

**State of New Jersey**

**Department of Health**

**Diabetes Prevention and Control 2017**

**Clinical Decision Support (CDS) System**

**Request for Applications (RFA)**

**October 1, 2016**

**Heart Disease and Stroke Prevention 2017: Clinical Decision Support (CDS) System Request for Applications (RFA)**

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# Heart Disease and Stroke Prevention 2017: Clinical Decision Support (CDS) System Request for Applications (RFA)

## 1.0 INFORMATION FOR APPLICANTS

### 1.1 Summary Information

The purpose of this Request for Applications (RFA), issued by the New Jersey Department of Health (DOH), is to announce the availability of **State Fiscal Year (SFY) 2017** funds for the incorporation of a Clinical Decision Support (CDS) System for management of patients with high blood pressure and patients with diabetes. Horizontally integrated healthcare organizations that have two (2) or more acute care, specialty care, or psychiatric care facilities are encouraged to apply for this funding opportunity. Approximately **\$160,000** is available for the funding of one application. The deliverables outlined in this RFA will create the CDS System for management of patients with high blood pressure and patients with diabetes and will require monthly reporting of measures related to these patients. Applications will be objectively reviewed and scored. The funding period is **9 months (October 1, 2016 – June 30, 2017) with a 9-month budget period. The anticipated award time frame is October 1, 2016.**

### 1.2 Background

Recognizing the vital public health interest in reducing and more effectively treating chronic disease, the DOH invested its resources in the development of The New Jersey Coordinated Chronic Disease Prevention and Health Promotion Plan. This Plan integrates the State's heart disease, stroke, cancer, diabetes, arthritis, asthma, obesity prevention, and tobacco control programs to concentrate efforts on addressing multiple chronic diseases simultaneously. **On December 23, 2013, the DOH was awarded a grant to implement CDC's "State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk Factors and Promote School Health" (CDC-DP13-1305).** One of the objectives is to improve the effective delivery and use of clinical and other preventive services in order to prevent, detect, reduce or eliminate risk factors for, diabetes, heart disease and stroke and mitigate or manage complications. Since the prevalence of coexistent hypertension and diabetes is increasing and since hypertension in patients with diabetes causes a significant increase in the risk of vascular complications and chronic kidney disease, this RFA focuses on improvements in National Quality Forum (NQF) Measures 18 (blood pressure control) and 59 (A1C control).

This RFA supports the development and implementation of a CDS System for a horizontally integrated healthcare organization's health information exchange (HIE) to ensure that all those engaged in the health systems care process have the information they need to make sound decisions and take appropriate action that will lead to improved outcomes for patients with high blood pressure and patients with diabetes. In addition to the required CDS System deliverables, this RFA requires reporting on performance measures that demonstrate an increase in the implementation of quality improvement processes in the healthcare organization and an increase in team-based care in the healthcare organization.

Information technology, specifically clinical information technology, has become the critical enabler in the drive for better care quality, safety and effectiveness, and ultimately, better health. While the

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electronic health record (EHR) sharing clinical data through an HIE is a central component of clinical information technology, the CDS System is essential to improving individual and population health. The CDS System makes sure that all those engaged in the healthcare organization's care process (physicians, quality improvement care teams, administration) have the information they need to make sound decisions and take appropriate action that leads to improved outcomes. The CDS System is a critical tool in delivering better health by improving usability and applicability of alerts, order sets, registries, and other clinical data available through EHRs and HIEs.

### **2.0 DEFINITIONS**

- Clinical Decision Support (CDS) System: A process and system for ensuring that health-related decisions and actions are informed by pertinent patient information and clinical knowledge to enhance health and health delivery goals and objectives.
- Health Information Exchange (HIE): The mobilization of healthcare information electronically across organizations. HIE provides the capability to electronically move clinical information among disparate health care information systems while maintaining the meaning of the information being exchanged.

### **3.0 SCOPE OF WORK**

#### **3.1 Location**

The location in which the work is to be performed, completed, and managed is Applicant's location, which the Applicant must identify in its application.

#### **3.2 Grant Term**

The Grant period is nine (9) months for the design, development, and implementation of a Clinical Decision Support (CDS) System. However, as a condition of grant award, the successful Applicant must report performance measures through **June 30, 2017**.

