THE CORPORATION OF THE CITY OF CORNWALL

Request for Proposal 20-P17
Electronic Patient Care

Appendix A – Terms of Reference

The City of Cornwall invites Proposals from qualified vendors to supply an electronic patient care record software program to be implemented system wide across the Cornwall Stormont Dundas and Glengarry Paramedic Services based on the following objectives:

a) An E-PCR solution that meets existing and future growth requirements.

b) Obtain a high-quality electronic patient care record software system.

c) Enter into a partnership with a vendor that provides timely on-going support and maintenance for their goods/services.

1. <u>SCOPE OF WORK</u>

1.1. The Corporation requires an all-in-one software solution that can perform the following, but not limited to, tasks:

  i.   Electronic Patient Care Report (ePCR)
  ii. Creation and management of electronic Incident and Occurrence Report
  iii. Real-Time View Integration with CAD and the software solution. For the purposes of, but not limited.
     a. Bi-directional communication with the Ambulance Communication Center (referred to as dispatch)
     b. Silent Dispatching (direct to service devices)
     c. Automatic data input in ePCR such as call number, times etc.
     d. Provide oral and mapped navigational direction to the call location without paramedic data input
     e. Dashboard demonstrating fleet status similar to or better than the soon to be unsupported "Public Safety Suite" provided by FATPOT.
  iv. Ability to provide ad hoc reports
  v.   Provide a suite of canned reports consistent with mandatory Ontario Ministry of Health reports.

The vision is to migrate all paper documentation the service requires to a

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'single sign-on' electronic format, with sufficient potential to meet the growing needs over the term of the contract.

The mobile ePCR Solution will offer the ability to enter ambulance call, build queries, data tracking, viewing, and printing of all patient care records as described in this RFP.

The Proponent shall supply, install, configure, and host a fully functional solution for mobile and fixed workstations. The solution will have data entry, database design and implementation, reporting and ability to integrate with Real Time Data (RTD).

Time for knowledge transfer to the corporation's Information Technology department and Cornwall SDG Paramedic Services' staff shall be included in installation time.

The Proponent shall supply 22 concurrent mobile software licenses for the purposes of ePCR documentation, 7 concurrent fixed or virtual workstation software licenses and 6 concurrent administrative software licenses.

The Proponent shall supply all the required server software applications, including all required software licensing.

The Successful Proponent ePCR solution must be tested, piloted and ready for a go live date before January 31, 2021.

As Cornwall SDG Paramedic Services migrates to the electronic format the interface between the E-PCR solution and the future reports system shall be achieved.

2. SYSTEM FUNCTIONS AND REQUIREMENTS

Functional Description	Highly Important	Feature Availability	Vendor Comments
A – Feature is available and installed B – Feature is available but not yet installed D – Feature is currently under development (indicate anticipated date of availability) N – Feature is not available			
Minimum mandatory functions to be eligible for evaluation and invite			
Complete ePCR solution		Mandatory	
The solution must have the ability to search for an ePCR on the content of multiple PHIPA and non-PHIPA field combinations		Mandatory	
Incident/Occurrence Report solution		Mandatory	
Can create printable ad-hoc reports		Mandatory	
Must have printable canned reports		Mandatory	
Capable of digital signature		Mandatory	
Call validation prior to finalizing ePCR • Ensuring documentation is complete and accurate • Ensuring ALS/BLS standards are followed • Incident reports are completed when required		Mandatory	

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Functional Description	Highly Important	Feature Availability	Vendor Comments
Must meet current Ministry of Health Acts and Standards • ACR Completion Manual • Ontario Ambulance Documentation Standards • Patient Care and Transportation Standards • ALS PCS • BLS Patient Care Standards • MPHIPA • PHIPA		Mandatory	
ePCR must be distributed and made available to Hospital Emergency Departments, Hospital billing departments, Base Hospital (RPPEO),		Mandatory	
Defibrillator .PCO (biometrics for defibrillator) file must be accessible to Base Hospital (RPPEO).		Mandatory	
Raw and non-editable ePCR data accessible via, Microsoft Access (preferred) or Excel or SQL		Mandatory	
Solution must be fully hosted		Mandatory	

