	to th	e NI			1
R	The system stores common prescriptions for quick				PowerChart Clinical		
ъ.	entry.		•	Х	Office with		
	Cita y.				PowerNote		
C.	The systems supports multiple drug formularies and			.,	PowerChart Clinical		
•	prescribing guidelines	•		X *	Office with		InfoScan
oworCh:	art Clinical Office with PowerNote's prescription write	rpro	wido		PowerNote	cossing an or	doring
ealth plai onversati rderable eing part ecessary	ion to prescribe medications, clinicians determine who identified. Clinicians are presented with a non-filter ions and can choose whatever orderable they wish the list includes a visual indication of whether or not the of the health plan medication formulary identified. The tokeep the information up-to-date so that the information income.	ed lis at is indiv his fu ation	st of pres ridua uncti n pre	med sent illy p ional sent	lication orderables with within the database buil resented medications in lity will have the depended is accurate. This wo	in the ordering ld. The preser n the list are m dency of the bu	g ntation of th narked as uild that is
foScan f	ormulary database or your organization can build you	ır ow	n fo	rmul			1
D.	The system has the ability to update the progress note				PowerChart Clinical		
υ.	with prescription information		•	Х	Office with		
					PowerNote		
Ε.	The system allows the provider the ability to document			V	PowerChart Clinical		
	the effectiveness or ineffectiveness of a medication.	•	_	Х	Office with PowerNote		
					PowerChart Clinical		
F.	The system stores refill and repeat prescription			Х	Office with		
	information	•		^	PowerNote		
					Fowerhole		
G.	The system allows storage of prescription data for						
	retrieval by any or the following:						
					PowerChart Clinical		
	Drug name	•		Х	Office with		
	Drug name				PowerNote and/or		
					Discern Explorer		
					PowerChart Clinical		
	 Drug code number (NDC) 	•		Х	Office with		
	Brag oddo Hambor (HBO)				PowerNote and/or		
					Discern Explorer		
					PowerChart Clinical		
	Amount prescribed	•		Χ	Office with PowerNote and/or		
	·				Discern Explorer		
					PowerChart Clinical		
					Office with		
	• Schedule	•		Х	PowerNote and/or		
					Discern Explorer		
Н.	The system provides the following drug/prescription				,		
11.	order information:						
	order information.				Davis Observe Office 1		
				v	PowerChart Clinical		
	Drug contraindigation			Х	Office with PowerNote/		
	Drug contraindication	•			MediSource		
					Foundation		
					PowerChart Clinical		
				i	i owcionali ollilla		I .
				Х			
	Active problem interactions	•	_	Х	Office with PowerNote/ Discern		

