TITLE:

Building Community Support for Diabetes

Tool-Kit

Community Collaboration

We Founded the:

- **Diabetes Community Resource Center (DCRC)**
- **And Created the DCRC Community-Based Care Model**

Program was supported by Comunity Health Workers (CHWs)

Community Partners:

- **AstraZeneca**
- **Kaiser**
- **IPDC**

November 2019

AstraZeneca

Purpose of the Tool-Kit

- The Tool-Kit includes the information necessary to allow it to be effectively implemented in a similar setting and for comparable population by someone other than the program developer.
- We highlight a selection of the many innovative and successful activities in the DCRC project entitled: "Building Community Support for Diabetes" and implemented by a collaborative cross-sector partnership
- The activities are to improve the care and health-outcomes for high risk and vulnerable populations.

Goal:

The Goal of the DCRC project is to improve cardio-metabolic health and outcomes, in high-risk patients while targeting social determinants of health.

Objectives:

1	**Build effective partnership and communication pathways: utilizing key-stakeholders and community-based partnerships**
2	**Appropriately identify and screen eligible patients and develop an efficient mechanism for improving screening and target patients for community engagement**
3	**Increase cardio metabolic patients' self-management skills while eliminating SDOH barriers to outcome and gaps in patient needs**

TABLE OF CONTENTS:

BACKGROUND:

The escalating problem of diabetes: including worsening outcomes among minority, high-risk and vulnerable populations, and the associated high health care costs for avoidable hospitalizations and Emergency Department (ED) visits are now considered to be a major Public Health and Medical Challenge confronting Health Systems in the 21st century. Evidence suggests that what is needed to address this complex health problem are: multiple stakeholders (including health plans, health systems, foundations, community-based organizations, health care providers, non-profit organizations (that support increased access to community resources), and outreach and engagement provided by Community Navigators) working in concert with individuals and families to develop new mechanism to tackle the complex health challenges at a community level with shared accountabilities.

In an effort to address this complex problem, AstraZeneca, Kaiser Permanente and the International Pre-Diabetes Center (three key-stakeholders) joined forces, created a partnership and founded the Diabetes Community Resource Center (DCRC). The primary goal of the partnership was to collaborate, develop and test: innovative, action-oriented, strategies for maximizing care-coordination, improving chronic disease self-management, quality of life among targeted place-based community population and individuals with persistently poor outcomes for diabetes, despite usual or routine diabetes care.

The DCRC Model was developed and tested and this Tool-Kit is a reflection of that work. The Tool-Kit summarizes and highlights the focus areas and results of that collaboration on the target population.

The partnership and resulting collaborations was a most logical next step, as all three stake-holder organization: share a common Mission to improve the health and quality of life of the communities they serve.

TARGET AUDIENCE FOR THE TOOL-KIT:

The target audience for this Tool-Kit includes: health systems seeking to improve the health of communities they serve, hospital administrators and health management organizations for chronic diseases, including population care management: with a need for patient individualization in complex care management, physicians, nurses, allied health professionals (including Community Navigators), medical schools and other health care training requiring community service learning to improve management of complex patients or to better understand the role of community based organizations in complex

patient care management and in addressing social determinants of health; Federally Qualified Community Health Centers, Community Health Centers, Local Health Departments, other safety net clinics, non-profit community-based organizations and other organizations serving vulnerable and high-risk populations with resources for un-met needs.

STRUCTURE OF THE TOOL-KIT

The information in the Tool-Kit is organized to highlight the strategies selected to achieve the program's goal and objectives. Data is collected and evaluated to determine the effectiveness of the program. Core features for program success and best practices are highlighted. We discuss some of the challenges that were encountered during the project period and present our solutions for overcoming the challenges/barriers. We present the core features that we have determined to be required for the success of the program. We hope that the Tool-Kit will be used to improve outcomes for comparable high risk and vulnerable populations in other chronic diseases and settings impacted by poor health outcomes and high health care costs.

SELECTION CRITERIA: INTERVENTIONS FOR THE TOOL-KIT

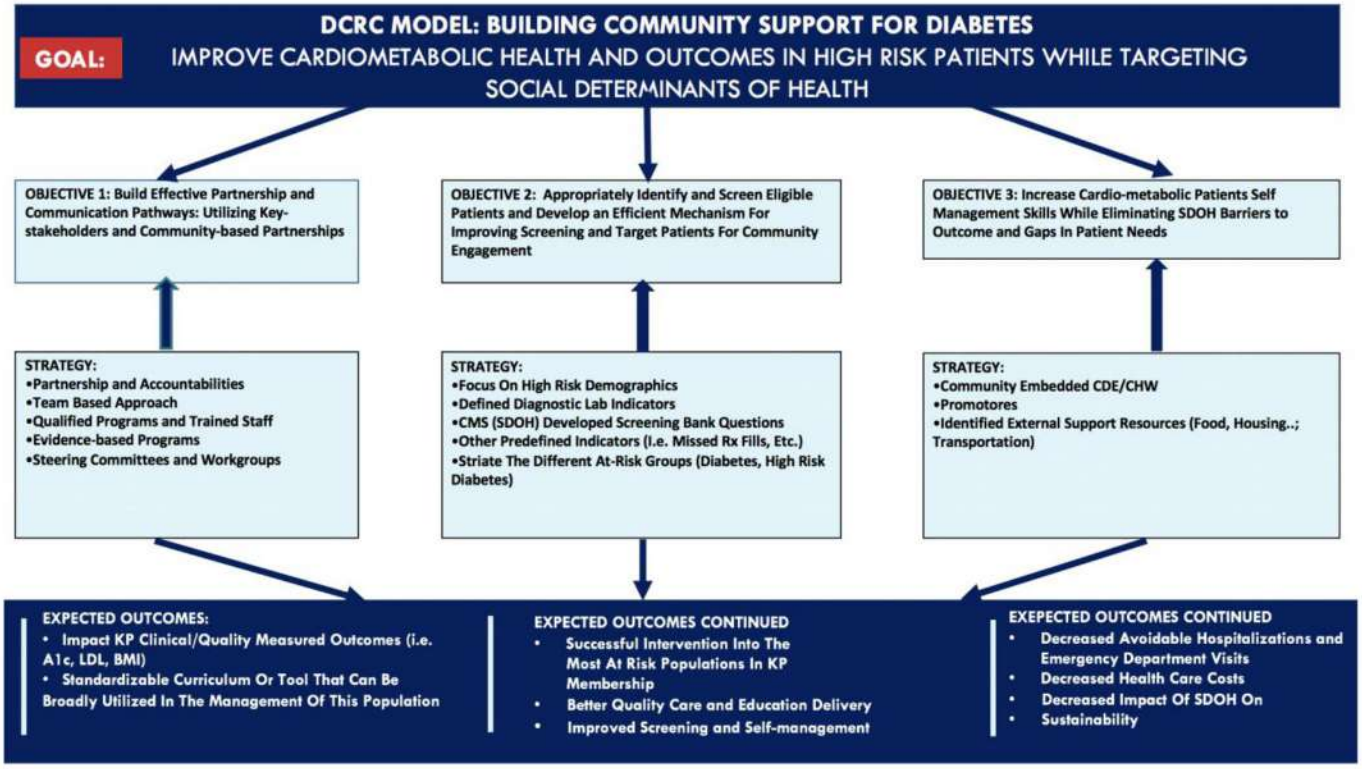
We selected activities from the DCRC Collaborative: Entitled "Building Community Support for Diabetes", based on the following inclusion criteria:

The activity:

- Address goals and objectives outlined in the strategic framework
- Is Innovative as demonstrated by one of the following:
  - Identification of new approaches in training Community Navigators to increase patient engagement in self-care behaviors,
  - Screening for un-met social needs, providing peer-support and linkages to community resources for –un-met needs.
  - Use of new technology or using technology in a new way to provide more efficient service or improved care
  - Address the needs of high risk and or vulnerable population
- Has a broad impact
- Positive impact on quality, safety and cost

- Potential for replicating the model in other facilities or communities for comparable population and other chronic diseases
- Evidence of scalability where applicable.

DCRC MODEL: BUILDING COMMUNITY SUPPORT FOR DIABETES



NEED FOR COMMUNITY PROGRAM AND PARTNERSHIP

Health systems and providers are facing increasing demands to provide more quality individualized care, while lack of time among providers and the illness burden among high risk and vulnerable patients only seem to grow.

Despite promising research evidence that shared commitment and a multi-sector partnership approach to promote chronic disease self-management and support services at the community level are effective, these partnerships and collaborations are rarely utilized.

Some patients despite usual and routine care for chronic disease management do not improve, and for numerous reasons including: psycho-social factors and un-met social needs that present challenges and barriers to self-care management.