	Functional Description	Highly Important	Feature Availability	Vendor Comments
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	REAL TIME DATA Capable of silent dispatching, two-way communication with dispatch and GPS Navigation by June 2022 unless barriers caused by the Ministry of Health are present.		Mandatory	
	The ePCR shall have the capability to import, store, display and transmit defibrillator data from the LP-15 and enter it into the report to be printed as part of the ePCR.		Mandatory	
	Solution must have an evaluation/auditing tool for paramedic performance.		Mandatory	
ePCR				
	Multi-platform (Web-based, Windows, MacOS, iOS and/or Android). Please provide platform availability	Y		
	The ePCR shall allow for users to log on at any time, with or without internet connection.	Y		
	Easy to use & easy to view for data entry			
	The ePCR shall allow the user to input data in any order/category.	Y		
	The flow of data entry must be methodological (i.e. Patient assessment, patient care etc.)	Y		

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Functional Description	Highly Important	Feature Availability	Vendor Comments
Ability to document pertinent negatives of all assessment fields	Y		
The ePCR shall visually indicate the user's current position within the patient report			
The ePCR shall offer picklists or other appropriate screen objects such as radio buttons or check boxes whenever a defined set of responses are possible for a given field.	Y		
Ability to speed the selection of an item from a menu by keying in the first few letters of the item. The application may display a shortened list of possible menu items as the keying proceeds			
The user interface shall allow the user to quickly move through the list including but not limited to scrolling, pre-fill, and auto fill			
A conspicuous visual indication is used to identify mandatory fields on the user's interface according to the transport code. The indicator may be in the form of shading, red dots in the field etc.	Y		
Ability for the user to access a list of all incomplete mandatory fields at any time during the process of completing the E-PCR	Y		

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	The software is to have mandatory parameters around certain fields. These fields shall not accept inputted data that is outside of parameters defined by ranges, lists or tables. In certain defined circumstances the user is provided with an "override" option on parameters.	Y		
	Patient's age should be in years unless the patient is two years of age or younger. If the patient is less than 2 years of age, the age should be displayed as months with an "M" beside the number. If less than three months, the number of weeks should be entered with the letter "w" or "weeks" beside the number. If less than one month, the age should be displayed in days with the "d" or "days" beside the number	Y		
	Users shall be able to call up reference documents (e.g. protocols, BLS Manual, Bypass Criteria etc.) while entering patient data, without losing any patient data. Users able to move easily back and forth between reference materials and patient reports.			

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	The ePCRs shall include the ability to record and calculate multiple scores including Adult and Pediatric Trauma Scores, GCS, Total Body Surface Burn Chart and APGAR. Additionally, the user shall have the ability to add custom scores to the configuration			
	The ePCR shall have integrated multi-language (French and English) functionality for all disclaimers requiring a signature.	Y		
	The ePCR shall have the capability to import, store display and transmit defibrillator data from the cardiac monitor/defibrillator and enter it into the report and to print it with the report	Y		
	Choices at the top of the drop-down list that updates based on frequency of use			
	Pre-populate common fields for multiple patients on a particular scene			
	Digital signatures must be added to reports requiring signatures. A space for digital signatures shall be included for providers, receiving facility, refusing patient, witness, and hospitals.	Y		

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Functional Description	Highly Important	Feature Availability	Vendor Comments
The ePCR shall have validation checks to ensure the document is complete and meets minimum requirement as set out by the Ambulance Completion Manual and ALS PCS (amended from time to time) and as set by the service. • Ensuring documentation is complete and accurate • Ensuring ALS/BLS standards are followed • Incident Reports are completed when required	Y		
Fields not passing validation checks shall give visual indications of missing fields, information.	Y		
The ePCRs shall only be finalized once completed. The user must complete all mandatory fields prior to closing the record; compliance checking software will return the user to the non-compliant fields	Y		
The ePCR shall generate a printable easily understood patient care report which will include all captured signatures. • All involved paramedics • Hospital Staff • Patients when relevant	Y		

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Functional Description	Highly Important	Feature Availability	Vendor Comments
Maintain a current Canadian prescription drug list, integrated within the solution, using the top two-hundred known prescriptions in pharmacology, with the ability to recognize user search inputs of either generic or trade names.			
The ePCR shall allow for an addendum to a finalized ePCR and have the ability for redistribution to the service, Base Hospital and receiving facility with a description of the amended information.	Y		
An exact copy of the printed patient report must be reproducible at any time after the call has been finalized and must be kept by the proponent and fully available to the service for a period of not less than (5) years	Y		
The ePCR must provide an interface with the defibrillator to acquire and store patient data to individual records in its original format (Please describe process)	Y		