#### **3.3 Grant Requirements**

CDS is a process for ensuring that health-related decisions and actions are informed by pertinent patient information and clinical knowledge to enhance health and healthcare delivery. The overarching goals of this RFA's CDS System are three-fold:

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- Increase the proportion of adults with known high blood pressure who have achieved blood pressure control (NQF 18)
- Decrease the proportion of patients with diabetes with A1c > 9% (NQF 59)
- Decrease the age-adjusted hospital discharge rate for diabetes as any listed diagnosis per 1,000 person with diabetes

CDS System components may include a trigger, logic, notification, data presentation, and action items. The CDS System must ensure that the right information is delivered to the right person in the right intervention format through the right channel at the right point in workflow.

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<b>3.3.1 Goals, Objectives, and Performance Measures</b>		
<b>RFA Goal</b>	<b>RFA Objective</b>	<b>RFA Performance Measures</b>
<b>1.</b> Increase implementation of quality improvement processes in the healthcare organization	<b>A.</b> Increase the proportion of adults with known high blood pressure who have achieved blood pressure control (NQF 18)	<b>i.</b> Number and proportion of healthcare organization members with HIT appropriate for treating patients with high blood pressure
		<b>ii.</b> Number and proportion of patients the Healthcare organization sees that have HIT appropriate for treating patients with high blood pressure
		<b>iii.</b> Number and proportion of members reporting on NQF 18
		<b>iv.</b> Number and proportion of patients with high blood pressure in adherence to medication regimens
		<b>v.</b> Number and proportion of patients with high blood pressure that have a self-management plan (may include medication adherence, self-monitoring of blood pressure levels, increased consumption of nutritious foods and beverages, increased physical activity, maintaining medical appointments)
		<b>vi.</b> Number and proportion of adults with known high blood pressure who have achieved blood pressure control (NQF 18)
	<b>B.</b> Decrease the proportion of patients with diabetes with A1c > 9% (NQF 59)	<b>i.</b> Number and proportion of healthcare organization members with HIT appropriate for treating patients with diabetes

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		<b>ii.</b> Number and proportion of patients the healthcare organization sees that have HIT appropriate for treating patients with diabetes
		<b>iii.</b> Number and proportion of healthcare organization members reporting on NQF 59
		<b>iv.</b> Number and proportion of patients with diabetes in adherence to medication regimens
		<b>v.</b> Number and proportion of patients with diabetes with A1c > 9% (NQF 59)
<b>2.</b> Increase use of team-based care in the healthcare organization	<b>A.</b> Increase the proportion of adults with known high blood pressure who have achieved blood pressure control (NQF 18)	<b>i.</b> Number and proportion of healthcare organization members with policies and system to encourage a multi-disciplinary, team approach to blood pressure control
		<b>ii.</b> Number and proportion of patients that are seen by the healthcare organization that have policies or systems to encourage a multi-disciplinary, team approach to blood pressure control
		<b>iii.</b> Number and proportion of patients with high blood pressure in adherence to medication regimens
		<b>iv.</b> Number and proportion of patients with high blood pressure that have a self-management plan (may include medication

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		adherence, self-monitoring of blood pressure levels, increased consumption of nutritious foods and beverages, increased physical activity, maintaining medical appointments)
		<b>v.</b> Number and proportion of adults with known high blood pressure who have achieved blood pressure control (NQF 18)
	<b>B.</b> Decrease the proportion of patients with diabetes with A1c > 9% (NQF 59)	<b>i.</b> Number and proportion of healthcare organization members with policies and system to encourage a multi-disciplinary, team approach A1c
		<b>ii.</b> Number and proportion of patients that are seen by the healthcare organization that have policies or systems to encourage a multi-disciplinary, team approach to A1c control
		<b>iii.</b> Number and proportion of patients with diabetes in adherence to medication regimens
		<b>iv.</b> Number and proportion of patients with diabetes with A1c > 9% (NQF 59)

**3.3.2 CDS System Project Management Plan**

The Applicant must develop a detailed Project Management Plan for its design, development, and implementation of a CDS System for the control of blood pressure and diabetes. The Project Management Plan should capture the entire scope of work in this RFA from initiation to planning to execution to reporting to evaluating. The Project Management Plan must include:



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- A. Schedule: activities schedule and project milestones
- B. Costs: project budget for each deliverable in this RFA
- C. Quality: quality measurement and improvement approach
- D. Project Team: people working on this project and their role/responsibilities
- E. Change Management: process to track changes in this project
- F. Performance Measurement: plan to capture and report on performance measures in Chart 1 of this RFA on a monthly basis through **June 30, 2017**.