To address the above challenges, three stakeholder organizations joined forces to:

- Pursue a shared interest in improving community health
- Promote approaches that screen and target most vulnerable populations to reduce disproportionate disparities that drive poor health outcomes.

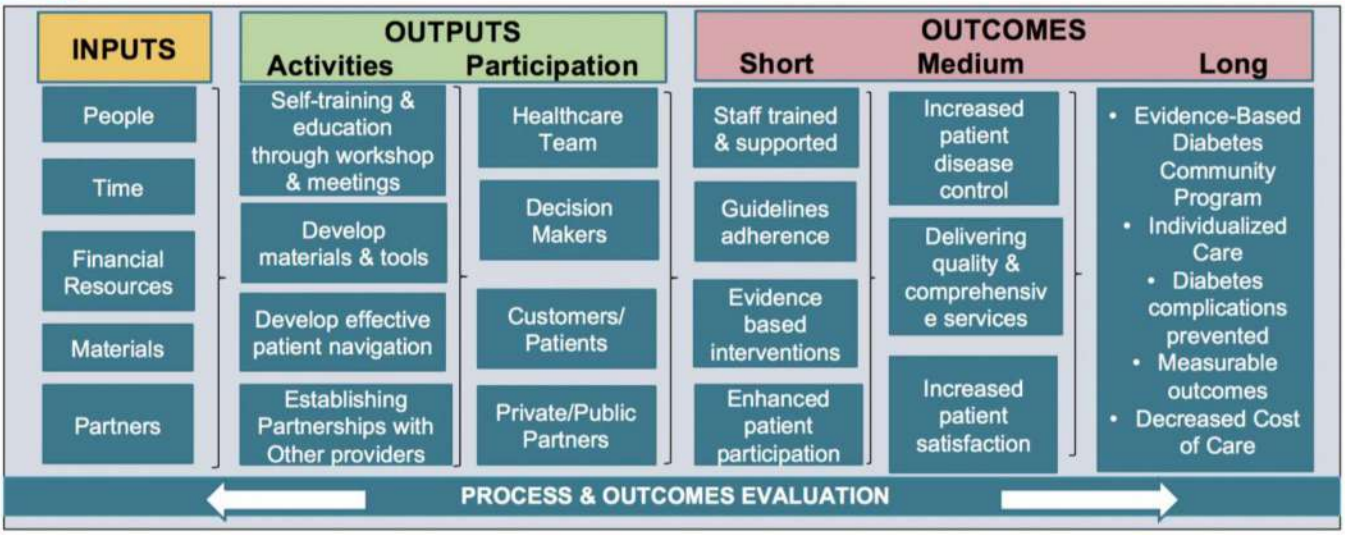
- Leverage resources to improve environment and community capacity in ways that are sustainable and produce measurable health outcomes
- Build community initiatives on a platform of governance, management, and adequate stable financing that assures continuity and sustainability.

LOGIC MODEL:

DCRC PROGRAM

Cardio-metabolic Self Management Education

Logic Model- DCRC Program



LOGIC MODEL AND THEORY USED (Guidelines)

Logic Model:

The program logic model describes the connections between the resources available, activities conducted, short-term outcomes, and long-term outcomes. In addition to the logic model, knowledge of the theory used to develop the program is critical in helping implementers understand how the program works to achieve its stated outcomes.

Theories Used:

1. Cross-Sector Community Collaborations: Complex health care problems engaging vulnerable populations are best solved in partnerships with multiple key stakeholders including Community Navigators, to screen for and align resources with un-met social needs
2. Collective Impact: A collective Impact Framework Approach with shared management and accountabilities is a best approach for solving complex health care problems and challenges.
3. Trained Community Navigators: who are from the local communities and are trusted by vulnerable populations can play a role in closing gaps for disproportionate health disparities in chronic diseases, poor health outcomes and high health care cost among high risk and vulnerable populations.

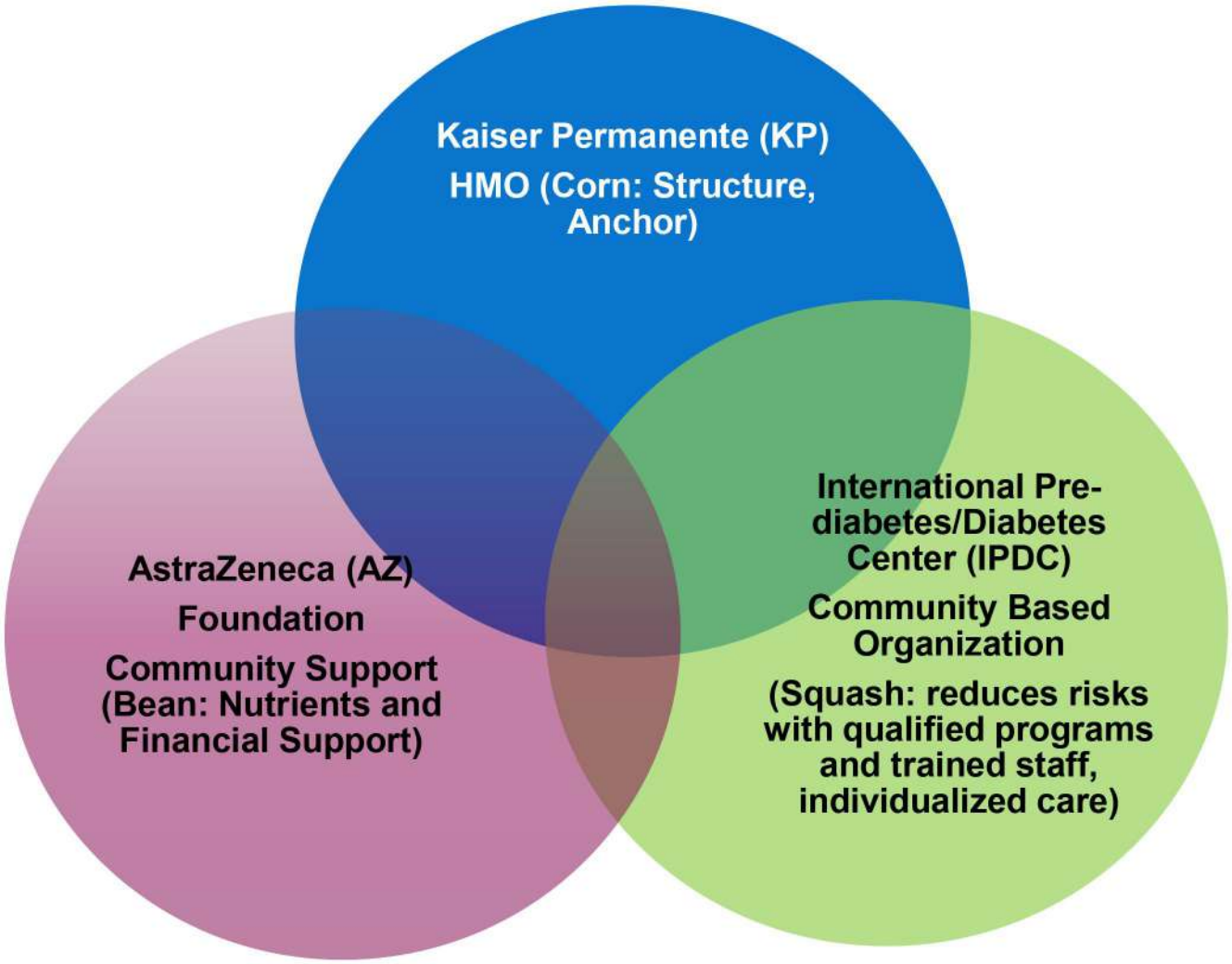
ACRONYMS & GLOSSARY OF TERMS:

Accredited Programs	Accredited or Recognized programs: that meet minimum standards and is eligible for reimbursement by CMS and most commercial insurance companies
ADA	American Diabetes Association
AADE	American Association of Diabetes Educators
AZ	AstraZeneca
CDC	Centers for Disease Control and Prevention
CN	Community Navigators
CMS	Centers for Medicare and Medical
DSME/T	Diabetes Self-Management Education/Training:
E.H.R	Electronic Health Record
Evidence-Based, Programs	**Programs** that have been rigorously tested in controlled settings, proven effective, and translated into practical models that are widely available to community-**based** organizations.
HIT	Health Information Technology
High-Risk Population	Populations with multiple chronic diseases, that are impacted by numerous psycho-social and or environmental factors
IPDC	International Pre-Diabetes center
KP	Kaiser Permanente
PDPTC	Pre-Diabetes Professional Training Center

