

## **Report to Stakeholders: Year 2**

Domain 2, Strategy 3: Increase the Use of Team-Based Care in Health Systems

Arizona Department of Health Services  
Division of Public Health Prevention Services  
Research and Development

November 6, 2015



## TABLE OF CONTENTS

---

INTRODUCTION .....	3
OVERVIEW OF YEAR TWO HEART DISEASE ACTIVITIES.....	4
METHODOLOGY .....	4
EXTERNAL STAKEHOLDERS SURVEY .....	4
PROCESS EVALUATION TOOL .....	5
EVALUATION COMMITTEE .....	5
RESULTS OF PROCESS EVALUATION .....	5
FEEDBACK FROM EXTERNAL STAKEHOLDERS.....	5
QUALITATIVE EVALUATION FROM THE UNIVERSITY OF ARIZONA .....	8
COMPLETED PROCESS EVALUATION TOOL FROM COMMITTEE MEETING.....	9
SNAPSHOT OF PERFORMANCE MEASURES .....	11
SHORT-TERM.....	11
INTERMEDIATE PERFORMANCE MEASURES .....	13
LONG TERM PERFORMANCE MEASURES.....	14
DISCUSSION AND CONCLUSIONS.....	15
STATUS OF PROCESS AND OUTCOMES AGAINST TARGETS.....	16
RECOMMENDATIONS .....	16

This publication was supported by Grant number: 5U58DP004793-02, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

## TABLES

---

Table 1: Adequate training was provided to clinical and non-clinical providers at the CHCs in the following areas:.....	6
Table 2: Adequate technical assistance was provided to clinical and non-clinical providers at the CHCs in the following areas:.....	6
Table 3: Systems are in place to sustain project efforts .....	6
Table 4: In your experience working on this project to increase use of team-based care in health systems, what has gone well? (verbatim).....	7
Table 5: What barriers have you faced while working on this project? (verbatim) .....	7
Table 6: Did you seek assistance for the problems and barriers you faced? .....	7
Table 7: What suggestions do you have to improve program implementation in future years? (verbatim) .....	8
Table 8: Process tool with Consensus ratings.....	9
Table 9: Proportion of health care systems with policies or systems to encourage a multi-disciplinary team approach to blood pressure control.....	11
Table 10: Proportion of health care systems with policies or systems to encourage a multi-disciplinary team approach to A1C control.....	12
Table 11: Proportion of patients that are in health care systems that have policies or systems to encourage a multi-disciplinary approach to blood pressure control .....	12
Table 12: Proportion of patients that are in health care systems that have policies or systems to encourage a multi-disciplinary approach to A1C control .....	12
Table 13: Proportion of adults with high blood pressure in adherence to medication regimens.....	13
Table 14: Proportion of adults with diabetes in adherence to medication regimens.....	13
Table 15: Proportion of patients with high blood pressure that have a self-management plan .....	14
Table 16: Proportion of adults with known high blood pressure who have achieved blood pressure control.....	14
Table 17: Decreased proportion of PWD with A1C >9.....	15
Table 18: Age-adjusted hospital discharge rate for diabetes as any-listed diagnosis per 1,000 persons with diabetes .....	15

## INTRODUCTION

The Arizona Department of Health Services (ADHS) was awarded a grant from the Centers for Disease Control and Prevention under *CDC FOA-RFA-DP13-1305: State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors, and Promote School Health* (CDC 1305-Public Health in Action). The grant is a five year project, with Year 1 beginning on June 30, 2013, and has both basic and enhanced components.

The purpose of the grant is to support state health departments which implement targeted strategies resulting in measureable impacts addressing school health, nutrition and physical activity, obesity, diabetes, and heart disease and stroke prevention. In addition the grant supports the development of core public health activities in states including partnership engagement, workforce development, guidance and support for programmatic efforts, strategic communication, surveillance & epidemiology, and evaluation. There are twenty-one strategies under the basic and enhanced components of the grant, and ADHS is implementing all of them. Both components utilize four domains, as prescribed by the CDC: 1) Epidemiology and surveillance; 2) Environmental approaches that promote health and support and reinforce healthful behaviors; 3) Health system interventions to improve the effective delivery and use of clinical and other preventive services; and 4) Community-clinical linkages to support cardiovascular disease (CVD) and diabetes prevention and control efforts and the management of chronic diseases. Although the CDC is highly prescriptive in the strategies and interventions which will be administered within each domain; ADHS is encouraged to be innovative in the approach used to administer the intervention.