### ***Deliverable 1: Project Management Plan***

#### **3.3.3 CDS System Assessment**

A reliable, timely, user-friendly CDS System is essential for robust interventions to control blood pressure and diabetes. The CDS System will depend on access to a common language and aggregated data from multiple sources. The Applicant must understand its HIT landscape to leverage the data needed for the CDS System interventions. The Applicant must complete an assessment of:

- A. Core Clinical Systems: applications that handle electronic health records, patient health records, documentation, order entry, medication management, results review from labs or radiology, drug reference information, drug interaction databases, order-set content, alerts and alerts configuring tools, business intelligence tools and dashboards, internal and external registries, health risk assessment tools, charge capture, billing, scheduling, and contact directories.
- B. Hardware/Software: the number of workstations/terminals, handheld/portable devices, and printers per bed/exam room, per clinician; the age of these devices and the software/operating version of these devices; the reliability and speed (as perceived by the users) of these devices.
- C. Network Connectivity: number and proportion of computers connected to internet and high-speed internal communications.
- D. Wireless/Remote Systems: number and use of wireless devices (alphanumeric pager, smart phones, tablets, laptops); telemedicine infrastructure (remote monitoring or data gathering from patients at home via machines that measure blood pressure or blood sugar); remote access to information systems by clinicians.
- E. Integration among Clinical Systems: number of different terminals/workstations/windows required to access the full portfolio of applicable applications.

### ***Deliverable 2: CDS System Assessment***

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### **3.3.4 Workflow Mapping**

The Applicant's capacity to document, understand, and improve how care delivery activities are carried out for blood pressure and diabetes control are essential for a successful CDS System. Clinical workflows include care steps performed at different points in time by different people/members, including patients and their caregivers, in the healthcare organization. These workflows can be sequential or simultaneous. There are workflows for an individual provider (or patient), for the care team, and the healthcare organization as a whole. The Applicant must develop:

- A. Workflows of its current environment for blood pressure control
- B. Workflows of its current environment for diabetes control
- C. Workflows for CDS System for blood pressure control
- D. Workflows for CDS System for diabetes control

***Deliverable 3A: Blood Pressure Control "As Is" Workflow and "To Be" Workflow***

***Deliverable 3B: Diabetes Control "As Is" Workflow and "To Be" Workflow***

### **3.3.5 CDS System Action Plan**

The Applicant should use the mapped workflows to build a shared understanding about the related decision support needs and opportunities for blood pressure and diabetes control. For example, diabetes care management focused on glycemic control requires several steps, such as ensuring that A1c is measured in each diabetic patient at an appropriate interval, that abnormal results are recognized and attended to, and that effective therapies to reduce elevated levels are appropriately instituted and monitored. A first step in the action plan could be to ensure that each patient has A1c levels checked and documented at recommended intervals. The CDS System Action Plan should identify when in the workflow the check for A1c documentation will occur, what information about the A1c results would indicate its aligned with recommended testing intervals, how the intervention will occur if A1c results are outdated, who is responsible for ensuring A1c testing and documentation occurs, and where the monitoring for updated test results will occur.

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The Applicant must develop and implement a CDS System Action Plan that provides logistical detail about the interventions for blood pressure and diabetes control that includes:

- A. Where these interventions fit in the mapped workflow.
- B. How these interventions drive performance on the measures set forth in Chart 1.
- C. How each partner in the healthcare organization contributes to the different intervention choices available, depending on the partner's role.
- D. A process for recognizing patient patterns for specific care action, such as using data-triggered alerts, smart patient assessment worksheets, data summaries, or predictive analytics.
- E. A process for intervention selection once a pattern is recognized.
- F. An approach to continuously communicate and validate the Action Plan and results with stakeholders to enhance effectiveness of CDS System.
- G. An approach to assessing and monitoring progress on the Action Plan and continuously improving upon it so that the RFA's Goals and Objectives, which are set forth in Chart 1, are met.
- H. An approach for deploying and continuously improving the CDS System.