Social Stressors	Include factors like socioeconomic status, education, neighborhood and physical environment, employment, and **social** support networks, as well as access to **health** care
SDoH	Social Determinants of Health
Standards-DSME/T	Incorporating the standards into practice are required for program Accreditation or Recognition
211-Community Resources	When **you dial 211** from almost anywhere in the United States or Puerto Rico, **you** are connected with a trained professional in your area who can connect **you** with resources and assistance for essential community services
Vulnerable Populations	Living below the 200% federal poverty level and having less than high school educational attainment

PARTNERSHIP: KEY STAKEHOLDERS

THREE SISTERS FRAMEWORK APPROACH*



PARTNERSHIP:

PARTNERSHIP STRUCTURE

*** A Three Sisters Framework Approach**:

is modeled from Agriculture in which three crops (corn, beans and squash) are planted together for optimal outcomes. The corn provides Anchor and Support, the beans uses the corn for anchor while the bean returns valuable nutrients to the soil. The squash with large leaves provides protection by shading the soil and supports retention of moisture to benefit all three crops. This synergistic approach has greater benefit to the larger community. The entire community contributes to sustainability. Problem solving is intuitive and is based on the need of the larger community

GOVERNING

Definition: Collective Impact

- A structured approach for making collaborations work across multiple sectors: health-systems, providers, non-profits, community coalitions, local citizens, philanthropy, government, public health, local businesses, numerous others.
- A framework used to tackle complex community social problems
- Multiple sectors working in concert with a goal to achieve significant and lasting social change particularly among vulnerable populations

PARTNERSHIP: CORE PRINCIPLES

Collective Impact Core Principles

CORE PRINCIPLES	GOALS
Common Agenda	Common understanding of the problem, collaboration and agreed upon approach for complex problem solving
Collecting Data	Consistent collection of data, data-driven outcomes, and evidence based programs, learning from success & failures
Activities, Mutually Reinforcing	Action Plan: shared commitments and accountabilities
Communication, Open And Continuous	Development of Trust and Transparency: In-person meetings, web-ex and teleconference, increased communication
Backbone Organization	Coordinating and Managing Organization: Data Collection & Administrative Support, Administrative and Logistical Support

PARTNERSHIP: CREATED COLLABORATION METRIX

PARTNERSHIP COLLABORATION ON METRICS: Included in Contract

The Metrics and Measures That Are Within Scope for This Collaboration Agreement Include:

· # of trained navigators

· # of patients screened

· # of patients linked to each category for resources

· # of patients screened/referred to community programs

· Quality and quantity of patient interventions

· Patient satisfaction with resources

· Changes in routinely collected NQF (National Quality Forum) endorsed quality measures (i.e. 30-day readmission rates, ER visits, hospitalizations)

CLARIFICATION: Scope of Work- Metrix

*To keep in line with our understanding of the project's scope for AstraZeneca (AZ): we report on aggregate changes, currently collected quality metrics, and descriptive or behavioral measurements rather than clinical outcomes.

MODIFICATION:

Please note that the contract allows for Kaiser Permanente and IPDC to choose and assess other metrics (i.e. change in patient lab results), however, these additional metrics are outside the scope of this Collaboration Agreement and shall not be reported to AZ with the in-scope metrics and measures set forth in this section 4.2 (Contractual Agreement)

EVALUATION:

* National Quality Forum (NQF) quality metrics for diabetes care.

QUESTIONS:

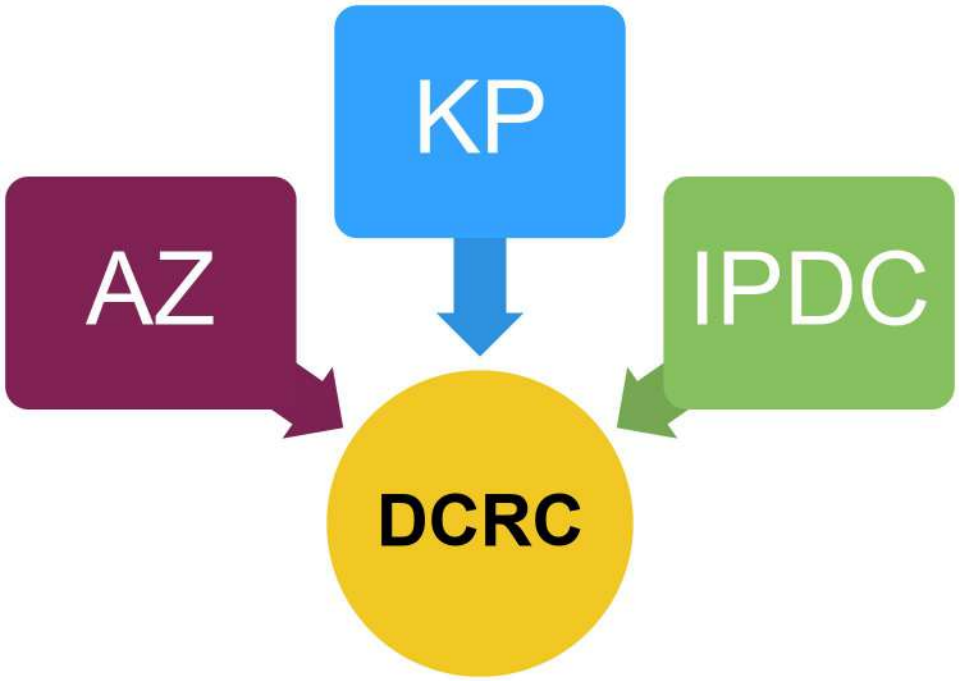
What data is currently collected? What is the metric of interest to evaluate at program end? Is the requisite data captured, stored, matched with other patient level data, and retrievable through a common secured data storage system?

COMMUNITY PARTNERSHIP COLLABORATION

AZ- Foundation + KP- Health Plan + IPDC- Community-Base Organization:

Founded DCRC & Created the C-L-A-S-S Intervention

Community Linkages for Assessment, Screening, Services/ Support



Partnership: Contractual Program Evaluation

Descriptive Process Oriented Metrics

- Number of patients identified by inclusion criteria
- Number of Trainers trained?
- Number of Patients passing through each contact point/testing point and intervention point

Measurement of staff/partnerships engagement?

Descriptive Impact Metrics *

- Number of patients who completed program
- Quality Metrics ^
- **DECREASED IMPACT OF SDOH ON KP MEMBER**
- **IMPACT KP CLINICAL/QUALITY MEASURED OUTCOMES (i.e. A1c, LDL, BMI)**
- **Quality and quantity of interventions**
- **Primary metrics**
- **Patient diabetes knowledge (pre-post)**
- **Patient activation scale**

GOAL: To improve cardio-metabolic health and outcomes, in high-risk patients while targeting social determinants of health		
OBJECTIVE 1: **Build effective partnerships and communication pathways: utilizing key-stakeholders and community-based partnerships**		
	STRATEGIES	**METRIX**
1	**Create a governing body comprised of 3 representatives from each key-stakeholder organization**	**Formation-of-Steering Committee achieved by target date**
2	**Develop time-frames, establish schedule for meetings, work-shops and planning meetings for steering committee**	**Collaboration-of-Steering Committee: measured by meeting notes and attendance record**
3	**Identify timeframes for program deliverables and to ensure achievement of benchmarks**	**Project Progress Reports:** **6 months, 12 months, 18 months and 24 months**
4	**IPDC obtains patient consent to participate in program and to communicate with patient provider**	**Quantitative evaluation to ensure 100% compliance with consent for enrolled patients**
5	**Communication pathways to include HIPAA compliant transfer of patient information and data**	**IPDC risk assessment** **And compliance to minimize technology risks and HIPAA compliance**
6	**Develop an efficient and effective method for identifying and linking to community resources**	**Screening survey questionnaire Developed = project deliverable** **Establish API key with LA County 211 community resources**
7	**Develop partnership with key stakeholders and community based partnerships**	App Linkage to community resources- LA County 211-Community Resources
8	**Patient satisfaction survey for peer-support group**	# patients (percentage) who report satisfaction with the program
9	**Patient satisfaction survey for program evaluation**	# patients (percentage) who report satisfaction with the program

ASSESSMENT OF PROGRAM EFFECTIVENESS: OBJECTIVE 1

RESULTS:

OBJECTIVE 1: CORE COMPONENTS - Guidelines
Core components *- Core components are the* ***program characteristics*** *related to* ***achieving the outcomes associated with the program****. Developers should identify core components of the program related to (a) content (what is taught); (b) pedagogy (how the content is taught); and (c)* ***implementation (learning environment*** *in which the program is taught).*
For Objective 1: "Build effective partnerships and communication pathways utilizing key-stakeholders and community based organization": core components include access to a community based organization with experience in evidence-based accredited programs for diabetes self-management education/training, knowledge of the operation of the health care organization and a framework to build capacity upon by engagement with other key-stakeholders, such as AstraZeneca. Dr. Grant, CEO of IPDC had previously worked in population care management at Kaiser Permanente for many years, and understood the gaps and need for alignment of community resources to better engage vulnerable and high risk patients at Kaiser Permanente. A common vision to improve the health of communities: is a very high National Priority across all health systems and Public Health. The common and shared vision plus a complex health challenge affords a unique opportunity to create synergy for greater impact on the community that could not otherwise be achieved individually by any one of the organizations. Each organization has unique unduplicated strengths, and affords a platform for cross-sector collaboration that is engineered to develop a pathway to better-manage and improve the health status of the most challenging populations in health systems.