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	Functional Description	Highly Important	Feature Availability	Vendor Comments
	The ePCRs shall provide the ability to send a completed report to the destination facility or to a specific department at ~~the~~ destination facilities in SDG, the City of Ottawa and counties of Prescott-Russell, Leeds-Grenville, and Frontenac~~.~~	Y		
	ePCR must be distributed to hospital billing department	Y		
	ePCR and .PCO file must be distributed or accessible to the Base Hospital	Y		
	The ePCRs shall be accessible to Hospitals through a cloud-based portal meeting PHIPA and MFIPA standards	Y		
Real Time Data - Mapping, Routing and Silent Dispatching				
	Integrated with on-board GPS or cellular connection. Current GPS provider is Acetech	Y		
	Call info/location pre-populates mapping software	Y		
	Able to integrate with future CAD connection.	Y		

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Functional Description	Highly Important	Feature Availability	Vendor Comments
Mapping software pre-identifies best route, taking into consideration: • Local road closures • Local Destination Guidelines • Municipal 911 • Traffic • Stroke Bypass • STEMI Bypass • Trauma Bypass • Children • Mental Health • Local Hospitals	Y		
Ability to log 10-8, 10-7 and accept calls without the need to use radio (silent dispatching)	Y		
GPS with multiple mapping with overlays to increase accuracy	Y		
The ePCR package to include Ministry CAD bidirectional connectivity for dispatch information to auto populate on the ePCR.	Y		

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Functional Description	Highly Important	Feature Availability	Vendor Comments
Two-way flow of CAD/Pt. data into, out of CACC database and ePCR	Y		
OTHER FUNCTIONS			
Ability to auto-send the Integrated Community Referral for EMS (CREMS) forms directly to our Community Paramedic (CP) program. (Please describe process)			
Integrated Hazardous Address Flag creation form that is auto sent to our Commanders.			
Generate a daily shift log (summary of calls completed during a shift) of ePCR's completed by each crew			
When created a non ePCR document such as Incident Reports, Flagging, Audit form, paramedic field evaluation, CREMS report etc.… Relevant ePCR information is pre-populated in applicable form (ACE, Pt. care observation, driving behaviour, etc.)	Y		

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Functional Description	Highly Important	Feature Availability	Vendor Comments
Allow Paramedics to fill in electronic forms to capture various operational metrics. Examples of such operational forms include Vehicle checkoffs, Paramedic Field Evaluations, Health and Safety Inspections, Facility Inspections, Damaged/Malfunction report, Equipment request, Decon/Disinfection forms, Hazardous Address, Public Access Defibrillators, Community Paramedic Referrals, etc. (Please provide list and sample of relevant forms available)	Y		
Ability to workflow documents (back to form creator, paramedic, and Commander for follow up, to QA personnel for approval, etc.) for the following processes: • Paramedic field evaluation • Post Call Observation Report • Ambulance Collision Report • Incident Report • Hazardous Address Flag • Service Delivery Complaint • Patient Care Complaint			
Useful documents (BLS PCS, ALS PCS, Documentation Standards, easily available to paramedics.			

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	The ePCR shall generate a PHIPA requirement for Notice of Privacy Practices acknowledgement			
	The Proposed solution shall have appropriate security features to protect the integrity of the data on both the workstation and server software and which is consistent with legislated requirements of Health Care Records including the Personal Health Information Protection Act (PHIPA) and the Municipal Freedom of Information and Protection of Privacy Act (MFIPA)	Y		

IR FUNCTIONS				
	The incident report shall be accessible through the ePCR platform and desktop.	Y		
	The IR shall allow for users to log on at any time	Y		
	The IR shall be capable of digitally attaching files such as pictures, audio recordings, documents etc.	Y		
	Integrated Incident Report and ePCR that can be sent to MoH Field Office once approved by administration	Y		

	An exact copy of the IR must be reproducible at any time after the call has been finalized and must be kept by the proponent and full available to the service for a period of no less than (5) years	Y		
	The IR shall have validation checks to ensure the document is complete and give visual indications of incomplete fields			
	IR should have the ability to make notes regarding the IR without being part of the printout and, accessible to creator and administrative staff.			
	Can create an Occurrence Report (Distinguishable from an Incident Report)			