Evaluation implementation and planning are part of Domain 1. ADHS' evaluation plan for the grant has been developed according to the CDC Six Step Evaluation Framework<sup>1</sup>, taking into account a combination of frameworks and methods to provide a uniquely appropriate set of organizing principles. The plan is sensitive to all phases of policy, system and environmental change from output measures to short, intermediate, and long-term outcomes. The overarching goal of the evaluation is to understand how activities are being implemented and how successful they are in meeting their objectives to achieve policy, system and environmental change. States are required to evaluate strategies in each of four categorical programs: school health, obesity, heart disease, and diabetes.

This report evaluates the collective Year 2 efforts of Domain 3 Strategy 2, which is to increase engagement of non-physician team members (i.e., nurses, pharmacists, and patient navigators) in hypertension and diabetes management in health care systems. It begins with a brief overview of activities and outlines the methodology used to evaluate them. Results from both process and outcome

---

<sup>1</sup> A Framework for Program Evaluation. Centers for Disease Control and Prevention, Program Performance and Evaluation Office.  
<http://www.cdc.gov/eval/framework/>

evaluations are presented, followed by a conclusions section, which discusses results, compares the status of process to outcomes measures, and offers recommendations for future years.

## **OVERVIEW OF YEAR TWO HEART DISEASE ACTIVITIES**

The categorical area of heart disease has strategies addressing health system interventions to improve the effective delivery and use of clinical and other preventive services; and community-clinical linkages to support heart disease prevention and control efforts. There were three heart disease strategies from which ADHS could choose to focus its evaluation. ADHS selected Domain 3 Strategy 2, which is to increase engagement of non-physician team members in hypertension and diabetes management in health care systems, and is currently in the adoption/start-up phase.

ADHS, in partnership with county health departments and the University of Arizona Prevention Research Center (AzPRC), funded a federally qualified health center (FQHC) to implement a community health worker (CHW) model for the identification and management of hypertension and diabetes. Curriculum development and multidisciplinary training on the effective integration and utilization of a team-based care model was provided by the AzPRC. Technical assistance was also provided to all clinic staff to incorporate public health strategies into practice such as: blood pressure and diabetes control, data-driven decision making for care improvement, use of electronic health records (EHR) for panel and population management, as well as services for self-management education and support.

## **METHODOLOGY**

A team approach to evaluation involving both internal and external stakeholders has assisted ADHS in understanding how activities are being implemented and how that relates to the targets set for CDC performance measures. Information was gathered from external stakeholders to get the point of view of partners who were actually implementing strategies in the field and to ensure that emergent issues were incorporated into future evaluation. Internal stakeholders' perspectives were also incorporated and discussed by a heart disease evaluation committee, who reviewed external stakeholder input and evaluated it in the context of overall grant goals and objectives.

### **EXTERNAL STAKEHOLDERS SURVEY**

The evaluation team met with ADHS heart disease and stroke program staff to identify external stakeholders who played a role in partnering with ADHS on strategy specific activities. An invitation was extended via email to the external stakeholders to participate in an electronic survey using Survey Monkey that had both structured and open-ended questions, which was used to inform ratings in the process evaluation.

## PROCESS EVALUATION TOOL

In addition to the electronic survey questions, questions for ADHS program staff were compiled to create an overall process evaluation tool for strategy-specific activities and work plan milestones. Questions on the tool were asked in a format where responses can be numerically coded to allow the evaluation team to quantify responses into an overall process implementation score. The process evaluation tool for this strategy has 42 possible points when all components of the process are fully implemented.