Evidence of Program Effectiveness (Guidelines)
Evidence of the programs' effectiveness – A description of the evidence supporting the program's effectiveness, including a discussion of the evaluation results and information from the developer on ***what makes the program work****. This should include a description of evaluation results* ***on behaviors, knowledge, attitudes****, and other relevant outcomes measured by the evaluation.*
Compare and contrast the effectiveness of patient recruitment process to determine best practices for patient enrollment and engagement. We utilized Electronic Health record and predictive Analytics to proactively target the most vulnerable, high risk patients

and who despite usual care and high utilization of emergency services for routine care, continue on a path for worsening disease outcomes and very poor quality of life. The partnership of 3 key-stakeholders made self-management education available at times that, were compatible with the schedules for high risk patients, while increasing access to evidence-based, qualified programs and trained staff. The Community Navigator Model improved patient engagement and trust and supported desired patient outcomes that could not otherwise have been achieved, and at significantly lower costs for improved/desired patient outcomes.

Key Accomplishments & Successes: Objective #1

Key accomplishments in communication and partnerships include:

1. IPDC's implementation of Electronic Health Record to provide HIPAA compliant safe patient information with patient providers at Kaiser Permanente.
2. The collaboration founded the Diabetes Community Resource Center (DCRC)
3. The Center is centrally located at bus-stops and within walking distance from Kaiser Permanente, Panorama City Medical Center, and for many patients who frequently visit the center.

Lessons Learned

The most valuable lesson learned: is the Proactive Approach to targeting patients. Using patient characteristics such as: patients who do not pick up their medications for the past 6 months, patients who have moved more that 4 times in the past 12 months; patient provider sends the patient a letter expressing concerns about housing and or medication challenges and provides the patient with contact information to reach out to the community based organization.

Once the patient contacts DCRC the patient is screened for unmet social needs and is linked to a CN who provides outreach and support. The patient is then assessed for gaps in diabetes self-management skills. A Plan is created with patient participation to guide the patient in achieving their goals for disease self-management and control.

We have identified this Proactive Approach to be a "Best Practice" Patients are extremely satisfied. The provider letter to the patient has strengthened the relationship between the patient and the provider.

Overview of Greatest Accomplishments: Objective 1

- **We develop a social-stressors screening tool**
  that increases the efficiency in screening for social determinants of health (SDoH)
  (the survey domains are included in the Appendix)
- **We developed an APP that links to community resources in real time**
- **We trained and certified # 30 community navigators**
  They were trained in patient community outreach, linkage to community resources and engagement in self-care behaviors

Activities Implemented, and the Resulting Outcomes.

- A SDOH Social Stressors survey is now available online and on mobile App
- The App is linked to LA County Resources

Why the Accomplishment/Success was Meaningful:

The accomplishments were meaningful: as this is the first time in 100 years that Kaiser Permanente has engaged in Community Based Collaboration to provide chronic disease management for complex patients; and the results achieved from this program were superior to those achieved previously by Kaiser Permanente for this challenging, high-risk, high cost target population.

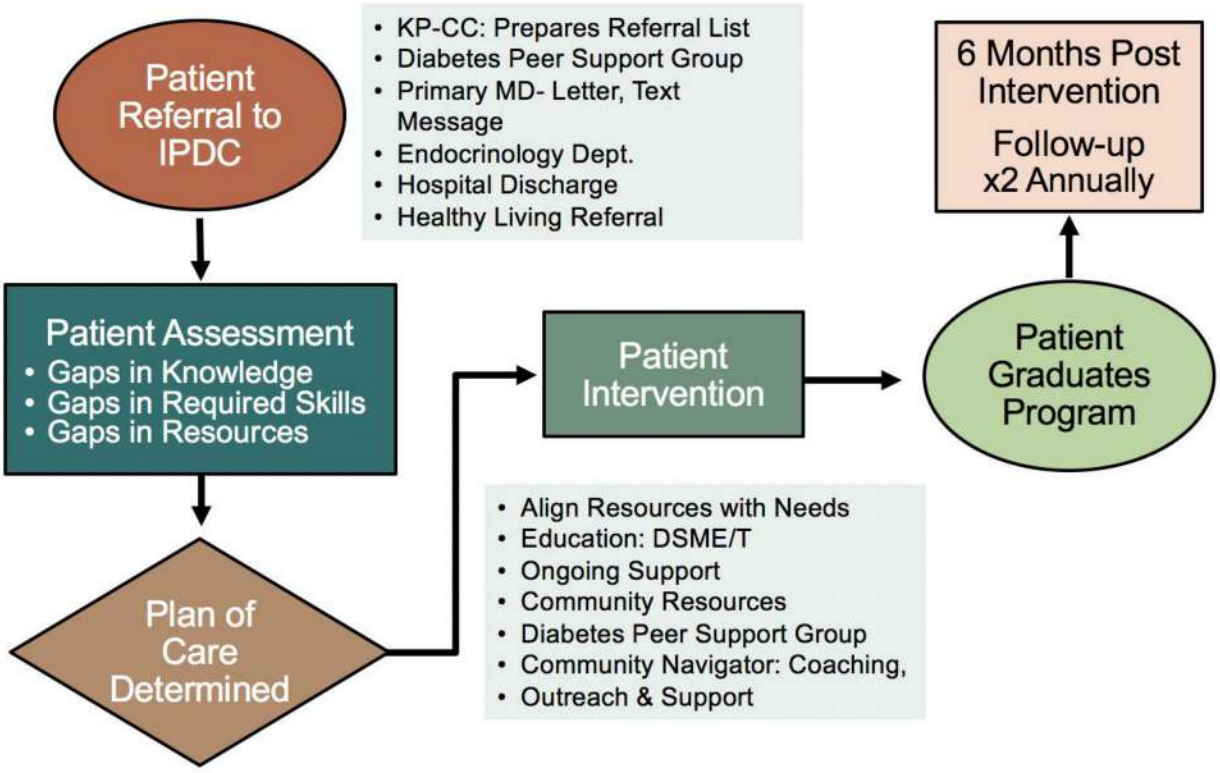
1. Core Features: Required for Success

- **Common Vision**
- **Qualified Programs developed by Community Based Organization in advance of project launch**
- **Trained Staff- Community Navigator Model**

- Clear Communication and Shared Accountabilities

OBJECTIVE 2.

DCRC Patient's Journey



Patient Individualization

In Population Care Management

The DCRC Program targets patients with persistently poor

Outcomes for diabetes despite usual care.

The program is designed and structured to assess for un-met needs: in required resources, self-management, disease knowledge, and coping skills; problem solving skills

The program achieves desired, successful outcomes by aligning targeted resources to bridge the gaps that are specific to the individual patient's un-met needs:

GOAL: To improve cardio-metabolic health and outcomes, in high-risk patients while targeting social determinants of health

OBJECTIVE 2:

Appropriately identify and screen eligible patients and develop an efficient mechanism for improving screening and target patients for community engagement

	STRATEGIES	METRIX
1	Qualified staff to conduct screening	Number-of-Community Navigator Trained
2	Develop a process for identifying the target population: highest risk patients with un-met social needs	Number-of-patients screened and referred to community resources
3	Compare different screening methods to evaluate effectiveness	Number of patients enrolled in program from various screening methods
3	Asses for gaps in knowledge and skills in diabetes self-care management	Number of patient screened and referred to diabetes self-management education
4	Focus on high risk demographics Compare participant program enrollment to target regions for high risk population	Number of patients (percentages) enrolled in program from target zip-codes

5	**Compare impact and improvement for participation to target regions for high risk populations**	**Number of patients (percentages) who improved in self-care behaviors from various target regions.**
6	**Develop an efficient mechanism for improving screening**	**Deliverable: social stressors screening APP that screens for SDoH upon completion of the project**
7	**Screen and identify patients with un-met social needs**	**Number of patients screened and identified with un-met social needs**
8	**Community Navigators (CN) provide outreach and support to participants with un-met needs**	**Number of patients (percentages) with positive screens who receive outreach and support from CN**

OBJECTIVE 2: ASSESSMENT OF PROGRAM EFFECTIVENESS

RESULTS:

Evidence of Program Effectiveness (Guidelines)
Evidence of the programs' effectiveness – A description of the evidence supporting the program's effectiveness, including a discussion of the evaluation results and information from the developer on what makes the program work. This should include a description of evaluation results on behaviors, knowledge, attitudes, and other relevant outcomes measured by the evaluation.
• We compare and contrast the effectiveness of patient recruitment process to determine best practices for patient enrollment and engagement. • We discovered that the provider letter to a patient instructing them to contact the DCRC for support had the highest patient enrollment rate in the program. • While test messaging had the highest response rate in a very short time, text messaging had the highest no show rate.
Key Accomplishments & Successes Objective #2
For Objective 2: " Appropriately identify and screen eligible patients and develop an efficient mechanism for improving screening and target patients for community engagement". Although we developed a Screening Survey (evidence based questionnaire with survey questions validated for screening un-met needs in Social Determinants of

Health (CDC developed /approved question: we ran into difficulties as the survey was initially provided in English and more than 50% of our target population preferred to communicate in Spanish. Consequently a Spanish version of the survey had to be developed in addition to an English version. Although this caused delays, it was a very valuable learning experience for future projects. We were reminded that advanced planning should include cultural and linguistic modifications for the population that is served.