### ***Deliverable 4: Action Plan***

#### **3.3.6 Develop/Leverage CDS System Tools**

CDS System tools help ensure that CDS System plans are executed correctly and completely. After the Applicant has implemented its workflow and action plan, the Applicant must identify and develop/leverage CDS System automation capabilities. The Applicant must provide a report of the automated CDS System tools that it has developed/leveraged that are relevant to the goals of blood pressure and diabetes control in this RFA. These tools must be available for use/transfer to other healthcare organizations. The CDS System tools can include:

- A. Parameter Guidance Tools: to help clinicians appropriately order interventions when the patient has additional constraints that affect therapy
- B. Order Sets and Care Plan Tools: to help ensure that the correct medication are ordered and administered in the correct doses and frequencies.
- C. Critiques and Warnings: to help catch potential errors such as drug allergy or drug-drug interaction, duplicate or inappropriate tests, or failure to order appropriate drug levels.

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D. Smart Documentation Forms: to help encourage complete process execution to ensure that clinicians address every element in the care plan.

E. Filtered reference information: to support correct care plan execution by providing information as needed.

F. Patient Dashboard Portal: To track referral for Chronic disease self-management and to engage patients in monitoring and managing their diabetes and/or blood pressure.

G. Data Display and Summary Tools: to present large amounts of patient information in a user-friendly, workflow friendly way that is viewable on mobile devices and is browser agnostic so clinicians see the right information at the right time.

H. Event and Time Alert Tools: to help clinicians spot unusual events that may indicate a need to change the care plan or to help ensure that an ordered test has occurred.

I. Retrospective Analytics: to help the Applicant look at performance on blood pressure and diabetes control over a period of time and detect variances from desired outcome so the CDS System can be continuously improved.

### ***Deliverable 5: Report of CDS System Automation Tools Implemented***

#### **3.3.7 CDS System Performance Deployment, Monitoring, and Measurement**

The Applicant must deploy its Action Plan and monitor the effectiveness of the interventions to control blood pressure and diabetes, as well as the workflow impacts for its providers. The Applicant must provide a Post-Deployment Report, detailing its successes, lessons learned, and tips for other healthcare organizations to consider when assessing the viability of a CDS System.

The Applicant must develop a plan for identifying, tracking, measuring, and addressing intended and unintended intervention effects and include these elements in its Quarterly Monitoring Report. As part of monitoring, the Applicant may find it necessary to re-tool its CDS System because of a negative impact on response time, the intervention did not function as planned, or there were unanticipated problems with workflow.

The Applicant must develop an approach for capturing and reporting its progress on the Performance Measures in Chart 1 of this RFA **through June 30, 2017** to DOH. The Applicant must report on a monthly basis on each of the performance measures in Chart 1 by the 14<sup>th</sup> day following the close of the prior month.

#### ***Deliverable 6A: Post-Deployment Report***

#### ***Deliverable 6B: Quarterly Monitoring Report***

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***Deliverable 6C: Monthly Reporting of Performance Measures in Chart 1 through June 30, 2017***

**4.0 APPLICATION PREPARATION AND SUBMISSION**

**4.1 General**

The anticipated RFA schedule and date for submitting proposals pursuant to this RFA is as provided in the table below.

**Anticipated CDS System RFA Schedule**

<b>Date</b>	<b>Activity</b>
May 6, 2016	DOH issues CDS System Request for Applications
June 3, 2016	Applicant submits Letter of Intent to DOH primary contact.
June 10, 2016	Technical Assistance Meeting Held
June 17, 2016	Applicants may submit proposals on SAGE
July 7, 2016	RFA Response Closing Date. Proposals received after this date and time will not be accepted.
September 28, 2016	DOH sends Notice of Intent to Award

**4.2 Eligible Applicants**

Eligible applicants are horizontally integrated healthcare organizations that have two (2) or more acute care, specialty care, or psychiatric care facilities that operate in New Jersey.

**4.3 Primary Contact**

The name, address, and contact information for the Primary Contact for this RFA are as follows:

LorieAnn Wilkerson-Leconte, MPH  
NJ Department of Health  
Division of Family Health Services  
PO Box 364  
Trenton, NJ 08625-0364  
LorieAnn.Wilkerson-Leconte@doh.state.nj.us

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### 4.4 Letter of Intent

Interested Applicants must submit a Letter of Intent by 12pm EDT on June 3, 2016, via email to:

LorieAnn Wilkerson-Leconte, MPH  
NJ Department of Health  
Division of Family Health Services

LorieAnn.Wilkerson-Leconte@doh.nj.gov

### 4.5 Proposal Submission and Delivery

Applicant proposals should not exceed 25 pages (Calibri 12pt font, 1-inch margin, numbered pages). Applicants must submit a detailed project narrative, describing how the Applicant plans to meet each of the deliverables in Section 3 of this RFA. DOH will provide feedback and technical assistance to the awardee to finalize project management plan activities post-award.