Legend: Min = Required Opt = Optional

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					Vendor (Capabilities	
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	Check that appropriate studies are obtained		•	Х	PowerChart Clinical Office with PowerNote/ Discern Expert		
I.	The system provides extensive drug interaction information:						
	• Drug-drug	•		X	PowerChart Clinical Office with PowerNote/ MediSource Foundation		
	Drug-allergy	•		Х	PowerChart Clinical Office with PowerNote/ MediSource Foundation		
	Drug-symptom	•		X *	PowerChart Clinical Office with PowerNote/ Discern Expert		
ntified	symptoms mapped to the MediSource content will be	IIIINC					
J. urrentl		• actio	on ch	X *	PowerChart Clinical Office with PowerNote ing. At what level the in	Q4, 2004	curs can be
J. urrentl	The system allows the provider the ability to prioritize / rank the importance of the interactions and/or warnings. ly, your organization will determine the severity of interactions.	• actio	on ch	X *	PowerChart Clinical Office with PowerNote ing. At what level the inposition level, anticipan	Q4, 2004	curs can be
J. urrentl	The system allows the provider the ability to prioritize / rank the importance of the interactions and/or warnings. by, your organization will determine the severity of interactional systems or the severity of interactional systems. Future functionality will provide the systems or the severity and Security	• actio	on ch	X *	PowerChart Clinical Office with PowerNote ing. At what level the in position level, anticipate Core to Cerner's Millennium Architecture	Q4, 2004	curs can be
J. urrentlefined co	The system allows the provider the ability to prioritize / rank the importance of the interactions and/or warnings. Ity, your organization will determine the severity of interactionalization level. Future functionality will provide the confidentiality and Security The system supports biosensor technology for logon	• actio	on ch	X * necki the	PowerChart Clinical Office with PowerNote ing. At what level the in position level, anticipate Core to Cerner's Millennium	Q4, 2004	curs can be
J. urrentlifined co. A	The system allows the provider the ability to prioritize / rank the importance of the interactions and/or warnings. It, your organization will determine the severity of interactionalization level. Future functionality will provide the appropriate and Security The system supports biosensor technology for logon Supports industry standard electronic signatures.	• actic	on ch	X * necki the	PowerChart Clinical Office with PowerNote ing. At what level the in position level, anticipate Core to Cerner's Millennium Architecture Core to Cerner's Millennium	Q4, 2004	curs can be
J. urrentl fined c A B.	The system allows the provider the ability to prioritize / rank the importance of the interactions and/or warnings. It, your organization will determine the severity of interactionalization level. Future functionality will provide the appropriate the system supports biosensor technology for logon. The system supports biosensor technology for logon. Supports industry standard electronic signatures. The system controls access to and within the system at multiple levels (e.g. per user, per user role, per area, per section of the chart) through a consistent mechanism of identification and authentication of all users in accordance with the 'Role Based Access Control' (RBAC) standard.	• actic	on ch	X * necking the	PowerChart Clinical Office with PowerNote ing. At what level the in position level, anticipat Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture Core to Cerner's Millennium	Q4, 2004	curs can be
J. urrentl fined c A B.	The system allows the provider the ability to prioritize / rank the importance of the interactions and/or warnings. It, your organization will determine the severity of interactionalization level. Future functionality will provide the appropriate the system supports biosensor technology for logon. The system supports biosensor technology for logon. Supports industry standard electronic signatures. The system controls access to and within the system at multiple levels (e.g. per user, per user role, per area, per section of the chart) through a consistent mechanism of identification and authentication of all users in accordance with the 'Role Based Access Control' (RBAC) standard. The system establishes patient/physician data element confidentiality.	• actic	on ch	X * necki the	PowerChart Clinical Office with PowerNote ing. At what level the in position level, anticipat Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture	Q4, 2004	curs can be

Shaded areas for internal use only

	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)				
G.	The system incorporates an audit trail for all system transactions including look-ups of patient data.	•		х	PowerChart Clinical Office with PowerNote						
Н.	Provides automatic analysis of audit trails and unauthorized access attempts.	•	_		*See Comments						
or system solution, a with outco	rized access attempts are logged by the core Cerner Madministrator. Audit trail analysis is supported using available for an additional fee, provides your organizationes represented by the following: ers arts or views or notifications are system responses	the t	Ceri	ner N	lillennium Auditing - A	dvanced solution	on. This				
I.	Runs under B-2 or above rated operating system.	•			*See comment	Future, date To be Determined					
implemen Cerner off Version 7 HP can pr	ernment rates operating systems by classifying them ted. Higher conformance is rated as a "B-x" and lowers HP's OpenVMS operating system as a choice of N.3). HP has a version certified as "B1" called "SEVMS ovide more information regarding it's strategy and succision Support	er rat lillen Alph	ing s niun na Ve	go de 1 pla ersio	own to a "C-x". tforms running current n 6.1" but Cerner has r edule of OpenVMS.	releases of the	e OS (e.g.				
A.	The system includes access to medical research and literature databases such as MEDLINE, JAMA, GRATEFUL MED, and others.		•	X *	PowerChart Clinical Office with PowerNote		Clineguide				
	o Clineguide medical literature is available through lin e licensed directly from Clineguide's website.	ks to	pro	blen	ns on the problem list.	This medical I	iterature will				
В.	The system utilizes health data from all sections of the chart to provide decision support to providers.	•		X *	PowerChart Clinical Office with PowerNote/ MediSource Foundation and/or Discern Expert						
interaction promote p Discern E from all so With the F	*The MediSource Foundation database is used for all drug interaction checking including drug-allergy notices, duplicate drug interactions, duplicate therapy interactions, drug-drug interactions and drug-food interactions at the time of order entry to promote patient safety and avoid ADE's. Discern Expert rules can also be created by your organization to provide decision support to providers utilizing health data from all sections of the chart. With the Health Maintenance Module, your organization has the ability to define health expectations based upon documented problems, procedures, diagnoses, age-range, and gender.										
С.	documented data indicates that critical interventions may be required.	•	_	X *	PowerChart Clinical Office with PowerNote/ Discern Expert						
	anization can develop a custom Discern Expert rule that critical interventions may be required.	nat w	ould	trig		when individua	I documented				
D.	The system automatically triggers an alert upon documentation of a diagnoses or event required to be reportable to outside agencies including the Centers		•	X	PowerChart Clinical Office with PowerNote/ Discern Expert/ Discern						