Project's key successes?

Key Successes:

- **234 patients screened for SDoH**
- *Developed a Screening APP, also available on internet to screen for SDoH*
- *Linkage to Community Resources in real time*

Lessons Learned:

1. We identified a need for patient follow-up at least every 6 months after completing DSME/T program; as 10% of patients experience challenges with worsening diabetes control about 6 months after completing the program.

2. It is important to note that CMS and other commercial insurance companies reimburse for 2 hours of follow-up DSME/T annually with provider referral.

Overview of Greatest Accomplishments: Objective 2

- We develop a social- stressors screening tool to increase the efficiency in screening for social determinants of health (SDoH)
  (see survey in appendix)
- We developed an APP that links to community resources in real time
- We trained and certified 30 community navigators in patient community outreach, linkage to community resources and engagement in self-care behaviors

Activities Implemented, and the Resulting Outcomes.

- A SDOH Social Stressors survey is now available online and on mobile App

The App is linked to LA County Resources

Why the Accomplishment/Success was Meaningful:

The accomplishments are meaningful in that with a cross-sector collaboration and partnership we were able to achieve goals and improved outcomes for high risk populations that could not otherwise been achieved by a single organization individually

We can add best practices to a body of knowledge that is currently in high demand nationwide.

OBJECTIVE 2: CORE PROGRAM COMPONENTS

OBJECTIVE 2: CORE COMPONENTS

Core components - Core components are the program characteristics related to achieving the outcomes associated with the program. Developers should identify core components of the program related to (a) content (what is taught); (b) pedagogy (how the content is taught); and (c) implementation (learning environment in which the program is taught).

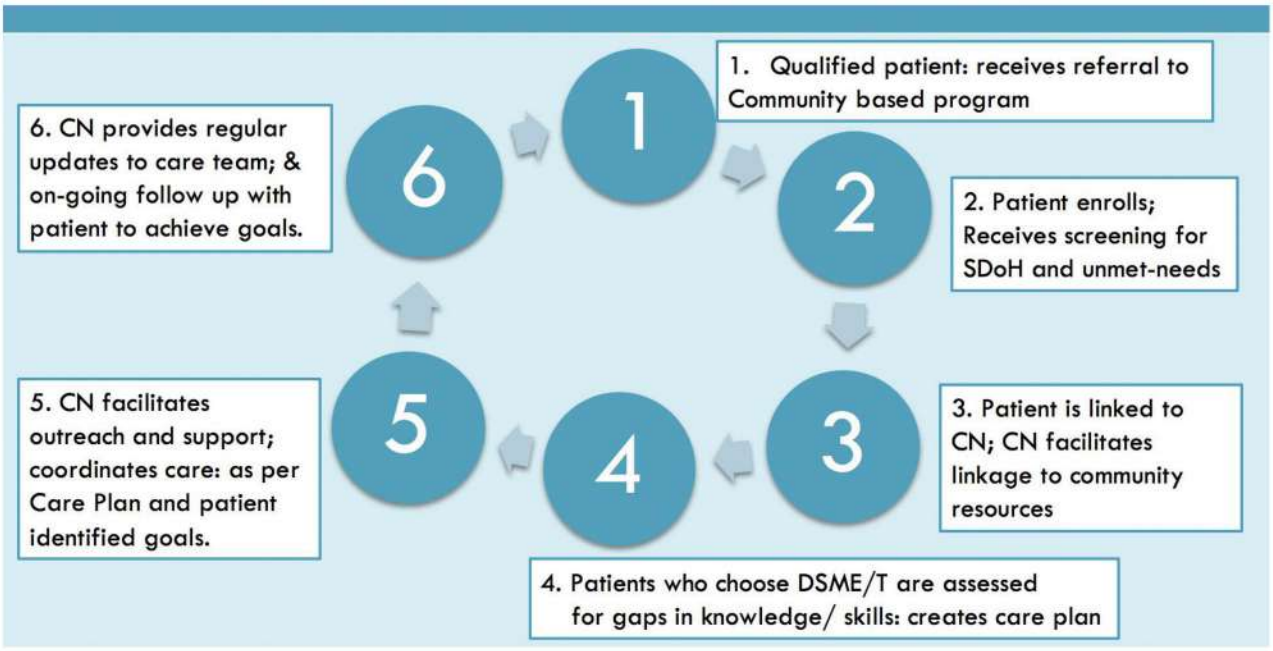
Core Components include: Trained Community Navigators in

- Patient Survey
- Data Collection
- Patient Consent
- Peer-Support

2. Core Features Required For Success

- Screening participants for un-met social needs
- Facilitating access to community resources for un-met needs
- Assessing for Gaps in diabetes knowledge and skills-set
- Linkage to resources (qualified programs and trained staff) to build gaps in knowledge and problem-solving skills
- Expand partnerships beyond the 3 key-stakeholders to include partners who support increased access to community resources.

DCRC MODEL: PATIENT PATHWAY



Training Materials:

***Guideline**: Training materials should include all necessary materials used to train staff who will implement the program.*

DCRC's Collaborative Project " Build Community Support for Diabetes" for program implementation provides the following Training Materials:

1. **Community Navigator Handbook and Training Curriculum- Fundamentals of CN**
2. **Training Materials and Curriculum: Peer Support for Diabetes**
3. **Screening for SDoH, Use of Screening APP and Community Outreach**
4. **Group Facilitation, Adult Learning Theories and Motivational Interviewing**

Technical Support is Provided to organizations to implement the necessary Standards required for Evidence-Based: Diabetes Self-Management Education/ Training:

Program Accreditation:

1. **Staff Training**
2. **Application Package Submission**
3. **The Interview Process**
4. **Performance Improvement**
5. **Annual Reporting**
6. **Billing and Program Sustainability**

Facilitator Guide:

***Guideline:** A facilitator guide should include an overview of the program, detailed instructions on how to implement the program, and any tips or best practices related to implementation.*

A Facilitators Guide and This Tool-Kit are provided to organizations with an interest in implementing the DCRC, Community-Based DSME/T program to close gaps for health disparities and SDoH among high risk vulnerable populations with poor outcomes for diabetes.

Curriculum: Diabetes Self-Management Education

***Guidelines:** teaching materials will be adapted to meet participants' needs and take into account characteristics such as age, type of diabetes, ethnicity, health literacy, and other co-morbidities*

The curriculum incorporates the National Standards for accredited programs
It is individualized to bridge gaps in patients knowledge and skills-set
It is aligned with patient's priority areas while it covers the minimum requirements for accredited programs:

AADE7

- Health Eating
- Physical Activity
- Diabetes Monitoring
- Risk Reduction
- Problem Solving
- Taking Medication Appropriately
- Healthy Coping

Guidance on Allowable Adaptations:

Guidelines: *Guidance on what adaptations are allowable and what adaptations are not allowable helps to minimize the number of adaptations that may have a negative impact on the program outcomes. Adaptation guidance should be informed by the program's core components, logic model, theory, and available research evidence*

Qualified programs and **trained staff** are mandatory requirements to ensure success of the programs and program outcomes.

- **Hence there are no adaptations to replace qualified programs and trained staff.**
- **Access to Community Navigator (CN) may be waived for individual high risk patients (with poor outcomes for chronic diseases) in cases where they have no positive screening results for unmet social needs.**

Monitoring Fidelity and Quality

Guidelines: *Tools for monitoring fidelity and quality help organizations assess program implementation and make continuous quality improvements to ensure the program is implemented as intended.*

- The DCRC, DSME/T program is nationally accredited, and as such adheres to evidence based program standards, implements continuous performance activities and submit annual program and performance improvement results to AADE annually.
- Annual Program and Performance -Improvement reporting are required to ensure program fidelity as well as for continued program Accreditation.