## EVALUATION COMMITTEE

Each ADHS program staff member, who was selected as a member of the heart disease evaluation committee, was sent a progress report that contained relevant information from the external stakeholder survey input and any performance measure data that was available. The committee was asked to review the process evaluation tool and gave each component a preliminary rating from their experience, their review of the work plan progress, and the information presented in the progress report. The committee met and agreed on a consensus rating for each component, using the following rating scheme:

Rating	Description	Use rating when . . .
3	Fully implemented	Component is accomplished in all targeted settings.
2	Substantially implemented	Component is fully accomplished in many but not all settings, or is nearly accomplished in most settings.
1	Partially implemented	Some or all partners have begun to implement, but have not yet made substantial progress.
0	Not at all implemented	Partners have not begun to implement.

## RESULTS OF PROCESS EVALUATION

### FEEDBACK FROM EXTERNAL STAKEHOLDERS

The ADHS heart disease program manager identified six contacts to invite to participate in an electronic survey for external partners. There were a total of four respondents: two county health department staff and two clinic staff members. Respondents were asked to rate each of the following components (Tables 1-3) according to whether they felt the component was implemented fully, substantially, partially, or not at all.

<b>Table 1: Adequate training was provided to clinical and non-clinical providers at the CHCs in the following areas:</b>					
	Fully	Substantially	Partially	Not at all	Total
Blood pressure and diabetes control	2	1	0	0	3
Effective team building	1	1	1	0	3
Use of EHR to manage clinic patient population	0	2	1	0	3
Linkage to community-based care	0	3	0	0	3
Services for self-management education and support	3	0	0	0	3

<b>Table 2: Adequate technical assistance was provided to clinical and non-clinical providers at the CHCs in in the following areas:</b>					
	Fully	Substantially	Partially	Not at all	Total
Blood pressure and diabetes control	1	2	1	0	4
Effective team building	0	3	1	0	4
Use of EHR to manage clinic patient population	0	1	3	0	4
Linkage to community-based care	0	3	1	0	4
Services for self-management education and support	2	2	0	0	4

<b>Table 3: Systems are in place to sustain project efforts</b>	
Fully	0
Substantially	2
Partially	2
Not at all	0
Total	4

Respondents were also asked open-ended questions regarding strengths and barriers faced as they relate to this team-based care project. Responses are listed verbatim in Tables 4 and 5. Table 6 asks those that reported barriers whether or not they sought assistance and how helpful, timely, and satisfied they were with the assistance received. Table 7 lists verbatim suggestions for improvement.

<b>Table 4: In your experience working on this project to increase use of team-based care in health systems, what has gone well? (verbatim)</b>
The CHW Training
Working on a medical team has gone well for me.
I believe what has gone well is the introduction of this kind of dialogue into our clinic. Though some many not, a lot of people actually see the value of CHWs within the Medical Home model we're trying to build. I feel that at least now there is a sense of awareness as to why CHWs are an important aspect of a clinic. As for the patients, I feel that many patients who have needed more 1 on 1 help and guidance have received that because of this grant. I cannot speak for every patient but it seems like the majority saw some kind of improvement with their blood pressures or A1Cs. This is the goal we're trying to reach for our patients.

<b>Table 5: What barriers have you faced while working on this project? (verbatim)</b>
Lack of administrative support by the grantee; all reports are routinely submitted late.
There are many barriers, one is that when an individual wants to do something their own way, etc.
On a systematic level there have been many issues in house that I believe have worked against us in trying to establish a firm position in this clinic. Conflicting visions of what role we're supposed to play, lack of communication from higher ups, dwindling support from IT, and an overall lack of understanding of what our overarching roles should be. With patients, it has been difficult to get many to come back. As is with anything related to health care, you will only be as successful with a patient if the patient is compliant and eager to work alongside you. Often times they will do well, then drop off. Other times they will believe to know everything (for a variety of reasons) and undermine our work. Regardless as a whole, there has been a major improvement in diabetes and hypertension self management.