					Vendor (
	Requirement	M E	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
	for Disease Control and Prevention (CDC) and State health and mental hygiene departments.				Explorer		
E.	The system automatically triggers and alert upon documentation of patient health data for a member of an existing medical registry or disease management program.	•		*	PowerChart Clinical Office with PowerNote/ Discern Expert		
our orga	anization can design a custom Discern Expert rule to	supp	ort t	his r		1	
F.	The system's alert/reminder functions are driven by appropriate multi-disciplinary clinical guidelines.	•	_	X	PowerChart Clinical Office with PowerNote		
G.	The system allows customized studies to be performed utilizing individual and group health data from the electronic record.	•		Х	PowerChart Clinical Office with PowerNote/ Discern Expert		
Н.	The system incorporates preventive medicine questionnaires to be completed by clinicians and if applicable, patients, during the encounter.		•	X *	PowerChart Clinical Office with PowerNote/ IQ Health		
						Cerner Millennium	
A.	The system has built-in mechanism/access to other systems to capture cost information	•			Strategic Outcomes, Data Warehouse	Release 2004, version 2004.01\ Estimated availability is Q1 04*	
neral led rious da lization,	Outcomes supports inclusion of revenue and cost ac dger systems. Once this data is uploaded into Cerner ta elements in the warehouse to create truly unique re and clinical analyses; but is not intended to duplicate Outcomes Solution Set is part of the PowerInsight dec	's Da epor e the	ata V ts. F info	/arel Powe rma	house, PowerInsight ca rInsight uses cost data tion provided by a cost	an combine this a in a variety of	data with strategic,
yı0 (sales and desired series part of the Foreign det		. Ju		a.i.i.y or oorations.	Estimated	
В.	The system generates an evaluation survey (scheduled and on-demand) that will record patient satisfaction	•			Clinical Outcomes, Data Warehouse	availability date is to be determined.*	
planned	d future enhancement for Clinical Outcomes will supp	ort t	ne ai	nalys	sis of satisfaction surve	ey data.	
C.	The system supports real-time or retrospective trending, analysis, and reporting of clinical, operational, demographic, or other user-specified data	•			Strategic Outcomes, Clinical Outcomes, Utilization Outcomes, Data Warehouse	Cerner Millennium Release 2004, version	
	the contract of the contract o						