Evaluation instruments: Accredited DSME/T Programs

Guideline: Evaluation instruments developed to assess participant outcomes can be helpful to include for others interested in evaluating replication of the program

Accredited DSME/T programs are provided Annual Program Evaluation Instruments. The Evaluation ensures adherence to Program Standards, program adjustments for engaging high-risk and vulnerable populations.

Adherence to Recommendations for Diabetes Management and adherence to time-frames for referral and follow-up: Cardiology, Podiatry, Ophthalmology, Nephrology

Care Coordination among providers, teams and community based organizations are recommended.

GOAL: To improve cardio-metabolic health and outcomes, in high-risk patients while targeting social determinants of health

OBJECTIVE 3:

Increase Cardio-metabolic patient self-management skills while eliminating social determinants of health (SDoH) barriers to health outcomes and gaps in patient's needs

	STRATEGIES	METRIX
1	Pre/Post intervention: measure KP admission rates and ED visits	Decreased-Emergency Department (ED) Visits, and Hospitalizations for KP enrolled members
2	**Screen and refer patients to community outreach for un-met social needs (food, transportation)**	# of patients who receive screening and CN outreach for SDOH

3	Improve patient self-management with peer-support group meetings	# of facilitated peer support group meetings for duration of project
4	Increase patient access to qualified programs and trained staff	# of patients who attend peer support group meetings
5	Provide culturally and linguistically appropriate self-management education for diabetes	# of patients who report satisfaction with peer support group meetings and content covered in the meetings
6	Increase access to evidence-based programs (accredited programs) for DSME/T	# of patient who receive diabetes self-management education
7	Target actions to bridge gaps in need and develop patient individualized plan	Number-of-patient encounters
8	Provide coaching to increase patient self-management skills	Number of patient who report satisfaction with the DSME/T program
9	Empower patients to set achievable goals and improve compliance with taking diabetes medications	# of patients who report Increased adherence to diabetes medications
10	Support patient goal setting and bridge gaps in need with CN outreach to food banks and access to safe physical activity	# of patients (percentage) who report improved self-care behaviors (eating habits/ Physical activity) post intervention
11	Increase access and engagement in community diabetes self-management education program	# of patients (percentage) who report increased confidence and outcomes with diabetes self-management education
12	Prevent avoidable hospitalizations and ED visits with proactive patient outreach using electronic to identify patients	Decreased health care costs from avoidance of ED visits and **hospitalizations**

ASSESSMENT OF PROGRAM EFFECTIVENESS: OBJECTIVE 3

RESULTS:

Evidence of the programs' effectiveness:

Section Guidelines: ***P****rovide a description of the evidence supporting the program's effectiveness, including a discussion of the evaluation results and information from the key-stakeholder developer on* ***what makes the program work?****. This includes a description of evaluation results on* ***behaviors, knowledge, attitudes****, and other* ***relevant outcomes measured by the evaluation***

Quantitative Measures:

1. **# 490 KP members attended and participated in the diabetes peer-to-peer support groups (comprised of 290 Spanish speaking and 192 English speaking).**
2. **# 48 peer support group meetings/ 24 months were hosted by IPDC**

Qualitative Measures:

3. **High patient satisfaction rates for DSME/T program and peer-support group meetings; (slightly higher rates for Spanish speaking participants when compared to English speaking participants: 96% vs 94%; N= 274 for the combined groups)**

Key Accomplishments and Success: Objective 3

Reduction in ED Visits:

- **53 ED visits at baseline;**
- **Reduced to 24 visits after 9 months in program**
- **= 45% reduction in ED Visits**
- **N=97 patients**

Reductions in Hospitalizations

16 hospitalizations at baseline reduced to 5 hospitalizations post-intervention (after 6 months in program)
Reduction of 11 hospitalizations N = 59 patients

IMPROVED SELF-CARE BEHAVIORS (AADE7) & NUMBER OF PATIENTS						
Eating	Exercise	Medications	Monitor	Risks R.	Coping	Problems
125	76	165	167	17	75	124

N = 237

Project Key Success. Lessons Learned

- **Our findings for hospitalizations and ED visits among elderly patients is consistent with the literature:**

The literature reports: that overall, Medicare beneficiaries with diabetes are hospitalized 1.5 times more often than beneficiaries without diabetes. Ten percent of these hospitalizations resulted from uncontrolled diabetes, and more than half of these admissions occur in beneficiaries 65 or older.

- The age range with the highest number of participants in the DCRC program are:

AGE-RANGE: (Years)	NUMBER OF PATIENTS (N=208)	PERCENT
65-84	101	49%
51-64	78	38%
35-50	29	13%

Overview of Greatest Accomplishments

Any KP patient who received any intervention from DCRC:
including screening for resources/outreach by CN; peer-support group meetings; and or enrollment and participation in DSME/T program:
Demonstrated improvement in diabetes control,

when pre/post data for self-care behaviors or health outcomes data were compared.

Activities Implemented and Resulting Outcomes

In our community collaboration we wanted to reach and improve outcomes for the highest risk patients. Post intervention we evaluated place-based zip-codes for areas where the highest risk/most vulnerable KP members lived. Recruitment data and improvement data were consistent with the highest risk target populations. Evidence in support of reaching our target population.

TARGET AREA	AREA REACHED	Zip-Codes)	% patients
Pacoima	**Pacoima**	**91331**	**25%**
Van Nuys	**Van Nuys**	**91401**	**24%**
N. Hollywood	**N. Hollywood**	**91605**	**21%**
Pan City	**Pan City + Other**	**various**	**30%**

N=234 Combined Areas

Why the Accomplishment Success was Meaningful

- Measurable decrease in hospital readmission rates: relates to decreased health care costs
- Measurable decrease in Emergency Department visits: related to decreased health care costs

KP, Northern CAL: found annual cost of diabetes care to be $3,500 higher than for someone without diabetes.

- DCRC costs linked to blood glucose control = reimbursement insurance company = $1,500/ for 10 hours in first year and $300.00/ annually thereafter.
- Suggesting that the costs/ per patient, for implementing and engaging high risk vulnerable populations in improving chronic disease self-care behaviors: is significantly less in a community-based setting when compared to KP ambulatory care out-patient setting.
- Additionally, the Data collected by KP, Panorama City showed that all KP members who engage in any form of intervention at DCRC, showed improved outcomes.
- Patients with 3 or more encounters at DCRC had the greatest improvements in outcomes
- Patients with 5 or more encounters had no hospitalizations in 6-9 months post intervention
- Patients who only received resource screening at DCRC and outreach by CN to community programs for un-met needs (food insecurity, housing) although improved in self-management, did not do as well as patients who had 5 or more interventions as DCRC.
- While patients with more than 5 interventions had no hospitalizations post-intervention; patients with less than 3 interventions at DCRC had reduced hospitalizations from 11 at baseline to 5 post intervention (cohort = 59 patient).

Office of Health Care Economics identified decreased health care cost, reductions in ED visits and decreased hospitalizations were associated with improved blood glucose control, and our findings were consistent with the above.

OBJECTIVE 3: CORE COMPONENTS

Core components: Guidelines
Core components are ***the program characteristics related to achieving the outcomes*** *associated with the program. Developers should identify core components of the program related to (a)* ***content (what is taught****); (b)* ***pedagogy (how the content is taught);*** *and (c) implementation* ***(learning environment in which the program is taught).***

Implementation Learning Environment:

DCRC - Diabetes Self- Management Education: IPDC served as host for the program

- The program is implemented in a community-based setting and is available to participants, after hours and on designated week-ends.
- The program is mostly facilitated by trained community navigators (CN): who understand the cultural barriers and un-met need of the local community.
- The CN are trusted by the local community, hence program participants: high risk, vulnerable populations are more inclined to be honest about sharing their struggles and challenges and will more readily accept support that they deem to be unconditional.
- The educational components and curriculum although standardized to cover critical and necessary self-care behaviors: are flexible in the presentation to align with a patient's readiness to learn, and is centered in the patient's priorities and goal setting.
- The CN and Certified Diabetes Educator in collaboration with the patient: designs a plan to achieve the goals set by the patient and to decrease cardio-metabolic risks resulting
  from uncontrolled diabetes

3. Core Features Required For Success

OBJECTIVE 3: CORE-FEATURES:

- Trained Certified Staff
- Accredited Program - Evidenced-Based DSMET
- Screen for Social Determinants of Health
- Assessment: for Gaps in Knowledge, Self-Management Skills
- Care Plan: Plan that incorporates community outreach for resources to close gaps in need
- Peer-Support: for encouragement, build confidence, coping with chronic disease
- Behavior Change: Empowerment, Patient Accountability for Desired Outcomes
- Identify Key Drivers of Improvement: abandon old destructive habits, create new behavior change to achieve diabetes control Desired Goals
- Data Driven Outcomes: Performance Improvement – at patient and organizational levels
- Program Fidelity: compliance with program standards, curriculum, patient centered care, annual reporting to Accrediting Organization
- Support Advocacy: Policy Change, Build Relationship and Partnerships;
- Sustainability -Reimbursement Activities, Create Continuous Revenue Streams to Support Community Program Beyond Funding Period

ENDORSEMENTS: Patient Satisfaction

1. **JG: 65- year- old Spanish speaking female**

   "I have type 2 diabetes for 35 years; I completed the DCRC program, and this is the first time in 35 years that I was able to achieve blood glucose control. Not only did I achieve control; I also know how to keep my blood sugar controlled. The program helped me to understand the different factors that can cause high or low blood glucose and how to problem solve to correct them."