<b>Table 6: Did you seek assistance for the problems and barriers you faced?</b>	
Yes	2
No	1
<b>Overall, how helpful was assistance you received?</b>	
Very helpful	1
Helpful	1
<b>Overall, how timely was the assistance you received?</b>	
Very timely	1
Not timely at all	1
<b>Overall, how satisfied were you with assistance you received?</b>	
Very satisfied	1
Satisfied	1

<b>Table 7: What suggestions do you have to improve program implementation in future years? (verbatim)</b>
Make provisions upfront that any grantee who does not submit reports longer than 90 days will not be considered for an extension of this grant.
Have a clear understanding the CHW curriculum, have a supervisor that works alongside you and makes themselves available when in need to assistance, have equal support for both clinics and have a better way of incorporation within the clinic environment without the fear of a CHW taking another employee's job away.

**QUALITATIVE EVALUATION FROM THE UNIVERSITY OF ARIZONA**

ADHS contracted with the AzPRC to conduct a mid-project qualitative evaluation with clinic staff to reflect current successes and challenges in developing an integrated system of care for hypertension and diabetes. Interviews were completed with eighteen staff members at two clinic sites.

Overall, staff felt CHWs were a valuable addition to the clinic and healthcare team. Responses varied regarding the perceptions, and therefore expectations, of the role of a CHW in the clinic setting. CHWs were primarily seen as patient educators, and expected to work one-on-one with designated patients. Clinic staff that worked most closely with CHWs, such as medical assistants and clinical care coordinators, observed positive outcomes with patients in the area of lower blood pressure, lower glucose, medication compliance, and increased knowledge of nutritional management.

Staff expressed challenges faced with initiation, implementation, and sustainability of the program. Administrative support and engagement in the project shifted at the start of implementation, as the clinic's medical director who championed the grant resigned. The new leadership was unfamiliar with the original grant action plan and had a different vision for CHW roles and clinic priorities. Clinic IT processes were also mentioned as a barrier. The electronic scheduling system, the clinics' firewall, and internal referral communication processes made it difficult for CHWs to be visible and responsive to the team and to patients. Time and length of the project was reported as a limitation.

The CHWs were new to their roles and they were expected to learn core competencies in a short timeframe. Training and preparation of CHWs to deliver services delayed start-up of the project. The first series of classes was not delivered until March 2015. Lastly, the clinic had a difficult time reaching 250 participants with their workload and timeline. It was expressed by clinic staff the importance of prioritizing the quality of systems in place rather than quantity of participants.

The CHWs gained experience and knowledge throughout the process, and were flexible and creative in responding to patient information and support needs, while competing with team and clinic demands. The two newly hired CHWs had a projected end date of June 2015, which was the end of the grant year. While this project was intended to integrate CHWs into the clinic as permanent members of the health care team, the classification of the positions as temporary limited potential for sustainability.

### COMPLETED PROCESS EVALUATION TOOL FROM COMMITTEE MEETING

All data related to the strategy, including external stakeholder feedback, was analyzed by the evaluation team and presented to the heart disease evaluation committee. Together, the committee reviewed the documentation and completed a process evaluation tool. The consensus of this committee resulted in the ratings shown below in Table 8. Ratings are defined as follows: “Fully” is scored as a 3, “Substantially” as a 2, “Partially” as a 1, and “Not at all” as a 0. A total score of 22 out of 42 was assigned for a percent score of 52%.

<b>Table 8: Process tool with Consensus ratings</b>	
Component	Rating
1. Partnerships formed with Community Health Center(s) (CHC)	2
2. Adequate training on the following was provided to clinical and non-clinical providers at the CHCs:	
a. Blood pressure and diabetes control?	3
b. Effective team building?	0
c. Use of electronic health records (EHR) to manage clinic patient population?	0
d. Linkage to community-based care?	0
e. Services for self-management education and support?	3
3. Adequate technical assistance on the following was provided to clinical and non-clinical providers at the CHCs:	
a. Blood pressure and diabetes control?	2
b. Effective team building?	2
c. Use of electronic health records to manage clinic patient population?	1
d. Linkage to community-based care?	2
e. Services for self-management education and support?	2
4. CHC implemented the CHW/Team model	2
5. Completed scope of work with University of Arizona for supportive Community Health Worker (CHW) training and evaluation	3
6. Provided training for CHWs in the area of hypertension and diabetes	Not added to total score

7. Sustainability when government money runs out/systems in place to sustain effort	0
Total Score:	22
Total Score / 42 Possible Points = Percent Score:	52%

The committee rated component 1, partnerships formed with the CHC, as “Substantially.” The group had discussions around the definition of the word “formed.” Some believed a relationship was established because a contract was signed. Others believed the clinic was never fully invested and on board. They agreed the partnership was not what they had hoped. One stakeholder stated, “Boxes were checked but there is no maintenance of the process.”