Legend: Min =Required Opt=Optional

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Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
*Cerner's Data Warehouse is a structured, enterprisewide data v combines clinical data with operational and financial data to pro Warehouse contains clinical information from Cerner's clinical of	vide	insi	ght	into all aspects of care	delivery. The D	ata
systems. Financial information includes transactions from acco contract management, payroll, and general ledger systems. Data Warehouse. The Data Warehouse also can store data from benchmarking data sets. Powerlnsight includes a world-class data and analysis applications. This analysis can be performed near Warehouse is updated nightly. We are considering looking at world-class data.	untir a froi exte ata w r real	ng ai m th ernal varel l-tim	nd b ese I sou nous e, re	illing systems, such as systems are placed in . urces, including national arobust set of detrospectively, or used these concurrent data needs	patient accoun XML format for Il outcome-orien ata extraction, r to forecast. Cen	ting, export to the nted reporting,
D. The system produces workload measures		•	X	PowerChart Clinical Office with PowerNote		
${f E}_{f \cdot}$ The system produces reports of usage patterns		•		Utilization Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04*	
*Utilization Outcomes is able to analyze the quantity and types of diagnosis, within service line. This helps your healthcare executionical resources to produce an outcome. Resource utilization to Set is part of the Powerlnsight decision support family of solutions.	tive rend	addı	ress	whether your organization	tion is efficientl	y using
F. The system has the capability to perform automatic cost analysis for courses of drug treatments		•	X *	PowerChart Clinical Office with PowerNote/ Discern Explorer		
*A custom Discern Explorer report can be created by your organ courses of drug treatments; however, the cost analysis is not au				d your organization in p	erforming cost	analysis for
G. The system provides the capabilities for users to develop utilization statistical and productivity reports on user-determined data fields		•		Utilization Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04*	
*The focus of Utilization Outcomes is to enable your healthcare of the resource usage. The ability to report upon productivity d volumes across multiple levels. Powerlnsight reports can be exfurther data manipulation. You can generate reports based on a Powerlnsight.	ata i porte	s als	so si o sta	upported with Utilization Itistical software of you	n Outcomes. It r choice, such a	measures as Excel, for
H. The system provides the capability for authorized users to develop volume statistics reports on user determined data fields	•			Strategic Outcomes, Data Warehouse	Cerner Millennium Release 2004, version	

Legend: Min =Required Opt=Optional

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Vendor Capabilities

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Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
					2004.01\ Estimated availability is Q1 04*	
*Strategic Outcomes supports the ability to measure, analyze, a medical service, and payor.	nd re	epor	t up	on volume statistics by		unit,
I. The system has the capability to produce population- based studies based on flexible, end user modifiable criteria.	•			Strategic Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04*	
*Strategic Outcomes can identify the composition of historic and	d cu	rrent	t pat	ient populations.	Comon	
J. The system has the capability of producing scheduled and on demand case mix reports.	•			Strategic Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04*	
*Any solution set reports (which Cerner refers to as metrics and automatically refresh at specific times, dates, or intervals, then see repository. Strategic Outcomes supports the ability to show cast instance, department, physician, and medical services, among constants. 18. Disease Management / Clinical Registries	sent se le	to u vel v	sers	of your choice or publi	ished to the cor	porate
A. The system supports disease management registries by:		_				
 Allowing patient tracking and follow-up based on user defined diagnoses 	•			Clinical Outcomes, Strategic Outcomes, Utilization Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04	
Integrating all patient information within the system	•		X	PowerChart Clinical Office with PowerNote		
 Providing a longitudinal view of the patient medical history 	•		X *	PowerChart Clinical Office with PowerNote		
*PowerChart Clinical Office with PowerNote's IntelliStrip is a gra showing your clinician information that has been posted to the not associated with a visit. It allows your clinician to access not Navigation buttons allow your clinician to select the time period	oatie tes, i	nt d resu	uring Its, _I	g visits and also inform problems, and so on, in	ation on the pat	ient that is