ADMINISTRATIVE FUNCTIONS				
	Easy to add "list items" to pre-populated drop- down lists (Describe process)			
	Allow paramedic service administrator to add / remove custom fields to the ePCR application for the purpose of collecting additional information, typically for clinical research purposes. (Please describe process)			
	Software has process to ensure that there is an ePCR for every call assigned by CACC where the crew arrives at scene (CAD reconciliation) and provide list of possible missing ePCR.			
	QA process identifies ePCR's with exceptions to QA rules that require peer audit or follow up	Y		
	Ability to import all historical calls (2011-present) to provider's platform	Y		

	The solution must have the ability to search for an ePCR on the content of multiple PHIPA and non-PHIPA field combinations	Y	
	The Proponent shall supply full data exporting capabilities from ePCR and all other documents in Microsoft Excel, SQL tables or other format acceptable to Cornwall SDG Paramedic Services. A software API for a web service is a preferred method for data transfer	Y	
	Data captured from ePCR, IR and all other digital forms shall be replicated in a separate database(s) for the sole purpose of querying and creating ad hoc reports through Microsoft Access 2016 or newer.	Y	
	The Proponent shall provide a conduit to access raw data from reports such as ePCRs, IRs in order to examine data on a regular basis.		
	The replicated tables shall be updated twice daily		
	The ePCR shall include a user-configurable and user query-able reporting tool to provide both scheduled and on-demand reporting.		
	The multiple documents, reports and forms should be accessible on a minimum amount of software with single sign on. I.e.: IR, ACE, ePCR should be on one platform.		
	The solution shall be PHIPA compliant. All data transmissions from the workstations to the server shall be encrypted. Access to the application on the workstations shall be restricted to authorized users	Y	

QA FUNCTIONS

	Provide the ability view or print canned report and statistic in one location.			
	Provide built-in and relevant paramedic service QA and Performance reporting, such as but not limited: • Call volume trends by time of day • Time on task by hour of day (% time on calls) • Resource availability based on deployment plan • Average response time vs. # of units available • Ambulance Offload Delay • Response times by CTAS on Arrival • Response times by Dispatch Priority • Response times by Return Priority • Service Demand Forecast based on expected population growth • Unit Hour Utilization • Unit Hour Availability (Includes Offload time)	Y		
	Easy to use application to custom build reports (Please provide process)			
	Ability for Paramedic to provide comment and workflow back to Commander on generated forms.	Y		

Solution available to audit paramedics • Abiltiy to evaluate (audit) ePCRs • Ability to evaluate paramedic performance on a call • Ability to evaluate Incident Reports Solution must have the ability for two-way communication between supervisor and paramedic.	Y		

System Administrator

The ePCR shall allow the administrator to customize button labels and lists.	Y		
The system administrator shall be able to automatically update the configuration of the ePCR without "touching" every platform	Y		
The Proponent shall push system updates remotely to all devices	Y		
System administrators shall be able to enable validation checks to ensure complete documentation. Rules shall be able to be flagged as required or optional	Y		
Compliance checking shall be easily customized by the system administrator	Y		
The ePCR admin functions shall be available system wide and access managed through security.	Y		

	Screens and processes embedded in the ePCR system should be tailorable /modifiable to meet new needs. Spare data fields should be available to deal with system modification	Y		
OTHER FUNCTIONS				
	The Proponent must provide a fully hosted solution and should include management of: • Total system security • Manage all network communications and connectivity • Manage all data management processes on-site and provide off-site backup with the client • PHIPA compliant data storage	Y		
	The Proponent has capacity to capture and provide data for provincial, national, or other research opportunities.			
	Cornwall SDG Paramedic Services plans to migrate to electronic reporting and documentation for vehicle check sheets, incident reporting and other operational and administrative reports. Interface between the E-PCR solution with the future reports system should be achieved utilizing the same platform without switching software	Y		
SITUATIONAL DASHBOARD				

	Situational dashboard is to display on one screen the status of the fleet. • Fleet Status showing number of vehicles available for call assignment (Service level) • Display active calls with call information such as call priority, primary problem, location etc. • Provide vehicle status while on an assigned call such as arrived scene, on route to receiving facility, arrived at receiving facility etc. • Capable of viewing service status at a glance	Y	
	Display a map with visual location of all vehicles on a separate page.		
WISH LIST			
	If solution is PC based, the vendor is to supply an antivirus for the paramedic documentation hardware and must be part of the annual operating cost.	Y	
	Ability to swipe a Health Card for input into ePCR. (or other personal identification. Possible future growth)		
	Provide the ePCR ability to take pictures and attach to the document with ease (If capable, please provide procedures)		