Component 2 asks whether adequate training was provided at the CHC in the areas of: a) blood pressure and diabetes control, b) effective team building, c) use of EHRs to manage clinic patient population, d) linkage to community-based care, and e) services for self-management education and support. The first subcomponent 2a was rated “Fully.” The consultant added that the training was well-attended.

The program manager informed the committee that the process tool questions were designed prior to the implementation of the program, and the program manager’s original intentions were to gauge which of the types of trainings and technical assistance might be of use to their partners early on in the process. Therefore, some of the areas of training listed were not provided. Components 2b, 2c, and 2d were rated “Not at all” by the committee because none of the trainings actually occurred. It is interesting to note that respondents still gave those a rating of “Substantially” on the electronic survey. The committee members indicated that training for blood pressure and diabetes control, component 2a, was a grant requirement while the other three trainings were not. Component 2e, training on self-management education and support was rated “Fully.” The committee reported that the clinic had some capacity on this component prior to the project and were able to enhance those efforts.

Component 3, which addresses adequate technical assistance provided, has the same five areas as component 2 above. All but one subcomponent was rated “Substantially.” Subcomponent 3c, which asks whether adequate technical assistance was provided regarding EHRs, was rated “Partially.” Reaching an agreement on the ratings for these components spurred a discussion regarding the format in which the training and technical assistance questions were asked.

Component 4 asks whether the CHC implemented the CHW model. The group stated that the clinic was still in the awareness/capacity stage. The committee gave it a rating of “Substantially.” Program staff said that the scope of work with the AzPRC was completed and a rating of “Fully” was assigned for component 5. Component 6 is a duplicate of component 2a and was not included in the total score.

Component 7 was rated as “Not at all” because there has been no commitment by the CHC to sustain the CHW chronic disease program after the funding year. The most significant sign of the clinic’s lack of commitment was the leadership decision to remove the chronic disease CHW positions at the end of the grant year.

## SNAPSHOT OF PERFORMANCE MEASURES

### SHORT-TERM

#### **m 3.2.01: Proportion of health care systems with policies or systems to encourage a multi-disciplinary team approach to blood pressure control**

Data Source: HRSA-Uniform Data System (UDS) website and State Tracking Tool

Approach: The CDC requested grantees to determine their definition of targeted healthcare systems for performance measures related to both strategies in Domain 3. Twenty-six individual FQHCs, non-FQHCs and county health departments were designated as potential locations for the CHW model to be implemented. There were already two healthcare systems that had implemented team-based care, therefore, the baseline was set at 8% (2/26). In Year 2, targeted FQHC has successfully utilized the team-based care approach to blood pressure control.

<b>Table 9: Proportion of health care systems with policies or systems to encourage a multi-disciplinary team approach to blood pressure control</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	8%	19%		31%
<b>Actual</b>	8%	11%			

#### **m 3.2.02: Proportion of health care systems with policies or systems to encourage a multi-disciplinary team approach to A1C control**

Data Source: HRSA-Uniform Data System (UDS) website and State Tracking Tool

Approach: The CDC requested grantees to determine their definition of targeted healthcare systems for performance measures related to both strategies in Domain 3. Twenty-six individual FQHCs, non-FQHCs and county health departments were designated as potential locations for the CHW model to be implemented. There were already two healthcare systems that had implemented team-based care, therefore, the baseline was set at 8% (2/26). In Year 2, targeted FQHC has successfully utilized the team-based care approach to blood pressure control. Table 10 shows Arizona’s targets and actual performance to date.

<b>Table 10: Proportion of health care systems with policies or systems to encourage a multi-disciplinary team approach to A1C control</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	8%	19%		31%
<b>Actual</b>	8%	11%			

**m 3.2.03: Proportion of patients that are in health care systems that have policies or systems to encourage a multi-disciplinary approach to blood pressure control**

Data Source: HRSA-Uniform Data System (UDS) website and State Tracking Tool

Approach: Clinic reports and websites with listed patient volume were used to estimate the number of patients within the 26 healthcare systems selected in performance measure 3.2.01. Table 11 shows Arizona's targets and actual performance to date.