To be considered, Applicant proposals must be responsive to all of the requirements of this RFA. Incomplete grant applications will not be considered and will be disqualified. All proposals must be submitted via the SAGE system

(<https://enterprisegrantapps.state.nj.us/NJSAGE/Login.aspx?APPTHEME=NJSAGE>) no later than 12:00pm EDT on July 7, 2016. Paper submissions will not be considered. **Please contact Lisa Esposito at [Lisa.Esposito@doh.nj.gov](mailto:Lisa.Esposito@doh.nj.gov) or (609) 999-9999 for assistance with SAGE.**

**Applications should be succinct, self-explanatory, and organized in the order outlined below:**

- A. **Identification of the Applicant:** name, street address, mailing address if different, email address, and telephone and facsimile numbers of the Applicant and the Applicant's proposed project manager.
- B. **Executive Summary:** a brief description of the proposed project including high-level process that will be used to develop the deliverables identified in Section 3 of this RFA.
- C. **Proposal:** a description of the approach and plans for accomplishing the work and deliverables outlined in Section 3 of this RFA that shows the Applicants' understanding of the requirements of this RFA and its ability to successfully complete the project within the one (1) year project period.
- D. **Organizational Capacity:** a description of the Applicant's organizational capacity to achieve the goals, objectives, and deliverables as detailed in Section 3 of this RFA. The Applicant should describe core project management to execute the award, including the roles and responsibilities of project staff. The Applicant should identify its Project Manager's ability to lead and manage the project to successful execution of the deliverables in Section 3 of this RFA; monitor the project's on-going progress; prepare and submit plans, reports, and performance measures; and facilitate communication with

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partners. The Applicant also should provide information about any contractual organization(s) that will have a significant role(s) in meeting the RFA deliverables.

**E. Readiness to Implement:** a description of the Applicant’s readiness to design, develop, implement, and measure CDS System performance.

**F. Budget:** DOH will award up to \$160,000 to one (1) successful Applicant for this project. Only actual costs incurred for the activities, deliverables, and services outlined in this RFA will be reimbursed. The Applicant must complete the Budget Sheet in Chart 2 of this RFA. DOH will issue deliverables-based payments for the design, development, implementation and performance measurement a CDS System for control of blood pressure and diabetes A1C levels. Applicants must complete the budget chart below for the CDS System deliverables to denote anticipated completion date and cost reimbursement amount for each deliverable.

**Chart 2: CDS System Budget**

<b>CDS System Deliverable</b>	<b>Estimated Completion Date</b>	<b>Deliverable Cost</b>
<b>Deliverable 1:</b> Project Management Plan		\$0
<b>Deliverable 2:</b> CDS System Assessment		\$0
<b>Deliverable 3A:</b> Blood Pressure Control “As Is” Workflow & “To Be” Workflow		\$0
<b>Deliverable 3B:</b> Diabetes Control “As Is” Workflow & “To Be” Workflow		\$0
<b>Deliverable 4:</b> Action Plan		\$0
<b>Deliverable 5:</b> Report of CDS System Automation Tools Implemented		\$0
<b>Deliverable 6A:</b> Post-Deployment Report		\$0
<b>Deliverable 6B:</b> Quarterly Monitoring Report		\$0
<b>Deliverable 6C:</b> Monthly Reporting of Performance Measures in Chart 1 through June 30, 2017		\$0
<b>Total CDS System Cost</b>		<b>\$0</b>

**Applications that do not meet the above submission criteria will not be considered and will be rejected.**

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**5.0 PROPOSAL EVALUATION**

In scoring applications, eligible applications will be evaluated against the following criteria during review:

- A. Applicant's Proposal and its compliance with RFA requirements. (45 points)
- B. Applicant's organizational capacity to perform the work required by the RFA, as presented in its proposal. (25 points)
- C. Applicant's readiness to implement a CDS System for diabetes and blood pressure control. (25 points)
- D. Applicant's cost proposal. (5 points)