The vendor is to supply and maintain 7 individual virtual desktops. Each desktop is to have the latest MS Access and Excel available with connectivity to duplicated ePCR data. (Please provide version of MS Access and Excel)			
ePCR data shall mine data from a static database updated/refreshed 2 times daily.			
Data connection via MS Excel and have the ability to create pivot tables.			
Can send pictures to receiving facility.			
Auto generate ePCR with call details for all calls assigned by CACC where Paramedic arrives on scene (Please provide list of information that auto-populates on ePCR)			
Access to historical records and ability to pre-populate a new ePCR. Populate patient information from a minimal set of data entry. i.e. Patient has previously been picked up by paramedics and static information should auto-populate such as DOB, gender, past medical history etc.			
E-learning platform			
Solution to maintain paramedic qualification. • Provide notice of expiring qualification • Upload proof of qualification with easy access • Able to set a minimum amount of qualification			

Have the ability of single sign on If multiple modules are provided i.e. ePCR platform, e-learning platform, paramedic evaluation, paramedic maintenance of qualification etc.		
Printed version of the ePCR should closely resemble the paper version of the Ontario Call Report.		

Fields with picklist that should not have the ability to edit changes		
Call type	Sending Hospital	Skin Condition
Crew Type	Pick up Code	CTAS on Contact
Country	Primary Problem (This does appear in the actual ACR)	Procedures (Intervention)
Province	Secondary Problem (This does appear in the actual ACR)	Procedures (Code)
CACC	Traumatic Injury Site (Location, Type and Mechanism)	Procedures Crew
Vehicle #	Arrest Witnessed By	Patient Outcome in Emergency
Station	CPR Started By	Special transport Codes
Vehicle Status	First Shock By	Final Primary Problem (This does appear in the actual ACR)
Dispatch Prb. Code (This does appear in the actual ACR)	Age	Final Status
Dispatch	Gender	Base Hospital
Return	Deceased	Receiving Facility/ Destination
To Scene Warning Systems	CTAS at Transport	Travel Conditions (This does appear in the actual ACR)

To Destination Warning Systems	CTAS at Destination	Crew section Function
Special Codes	Skin Colour	Crew section Cert (ACP, PCP, PCP AIV etc.)

Fields with picklist that should have the ability to enter free text		
Relevant Past Hz provided by (given two options and free text)	Assessment Head/Neck	Disposition of Effects
Relevant Past Hx	Assessment Chest	Crew Section Name (they can write in names such as escorts or students)
Medication	Assessment Abdomen	Crew Section Badge (write in student #'s)
Allergies	Assessment Back/Pelvis	
Treatment prior to arrival	Assessment Extremities	

3. <u>COST, SCHEDULE, AND QUALITY CONTROL</u>

- Please outline service and maintenance costs for the solution as proposed.

- Provide the implementation cost (cost for 2020) followed by annual all-inclusive costs including leasing, license agreements, renewal, upgrade (include upgrading of software installation of new versions) and installation for the next 5 years, broken down for each calendar year.
    - o Yearly cost of proposed solution broken down into modules.

- Provide costing for technical support:
    - o 24/7 Technical support for ePCR hardware and software,
    - o Technical support for all other proposed software and hardware.

- Cost is to include all hardware required offsite for the entirety of the solution i.e. servers, cables etc.

- If not part of the solution, provide cost for hardware, software and implementation (cost for 2020) and annual cost for additional modules:
    - o E-learning platform
    - o Paramedic qualification maintenance platform

Solution Proposal

- Detailed listing of hardware provided (if applicable) and/or required.

- Detailed listing of software required

- Description of training provided, including location and time commitment, personnel requirements, delivery methodology.

- Describe and attach your proposed implementation plan.

- Describe your ability to integrate all historical ePCR, ADRS and Incident Report data,

- Provide minimum requirements and approximate cost of portable hardware, including keyboards required to use the proposed solution efficiently (this will not count towards the evaluation of cost for the solution).

- Provide hardware requirements to implement mobile "Real Time Data" with GPS mapping.

Proposed Project Schedule

Item	Date
Issue of RFP	October 15, 2020
Deadline for Questions	October 22, 2020
Deadline for Submission	November 12, 2020
Interviews	Week of November 23
Award of RFP	December 14, 2020
Project Commencement	December 15, 2020
Project Implementation Completion	January 30, 2021

Note: although every attempt will be made to meet dates as listed, the Corporation reserves the right to modify any or all dates at its sole discretion.