Imperial County Accountable Community for Health's (ICACH) Strategic Priorities

Selected Health Issue: Asthma, a chronic respiratory disease, is a major public health issue in Imperial County, especially among children. Although there is no cure for asthma, symptoms can be controlled with appropriate medical treatment, self-management, education, and by avoiding exposure to environmental allergens and irritants that can trigger an attack. Despite many interventions and efforts over the past decade, asthma continues to pose an undue burden on the population, particularly in children. Imperial County has the dubious distinction of having the highest hospitalization and ED visit rates in California.

In 2011-2012, 8.6 percent of Imperial County residents reported having active asthma, compared to 8.3 percent of all California residents, according to the California Health Interview Survey (CHIS). Children in Imperial County visit the ED and are hospitalized for asthma at rates nearly 2 to 3 times higher than the state average. In 2012, the county's age-adjusted hospitalization rate was 30.6 per 10,000 population aged 0-17, compared to 11.7 for California overall.

In 2014, the county's age-adjusted rate of ED visits was 79.9 per 10,000 residents -- nearly double that of California as a whole (49.5). Among children aged 0-17, the age-adjusted rate was significantly higher: 149.6 ED visits per 10,000, compared to 80.7 statewide.

Imperial County's ED visit rates vary by zip code, with those in the north end higher than those in the southernmost communities. The project would target residents in these impacted communities. These rates are highest in the more remote communities and, in those where they can be adequately calculated based on population size, are highest among children. Over the past decade, the age-adjusted rate of ED visits in children aged 0-17 was consistently highest in the city of Westmorland (population 2,444), located on the southernmost tip of the Salton Sea. In 2014, the age-adjusted rate of ED visits due to asthma for Westmorland was 527.5 per 10,000 population, among children less than 18 years of age. Data trend analysis has identified four Imperial County zip codes with highest age-adjusted rates for asthma ED visits in children aged 0-17 from 2005-2014. The rates in these communities provide a baseline for comparison to measure the impact of the intervention.

Asthma is one of the leading causes of hospitalization among children younger than 15, and is associated with increased ED visits, according to the Centers for Disease Control and Prevention. Based on information provided by Imperial County's two hospitals for a one-year period from February 2015 to March 2016, a total of 5,273 Imperial County residents were seen in the emergency departments due to asthma, accounting for a total of $13.6 million. During the same period, 365 residents were hospitalized due to asthma, at a cost of $10.4 million. Pediatric hospitalizations and ED visits (N=2,554) due to asthma accounted for a total of $7.5 million in charges for the two hospitals.

Studies have reported a higher rate of health care use among children insured by Medicaid (Medi-Cal) compared with children insured by other health insurance programs. In 2014, Medi-Cal was the expected source of payment for 48.6% of asthma ED visits in California, and 43.5% of asthma ED visits in Imperial County, according to the Office of Statewide Health Planning and Development (OSHPD).

Over the past decade, Imperial County has come together to reduce the burden of asthma. These efforts have made a difference. Asthma hospitalization rates have declined. In 2000-2005, Imperial County reported 19 hospitalizations per 10,000 population on average, compared to fewer than 11

hospitalizations statewide during the same period. In 2012, Imperial County's hospitalization rate for all ages dropped to less than 17 per 10,000 population, while the rate for California overall was 8.6.

Air quality has improved significantly over the past decade. The overall number of days exceeding state and federal standards for ozone pollution has decreased significantly in Imperial County from more than 40 days in 2005 to fewer than 10 in 2014. Imperial County has also improved in terms of average daily density of fine particulate matter in micrograms per cubic meter (PM2.5), and is comparable to California overall and lower than the national average, according to the 2016 County Health Rankings & Roadmaps.

Ongoing programs such as the Child Asthma Project and the Healthy Homes – Healthy Breathing Project, and patient-centered medical homes have tracked successes within the project or clinic, but currently there are no shared metrics to track the impact of these efforts. A successful Asthma Initiative was formed in 2001 to bring together disparate projects funded through various sources, with different target populations, to combine forces in an effort to maximize scant funds by not duplicating efforts. However, once most of the projects ended, the Initiative disbanded. Currently, there are 18 asthma-related programs and projects targeting a broad range of air quality monitoring and evidence-based practices including:

- Community-based programs focusing on preventing or reducing ED visits and hospitalizations through self-management education and home-based interventions
- Environmental assessments in homes and advocacy with landlords in disadvantaged and underserved communities
- Training for Community Health Workers and promotoras to identify indoor triggers and educate families
- Training for health-care providers on national asthma guidelines
- FLARE Plan emergency department discharge program
- Open Airways for schools
- Air monitoring in the community with sensors and flags to designate level of air quality at schools
- Web-based air quality index to provide current conditions of air quality
- Care teams to address patient health issues and customized health records that offer clinicians tools for care and disease management templates

Many of these programs and projects are grant funded with unsure futures, and some are the sustained remnants of past funding.