<b>Table 11: Proportion of patients that are in health care systems that have policies or systems to encourage a multi-disciplinary approach to blood pressure control</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	6%	8%		33%
<b>Actual</b>	6%	6%			

**m 3.2.04: Proportion of patients that are in health care systems that have policies or systems to encourage a multi-disciplinary approach to A1C control**

Data Source: HRSA-Uniform Data System (UDS) website and State Tracking Tool

Approach: Clinic reports and websites with patient volume were used to estimate the number of patients within the 26 healthcare systems selected in performance measure 3.2.02. Table 12 shows Arizona's targets and actual performance to date.

<b>Table 12: Proportion of patients that are in health care systems that have policies or systems to encourage a multi-disciplinary approach to A1C control</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	6%	8%		33%
<b>Actual</b>	6%	6%			

## INTERMEDIATE PERFORMANCE MEASURES

### **m 3.2.07: Proportion of adults with high blood pressure in adherence to medication regimens**

Data Source: University of Arizona Contractor Reports

Approach: In Year 2, a target was set by ADHS program staff for 50% of enrolled participants (n=200) to be in adherence with their blood pressure medications. Ninety-five percent of participants were adherent in Year 2. For Year 3, the university intends to add 50 additional participants to the cohort and have readjusted their targets accordingly. Table 13 shows Arizona’s targets and actual performance to date.

<b>Table 13: Proportion of adults with high blood pressure in adherence to medication regimens</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	50%	88%		96%
<b>Actual</b>	0%	95%			

### **m 3.2.08: Proportion of adults with diabetes in adherence to medication regimens**

Data Source: University of Arizona Contractor Reports

Approach: In Year 2, a target was set by ADHS program staff for 50% of enrolled participants (n=200) to be in adherence with their diabetes medication. Ninety-four percent of participants were adherent in Year 2. For Year 3, the university intends to add 50 additional participants to the cohort and have readjusted their targets accordingly. Table 14 shows Arizona’s targets and actual performance to date.

<b>Table 14: Proportion of adults with diabetes in adherence to medication regimens</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	50%	86%		95%
<b>Actual</b>	0%	94%			

### **m 3.2.09: 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 food and beverages, increased physical activity, maintaining medical appointments)**

Data Source: Maricopa County Contractor Reports

Approach: Although the CHC had implemented the CHW model within their clinic, the clinic did not report data on this performance measure. Therefore, a target of 50% was not met in Year 2.

<b>Table 15: Proportion of patients with high blood pressure that have a self-management plan</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	50%	50%		75%
<b>Actual</b>	0%	0%			

## LONG TERM PERFORMANCE MEASURES

### **m 3.2.10: Proportion of adults with known high blood pressure who have achieved blood pressure control**

Data Source: Maricopa County Contractor Reports

Approach: Based on current data for patients with high blood pressure control from the Arizona FQHC website, a target of 62% was set for Year 2. The Year 2 actual reflects data collected from one healthcare system. There were 85 hypertensive participants of which 50 had blood pressure readings less than 140/90. Table 16 shows Arizona’s targets and actual performance to date.

<b>Table 16: Proportion of adults with known high blood pressure who have achieved blood pressure control</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	62%	62%		75%
<b>Actual</b>	0%	60%			

### **m 3.2.11: Decreased proportion of PWD with A1C >9**

Data Source: Maricopa County Contractor Reports

Approach: Based on current data for patients with diabetes control from the Arizona FQHC website, a target of 66% was set for Year 2. The Year 2 actual reflects data collected from one healthcare system. There were 135 diabetes participants of which 85 had a documented A1C of less than 9%. Table 17 shows Arizona’s targets and actual performance to date.