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						Vendor Capabilities				
		Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)		
•	•	Providing intuitive access to patient treatments and outcomes	•			Clinical Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04*			
linica	ΙΟι	utcomes supports the ability to measure, analyze, and	d rep	ort ı	upor		d outcomes.			
В	3.	The system automatically identifies all high-risk patients and notifies clinical staff for preventive care.	_	•	X	PowerChart Clinical Office with PowerNote				
•	C.	The system utilizes user authored and/or third party developed clinical guidelines for disease and registry management	•			Clinical Outcomes, Data Warehouse	Cerner Millennium Release 2004, version 2004.01\ Estimated availability is Q1 04*			
		ght provides you with the ability to generate reports of								
ıch as	: DE	RG, ICD9, APC, and CPT4. PowerInsight combines clir	nical	data	a wit	h operational and finar	icial data to nro			
			iicui	uutt		ii oporational ana ima	iciai data to pro	vide insigni		
to all a	asp).	The system tracks / provides reminders and validates care process	•			PowerChart Clinical Office with PowerNote	Q1, 2004*			
to all a	asp). fun	The system tracks / provides reminders and validates care process	•			PowerChart Clinical Office with PowerNote	Q1, 2004*			
to all a	asp). fun ot va	The system tracks / provides reminders and validates care process	•			PowerChart Clinical Office with PowerNote	Q1, 2004*			
uture pes no	ot va	The system tracks / provides reminders and validates care process actionality includes the ability to track and provide relatidate the care process. The system generates follow-up letters to physicians, consultants, external sources, and patients based on a variety of parameters such as date, time since last event, etc. for the purpose of collecting health data and functional status for the purpose of updating the	nind	ers	rega	PowerChart Clinical Office with PowerNote rding disease manager PowerChart Clinical Office with PowerNote ate Q1, 2004.	Q1, 2004*			
uture Des no	ot va	The system tracks / provides reminders and validates care process actionality includes the ability to track and provide relatidate the care process. The system generates follow-up letters to physicians, consultants, external sources, and patients based on a variety of parameters such as date, time since last event, etc. for the purpose of collecting health data and functional status for the purpose of updating the patient's record	nind	ers	rega	PowerChart Clinical Office with PowerNote rding disease manager PowerChart Clinical Office with PowerNote	Q1, 2004*			
uture pes no F uture F	fun fun £.	The system tracks / provides reminders and validates care process actionality includes the ability to track and provide relatidate the care process. The system generates follow-up letters to physicians, consultants, external sources, and patients based on a variety of parameters such as date, time since last event, etc. for the purpose of collecting health data and functional status for the purpose of updating the patient's record actionality with our Correspondence Module; anticipated to the system links Disease Management functions to all	nind	ers	rega se d	PowerChart Clinical Office with PowerNote rding disease manager PowerChart Clinical Office with PowerNote ate Q1, 2004. PowerChart Clinical Office with	Q1, 2004*			
uture oes no Future	fun fun £.	The system tracks / provides reminders and validates care process actionality includes the ability to track and provide regalidate the care process. The system generates follow-up letters to physicians, consultants, external sources, and patients based on a variety of parameters such as date, time since last event, etc. for the purpose of collecting health data and functional status for the purpose of updating the patient's record actionality with our Correspondence Module; anticipated the system links Disease Management functions to all other sections of the EMR	nind	ers	rega se d	PowerChart Clinical Office with PowerNote rding disease manager PowerChart Clinical Office with PowerNote ate Q1, 2004. PowerChart Clinical Office with PowerNote Core to Cerner's Millennium Architecture	Q1, 2004*			
future pes no F	funct va	The system tracks / provides reminders and validates care process actionality includes the ability to track and provide relatidate the care process. The system generates follow-up letters to physicians, consultants, external sources, and patients based on a variety of parameters such as date, time since last event, etc. for the purpose of collecting health data and functional status for the purpose of updating the patient's record actionality with our Correspondence Module; anticipated the system links Disease Management functions to all other sections of the EMR The system auto-populates user defined data fields with patient demographics at the time of order or	e mind	ers	se d	PowerChart Clinical Office with PowerNote rding disease manager PowerChart Clinical Office with PowerNote ate Q1, 2004. PowerChart Clinical Office with PowerNote Core to Cerner's Millennium Architecture Core to Cerner's Millennium Architecture	Q1, 2004*			
to all a Cuture pes no Future Future F	funct va	The system tracks / provides reminders and validates care process actionality includes the ability to track and provide relatidate the care process. The system generates follow-up letters to physicians, consultants, external sources, and patients based on a variety of parameters such as date, time since last event, etc. for the purpose of collecting health data and functional status for the purpose of updating the patient's record actionality with our Correspondence Module; anticipate The system links Disease Management functions to all other sections of the EMR The system auto-populates user defined data fields with patient demographics at the time of order or request	e mind	ers	se d	PowerChart Clinical Office with PowerNote rding disease manager PowerChart Clinical Office with PowerNote ate Q1, 2004. PowerChart Clinical Office with PowerNote Core to Cerner's Millennium Architecture Core to Cerner's Millennium	Q1, 2004*			