2. **CMN**: **40-year- old white male**

   "I just wished that I had known about this program 10 years earlier. After 5 visits to DCRC: I now know more about diabetes and how to manage it, than I did in the past 10 years. This is the first time in 10 years that I have achieved blood glucose control and have a fundamental understanding to keep it controlled."

3. **RS: 55-year-old Spanish speaking male**

   "I hope this program can remain in the community. I thought I was going to loose my right foot to diabetes. This program helped me understand how to self-manage my diabetes, how to take my medications and eat properly. The ulcer on my right foot has healed. I don't know what would have happened to me, if this program was not in the community to provide these services, and especially the education at the times when I can be available. I saw the flyer to the program in my doctor's office and referred myself. Thank God for this program."

CONTRIBUTION TO "BEST PRACTICE"

- **PROACTIVE APPROACH:**

The ability to identify and capture highest risk patients in advance of Emergency Department (ED) visits and hospitalization, provides a unique opportunity to decrease avoidable health care costs while closing gaps for disproportionate disparities among high risk and vulnerable populations. Uncontrolled chronic diseases linked to gaps in un-met needs for resources, social support and services, can lead to worsening health outcomes, higher disease burden, higher cardio-metabolic risk factors and high health care costs.

Our community collaboration identified that using **Electronic Health Record** to identify patients with certain characteristics (example moved more than 4 times in the last year, not picked up medications in past 6 months, missed several follow-up appointments…) can benefit from community outreach and community based programs.

Using electronic health record, **patient characteristics** and predictive analytics to screen and identify high risk patients: providers inquired whether positively screened patients would like to receive support and outreach by community navigators, and provided them with the contact information to a community based organization that would facilitate these services. In addition the community-based organization increased access to evidence-based self-management education.

- **QUALIFIED COMMUNITY-BASED SELF-MANAGEMENT AND SCREENING PROGRAMS**

  - **PROGRAM CHARACTERISTICS:**

- **Person-/Family-Centered**

  (access to services convenient for individuals and families: including after work and on week-ends, readily accessible in the local community)

- Adequate access to disease-specific information
- Education driven by the priorities and goals of the person and or family.
- Accommodation made to ensure culturally responsive services and language
- Care Plan guided goals derived from a communication process
- Careful attention to social risks such as poverty, mental illness, unsafe housing, history of or current trauma, food insecurity, lack of transportation, and low literacy.
- Comprehensive assessments of social risks

- **QUALIFIED EVIDENCE-BASED: PROGRAMS;**
- **ACCREDITED EDUCATION PROGRAMS ARE REIMBURSABLE**

- High-quality accredited community programs adhere to national standards and
- Incorporate self-management education to:
  - improve patient and family's knowledge of disease
  - learn necessary, required skills to better self-manage chronic disease
  - learn problem solving-skills, and coping skills for improved health status and quality of life while living with chronic disease
  - achieve and sustain control of chronic disease

- **PATIENT ACCOUNTABILITIES FOR SELF-MANAGEMENT**

- Mutually developed care plan (including patient's input for setting goals) guides the provision of services
- Shifts accountabilities for disease self-management and control to empowered and confident patient
- Guided by quality programs: structured and engineered for performance improvement and reduction in health care costs.

Project Planning and Contracting:

Recommendations:

The project planning and contracting process should start before the official start of the collaboration.

Project planning activities should be an ongoing component of the collaboration.

The success of the project: The formation of the Diabetes Community Resource Center (DCRC) and resulting collaborative project entitled " Building Community Support for Diabetes" was made possible through the multiple stakeholders who came together and worked together to find solutions to complex health care problems.

Developing the initial project plan

The collaboration solutions' planning should go through the process of

- Initiation (requirements specification),
- Planning and design, Execution, (construction and development),
- Control and integration,
- Validation of the solution (testing and debugging) &
- Closure (installation and maintenance)

STRATEGIES:

Some of the key questions that helped iron out the project plan for the Kaiser DCRC collaboration solution are:

- What does the timeline look like for the project?
- What potential hurdles could hinder the project completion?
- Who owns what?
- Include ground rules on who makes the final decision for certain scenarios such as project scaling.
- What are the project management guidelines?
- What are the final deliverables to both parties? What is the timelines for delivery?
  - What are the key deliverables that determine the completion of phase 1 and how much effort & budget is required for this portion?
  - Similar question for phase 2
  - Similar question for phase 3 and beyond

After agreeing with the other core considerations are agreed upon, you can focus on the steps to execute the project.

1. Develop the roll-out strategy and training for providers
   - The roll-out plan requires the creation of several components:
     - Marketing tools

    - Recruitment tools
    - Live internal training presentation
    - Online internal training modules
    - App development, if agreed upon by all stakeholders
- Internal advocates must be identified and utilized to spread internal buy-in of the initiative
- All stakeholders should be aligned, and directives should be provided by department leadership

2. Define educational materials, and how they should be used
    - As part of the agreed upon project plan, educational tools have been identified and should be used. The following points should be considered:
        - Development of a roadmap for utilizing the right educational resource at the right milestone
        - Assignment of role to manage the dissemination of educational resources
        - Determine whether new educational materials will be developed as part of the project

3. Determine whether the patient program that will be utilized is an accredited established program or one that will be part of an existing customer program or developed as a part of the collaboration

4. Develop a patient recruitment plan and test different modes of recruitment, then capture successes
    - Have a strong patient communication process to maintain touchpoints and complete execution
    - "Think outside of the box" on ways to recruit these hard to engage patients. Utilize all available resources to help find messages that will resonate with the individual. For example, in this collaboration, we segmented patients to receive different text messages based on criteria pulled from their database. Patients who moved 2-3 times in the past year received text messages regarding housing, patients who have missed filling their Rx's multiple times received messaging around financial pressures and food insecurity.

5. Plan to provide regular feedback meetings to share what's working and what is not
    - A proposed meeting agenda can include:
        - Overview of current enrollment in the program
        - Areas of success
        - Areas for improvement
        - Key future milestones

6. Identify decision points and define them

- Example: Will certain patients receive 1 level of support while another group receives a different level of support?
    - How do you differentiate? Is this content captured in the data plan?

Funding and Resources

Identifying the fund and key resources for the collaboration is a key step. The collaborating parties should decide who is going to fund the initiative and how it is going to be split if decided.

Then the concerned parties should plan within their leadership team on the appetite for funding and come to an agreement. The funding could be resources (such as Field Health Outcomes support, project management support, contracting support) for the execution of project.

Once the funding and resources are finalized, then the team should structure the funding in such a way the outcomes, KSF and actions are tied to financial funding. This way funding is alignment to project milestone plan with phased budget estimates.

Example:

For DCRC funding, AstraZeneca funded the collaboration as part of six step process, which are tied to action items.

Governance Process

After all key aspects of project planning are finalized, the next major step in the project is approval from internal governance process of manufacturer and health system. -

STRATEGY:

For the Kaiser DCRC collaboration, the collaboration should be approved by AstraZeneca's Governance Process and Kaiser's Governance Process

AstraZeneca Governance Process:

Kaiser DCRC collaboration should be approved by ACERT team and completion of an Fair Market Value (FMV) assessment is required before any contract may be signed.