<b>Table 17: Decreased proportion of PWD with A1C &gt;9</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	66%	66%		75%
<b>Actual</b>	0%	63%			

**m 3.2.12: Age-adjusted hospital discharge rate for diabetes as any-listed diagnosis per 1,000 persons with diabetes**

Data Source: Hospital Discharge Database (HDD) and Behavioral Risk Factor Surveillance System (BRFSS)

Approach: A baseline was set by calculating the age-adjusted rate using 2012 HDD and US Census population numbers. Year 2 and Year 5 targets were set based on the baseline calculation. Year 2 actual was reported using 2013 HDD and the US Census population. Year 3 and Year 5 targets were readjusted based on Year 2 actual data. Table 18 shows Arizona’s targets and actual performance to date.

<b>Table 18: Age-adjusted hospital discharge rate for diabetes as any-listed diagnosis per 1,000 persons with diabetes</b>					
	Baseline	Year 2	Year 3	Year 4	Year 5
<b>Targets</b>	N/A	210 per 1000 persons	237 per 1000 persons		220 per 1000 persons
<b>Actual</b>	228 per 1000 persons	257 per 1000 persons			

## DISCUSSION AND CONCLUSIONS

The clinic faced several challenges in their efforts to create a CHW integrated system of care for hypertension and diabetes. Clinic leadership changed between the time of the contract and project initiation, which influenced the hiring of CHWs, the development of the curriculum, and conducting trainings. With limited time, the clinic adjusted to new leadership, new technology, loss of key staff, limitations with internet access, and the development of a new curriculum. There was also clear frustration among staff with scheduling, availability of CHWs, limited understanding of their roles, and communication obstacles throughout the clinic setting.

The external stakeholders that responded to the survey reported positive feedback on curriculum, trainings, and technical assistance. EHR trainings and technical assistance were rated the lowest by participants, which coincides with the reported obstacles faced on submitting grant deliverables. While

this project was intended to integrate CHWs into the clinic as permanent members of the health care team for chronic illness, the temporary nature of the position demonstrates the need for ongoing funding or reimbursement to support CHW positions. This continues to be a barrier in sustaining these strategies over time.

## **STATUS OF PROCESS AND OUTCOMES AGAINST TARGETS**

Arizona has met targets in Year 2 for short term performance measurement regarding the implementation of team-based care models within healthcare systems. Due to issues with clinic IT and EHR capabilities, there have been delays in contractor reporting. As a result, Arizona did not report on appropriate performance measures for the Annual Progress Report in February. Since then the county health department derived data from an audit of CHC records and produced data on measures National Quality Forum (NQF) 18 and 59. ADHS is in the process of procuring the final long-term performance measure. Although it is early to be assessing intermediate or long-term change based on Year 2 actual data, 3-year and 5-year targets were adjusted.

## **RECOMMENDATIONS**

The project faced many obstacles in the first year of implementation. The lessons learned will be used to inform Year 3 processes. The importance of CHWs becoming formally engaged as a permanent member of the team was apparent in the first years' findings. The targeted clinic should create clear descriptions at project onset of CHWs work within the team and clinic, in order for all clinic staff to understand the diverse roles they can play within a clinic and community. Another recommendation would be to decrease the number of enrolled participants in the study. ADHS requested in their contract that the clinic enroll 250 participants. Based on the consultants' qualitative evaluation, the clinic experienced difficulty reaching this number. It is important for clinic staff to prioritize the quality of systems in place rather than quantity of participants.

Due to numerous challenges faced after consulting with the CDC, it is recommended that ADHS and its county health department contractor discontinue working with this clinic in Year 3. Although ADHS has received timely and consistent program updates from the county health departments, there has been limited and delayed reporting of activities from the clinic. In Year 3, it is recommended that the county health department target a different health care system with lessons learned in mind.

In addition to these recommendations, in Year 3 the evaluation team will include all projects funded within this strategy in the process evaluation. The Year 2 evaluation does not fully assess the efforts of the entire strategy, which is to increase engagement of non-physician team members in hypertension and diabetes management in health care systems. ADHS also funds a project with the University of Arizona College of Pharmacy, in which pharmacists utilize a team-based care model to assist patients in

the management of their chronic conditions. The evaluation team has already extended an invite to the project administrators to be included in the Year 3 process evaluation of this strategy.