Legend: Min = Required Opt = Optional

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				Vendor Capabilities				
	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)	
	as voice recognition, touch screen, light pen, mouse, keyboard, etc.				Millennium Architecture			
E.	The system will be accessible and available to all authorized users 99.5% of the time.	•		Х				
F.	The system's response time is 2 seconds or less 90% of the time.	•						
G.	The system supports sub second response time 80% of the time.	•						
Н.	The system supports remote system monitoring technology.		•	Х	Core to Cerner's Millennium Architecture			
I.	The system incorporates extensive, secure telecommunications capabilities that link staff and clinicians from remote locations to the central site.	•		х	Core to Cerner's Millennium Architecture			
J.	The system supports an industry standard locking mechanism to prevent unauthorized updates.	•		Х	Core to Cerner's Millennium Architecture			
K.	The system supports and implements system redundancy/fault tolerance for 100% availability.	•			*See comments			

*Cerner uses a combination of several strategies to help ensure the availability of your system. These include redundant hardware components such as disk and network components to protect against device failures. Oracle's Parallel Server is utilized for automatic fail-over in the event a node fails. Oracle's hot backup allows for the backup of data with minimal affect on users. How often table reorganizations need to occur in the Millennium® applications is directly relational to the number of disks, the planned workload, as well as the computer equipment configuration installed. Cerner will work with each client during technical discussions to determine the best strategy based on specific client needs.

Cerner offers database HIGH AVAILABILITY. There are various stages of high availability configuration: 1)
Competent/Proactive DBA; 2) Mirrored Disk Farm; 3) Cluster; 4) Oracle Parallel Server; 5) Oracle Hot Standby Database; 6)
Oracle Parallel Server in a multi-data center environment (HP's BRS); 7) Replication / Dual Systems. Cerner either supports or has plans to support each of these configurations.

The ability to launch multiple instances of a server on multiple platforms, assuming no constraints by the underlying database, provides server-level fault tolerance. The loss of a server instance or a node simply means the client must reconnect to an available service, which is done automatically by the distributed application framework. The only loss of data will be since the last commit performed by the user.

L. The system logs all transactions pro	ocessing archiving.	X	Core to Cerner's Millennium Architecture	
M. The system alerts simultaneous use presence in the same record.	ers of each other's		*See comments	

*A major strength of the ORACLE RDBMS is its ability to maintain high concurrency in a multi-user environment with a multi-version read-consistency. The high concurrency of ORACLE allows full utilization of the processing power available in multiprocessor machines. ORACLE provides complete facilities for concurrency control to ensure data integrity during attempted simultaneous access. Automatic, or implicit, and explicit locking at the table and row levels occurs during updates to the database. ORACLE's precision locking, such that updates do not block queries and queries do not block updates, helps contribute to this high degree of concurrency.

		Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)
20.	Clin	ical IT Data Dictionary						
	Α.	The system is structured to support skeleton-to-robust EMR.	•		Х	Cerner Millennium Core System		
	B.	Provides attributes for each data element; supports all data types.	•		X	Cerner Millennium Core System		
	C.	Supports static/dynamic data element relationship.	•		Х	Core to Cerner's Millennium Architecture		
21.	Inpu	ut Mechanisms						
	A.	The system supports a full range of input technologies.	•		Х	Cerner Millennium Core System		
	B.	Input protocol is easy/fast; intuitive input interface.	•		X	Cerner Millennium Core System		
	C.	The system capitalizes on the "repetitive nature of medicine".	•	_	X *	Cerner Millennium Core System		
click based and e	deviced appoint of the second appointment of	e opportunities for end users to access relevant patients, such as a mouse, users can work quickly through the lications can be used entirely with the keyboard. In Managery is by choosing icons, tabs, pull-down menus, etc. The compared to the systems in whatever manner best fits the system has the ability to allow inclusion of free	the in lillen app	nfori iniur licat	mation®, o	on. Conversely, both the users are able to access support the full power	ne Windows-ba s applications, of the GUI env	sed and Web- functions, ironment by
		text as well as the capture of discrete data.			^	PowerNote		
23.	Erg	onomic Presentation				O MUL		T
	Α.	The system places emphasis on user friendliness	•	_	X	Cerner Millennium Core System		
	В.	The system incorporates a consistent presentation of information across the entire system	•		X	Cerner Millennium Core System		
	C.	The system incorporates visual cues	•		X	Cerner Millennium Core System		
	D.	The system provides consistent formatting to aid users in finding information	•	_	Х	Cerner Millennium Core System		
24.	lmp	lementation and Support						
	A.	The implementation effort begins with the development of a comprehensive implementation plan developed jointly with the end user.	•		X			
	В.	The implementation plan includes an end-user skills assessment phase to be performed by the vendor.	•			*See comments		

Legend: Min =Required Opt=Optional

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	Requirement	Min	Opt	Yes	Module Name	Future Version (Date)	3 rd Party Provided (Name)		
	rforms train-the-trainer sessions to prepare your imp						tion can		
choose to include skills assessments on all end-users as a part of your end-user training curriculum. End-user training by the Cerner Implementation Team is available at an additional fee.									
Ena-user t	raining by the Cerner implementation Team is availab	ie at	ana	laali	lional lee.				
C.	The implementation includes a staff-training phase.	•		Χ					
D.	The amount and type of training is derived from the results of the skills assessment phase.	•			*See comments				
choose to	rforms train-the-trainer sessions to prepare your imp include skills assessments on all end-users as a part raining by the Cerner Implementation Team is availab	of y	our e	end-	user training curriculun		tion can		
Е.	The system package includes support and maintenance of application software and application system upgrades.	•		х					
F.	The system includes support of networked applications.	•			*See comments				

*Further clarification is required. Cerner solutions may use any physical transport which supports TCP/IP. Cerner applications are installed in over 1000 sites worldwide that use a wide variety of network solutions. Cerner recommends fiber optics as a backbone transport medium. Cerner Professional Services offers Network Assessment, Design, implementation and Troubleshooting assistance.

In addition, Since its inception, Cerner has interfaced with all the major suppliers of healthcare information systems as well as many "homegrown" systems using mainly "vendor specific" formats for the transmission of data between the Cerner system and the foreign supplier system. Most interfaces at this time were "point-to-point" (two systems physically connected together via a cable). This type of connectivity was also referred to as synchronous, or RS-232C, and was required to be written by each supplier at the application level.

Three major advents occurred in the late 1980s and early 1990s in the healthcare arena that vastly changed the world of interfacing.

Networks were installed in the hospital or provider facilities and network connectivity protocols were developed

A standard for the transmission of the data content was developed (HL7)

Commercial interface engines were used for the first time to interface healthcare applications

With the general acceptance, and widespread use of the Health Level 7 (HL7) standard since the early nineties, almost all interfaces implemented today use this standard format for the transmission of data with the exception of specific functional areas, such as HIPAA mandated formats for eligibility verification and for electronic Medicare/Medicaid claims and reimbursement which use ANSI X.12, and other areas not yet supported by the HL7 standard. However, if a legacy system does not support the HL7 standard, Cerner will implement a custom interface subsequent to specification review and negotiations with the supplier and/or client.