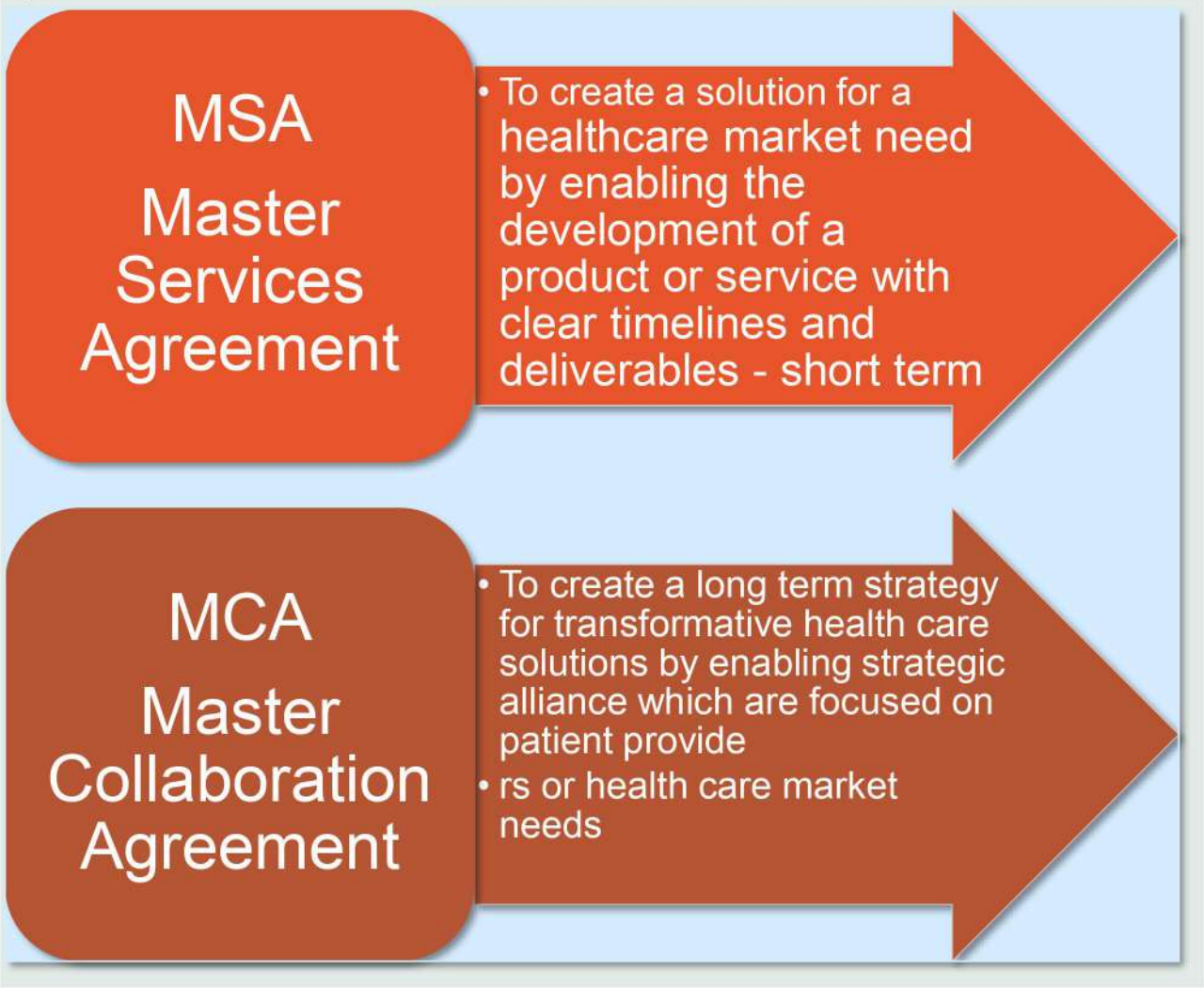
Kaiser Governance Process:

Should be submitted to the KP legal team for approval in advance of the start of the project

Contracting with all the parties:

Once approved by governing bodies, Collaboration owner should work with all the stakeholders to draft the appropriate Master Service Agreement/ Master Collaboration

Agreement and Statements of Work



Once the contract terms are internally agreed by the collaboration team, Manufacturer, Health System and Innovation Partner will submit all agreements through DocuSign for signature with their key decision makers and will open the PO for the approved Customer Collaboration under specific organizationally approved in the governance process.

Note: Timing

- Contract negotiation may take considerable time, especially in larger organizations where additional approvals outside of legal may be required

Project Details:

Data Management

The collaboration team should determine and plan for how the project data will be captured, analyzed and reported. The key questions that the team should ask to ensure the access to data and availability of data for this collaboration are:

- Describe the rigor with which the data is captured and tracked.
- At what level of granularity, will the data required for monitoring the KSFs be captured?
- What measurements are being used?
    - Adherence measures
    - Outcomes measures
    - Self-reported patient measures of all kinds, including experience
    - Cost measures
- Is there an EHR system included in the data? Ensure a feedback loop is integrated into the collaboration so referring providers receive feedback on referred patients.
- How will patient consent be captured?
- How frequently will the data be reported?
- Who owns the data and where it will be housed?
- What has the rights to share the data publicly?

Data Sharing:

What technical restrictions outside of HIPAA are in place for sharing PHI to third party organizations? How will this exchange of data be transferred?

the key success factors that will determine the success of the projects.

DCRC Activities/ Intervention:

In the Kaiser DCRC project, the collaboration team comprising of AstraZeneca, Kaiser Permanente and IPDC developed the following key success factors for the project

- No. of Community Navigators trained,
- No. of patients screened for SDOH,
- No. of patients who presented to peer to peer support group meetings,
- patient satisfaction with the programs and services at DCRC, and
- associated outcomes such as reduction in ED visits and Hospitalizations.

Recognition from Governing Bodies

The DCRC Program is a Nationally Recognized evidence-based program, that has demonstrated adherence to standards of practice and approved by Centers for Medicare and Medicaid Evidence based programs with recognition are required for reimbursements, and reimbursement ensures program sustainability after the funding period ends

Program Evaluation

The collaboration team should do a before and after analysis of ED visits/Re-hospitalizations for patients who are provided with 1:1 education v/s the patients who are provided education resources but without 1:1 coaching.

After measuring the outcomes, the team should tie it up to the cost impact by performing a data analysis and the health systems hospitalization/ED visit cost analysis.

Data and Reporting to AZ

Collection and Submission of Data

On timeframes specified in contract, the data captured from the program must be reported to AZ as specified in the deliverables section of the contract

And by IPDC to AADE for continued recognition of the program.

(Although this is currently done at IPDC, it is not a component of the DCRC project).

Scalability of the project

After monitoring the data, the team should look into referring more patients into the program and scaling it to other hospitals in the health system based on the improvement in patient health outcomes and KSFs.

APPENDIX C:

Social Context Assessment (Domains)

- **Demographics (~7 questions)**
  - •Age
  - •Race/Ethnicity
  - •Education
  - •Employment Status
  - Income
  - •Marital status
  - •Household size

- **SDoH* (~6 questions)**
  - •Food security
  - •Housing security
  - •Transportation
  - •Social Support
  - •Not seeking care due to costs
  - •Civic participation

- **Problem Areas in Diabetes Questionnaire** (~5 questions)
  - •DAWN Study> psychosocial burden of diabetes
  - •Diabetes-related emotional distress
  - •PAID-5 short form (McGuire, et al. 2009)
  - *indicators will be derived from national data sets (BRFSS, NHIS, ACS) for comparison when available

APPENDIX D

REFERENCES

Brunisholz KD, Briot P, Hamilton S, et al. Diabetes self-management education improves quality of care and clinical outcomes determined by a diabetes bundle measure. J Multidiscip Healthc. 2014;7:533-542. doi:10.2147/JMDH.S69000.

Hale NL, Bennett KJ, Probst JC. Diabetes care and outcomes: Disparities across rural America. J Community Health. 2010;35(4):365-374. doi:10.1007/s10900-010-9259-0

Centers for Disease Control and Prevention. *The Value of Community Partnerships, Brief 3*. Atlanta, GA: US Dept Health and Human Services; 2018. https://www.cdc.gov/workplacehealthpromotion/tools-resources/pdfs/issue-brief-no-3-community-partnerships-03062013.pdf pdf icon[PDF – 588 KB]. Accessed July 31, 2018.

RESOURCES

Diabetes Resources:			
AZ	**Health Journey Support**- Online Educational Tools: https://www.healthjourneysupport.com/	**AZ**	**Fit2Me**- Personal Lifestyle Coach: https://fit2me.com/
KP	**Center for Healthy Living Classes**- https://thrive.kaiserpermanente.org/care-near-you/southern-california/los-angeles/prevention-wellness/center-for-healthy-living/	**AADE**	Diabetes Education Curriculum, second edition Contact: deap@aadenet.org

CONTACT

AZ:	Bradley Lew	**E-mail**: Bradley.Lew@astrazeneca.com
KP:	**Mehrzad M. Soleimani**	E-mail: **Mehrzad.M.Soleimani@kp.org**
IPDC:	**Yvonne Grant**	**E-mail:** ygrant@internationalprediabetescenter.org