Building a Comprehensive Plan: The foundation of our asthma portfolio of interventions is the community health assessment and community health improvement planning process conducted by the CHIPP. The CHIPP conducted an extensive health data analysis, community input process, environmental scan and gap analysis. Research conducted by Public Health provided a matrix of evidence-based programs and practices to serve as a reference that was later augmented by CACHI resource documents. Public Health and the Steering Committee met with the work-group leads and support staff for the Community Prevention Linked with High Quality Healthcare priority area to discuss their work plan development for the asthma goal. The work group was in the process of refining the asthma work plan to achieve mid-term (3-5 years) objectives and the work group staff and leads, Steering Committee and Public Health worked together to complete the process. To help guide this process a list of strategic priorities was developed including the degree of or amenability to:

- Integrated quality standards and metrics
- Defined high-risk/disparity targets
- Leverage of existing resources and programs

- Clinical-community linkages
- Clinical spectrum linkages
- Patient and provider satisfaction
- Sustainability

The CHIPP asthma work plan was refined using the strategic priorities. The identified interventions were then aligned with the five domains of the ACH initiative creating a draft portfolio of interventions. This draft was circulated to a variety of partners and stakeholders for review and comment. Based on the feedback received, the portfolio was further refined. The final draft of the portfolio of interventions, along with the final draft of the ACH work plan, were presented to the Commission for their review and approval. The Commission took action to approve both documents on April 12, 2016.

Proposed Interventions: Our proposed portfolio of interventions contains eight interventions spanning all five domains. Each of the interventions are listed with a brief description of the reasoning for inclusion based on the strategic priorities.

Intervention 1: Focus and stabilize home-based multi-component family and patient education with an environmental focus and community resource linkages to reduce asthma exacerbations and increase successful long-term asthma management with a priority target population of children residing in asthma disparity communities.

- High degree of evidence-based documentation that supports intervention.
- High degree of ability to leverage existing resources and programs. Currently, two grant funded projects using this model are operating in Imperial County—the Child Asthma Project through an EPA grant, and Respira Sano, a collaborative project of Clinicas, Comite Civico and SDSU. Funding for these projects expire within the year. Both project partners include community service workers and promotoras who provide the home-based interventions. Both cadres of community service workers completed asthma training, although training for each cadre used different curriculum. These current activities align with Clinicas' patient-centered medical home/chronic disease management model.
- Clearly defined disparity population supported by asthma trend data by zip code with disproportionally high ED utilization. Proposed communities have a high degree of disparity including poverty, lack of access to services and housing challenges.
- Provide clinical-community linkages although community linkage navigation training will need to be enhanced.
- High amenability for sustainability. Both interventions are integrated in clinical setting with a strong interest by both health plans for exploring ROI measures.
- Provide the ability to implement shared quality standards and metrics to measure impact on improved asthma management and decreased ED utilization. Provides the ability to align training standards and patient education.

Intervention 2: Improve linkages between acute care and primary care with priority target of ED discharge linkage to primary care.

- Evidence-based documentation that supports intervention.
- Ability to leverage existing resources and programs. Currently there is one program using this model—the Child Asthma Project through a First 5 recurring grant. The program serves both hospitals through an MOU. Inpatient discharges are targeted with a strong collaborative relationship with hospital discharge planners and health plan resources. ED data capture needs a system enhancement to share discharge information in a timely manner to effectively link to

medical homes. Also there is a need to enhance and leverage FLARE discharge plan program implemented through El Centro Regional Medical Center and an opportunity to expand the program to Pioneers Memorial Healthcare District. Aligns with the ED Diversion pilot between Clinicas and CH&W which captures frequent ED users of Clinicas. Clinicas has trained community health worker cadre to provide home-based education to promote medical home access.

- Clearly defined target population inclusive of the whole community and that spans income levels.
- High amenability for sustainability. Intervention is integrated in clinical setting with a strong interest by both health plans for exploring ROI measures.
- Provides the ability to implement shared quality standards and metrics to measure impact on improved asthma management and decreased ED utilization. Provides the ability to align training standards and patient education.
- Provides the opportunity to measure and improve patient and provider satisfaction.

Intervention 3: Improve asthma management in schools through school nurse partnerships and increase compliance with Guidelines for the Management of Asthma in California Schools and Flag Alert Program with a priority target population of children residing in asthma disparity communities.

- Evidence-based documentation that supports intervention.
- Clearly defined disparity population supported by asthma trend data by zip code with disproportionally high ED utilization. Identified communities have a high degree of disparity including poverty, lack of access to services and housing challenges. Intervention aligns with home-based and clinical spectrum intervention (Interventions 1 and 2). Enhances ability to identify and intervene with target population.
- Ability to leverage existing resources and programs. Intervention aligns with schools mandate for asthma management in schools and supports school wellness committees. Builds on strong partnership between SDSU-IV Campus, Imperial County Office of Education School Nurse Resource program and individual school districts.
- High amenability for sustainability. Intervention is aligned with external mandate and provides opportunity to measure ROI based on school attendance.

Intervention 4: Reduce exposure to second-hand smoke through the adoption and implementation of voluntary smoke-free multi-unit housing policies with a priority target population of children residing in asthma disparity communities.

- Evidence-based documentation supporting intervention.
- Ability to leverage existing resources and programs.
- Aligns with and provides resources to home-based clinical spectrum intervention (Intervention 1).

Intervention 5: Integrate family-centered assessment and linkages with community resources/programs in home-based asthma intervention with a priority target population of families residing in asthma disparity communities.

- Evidence-based documentation supporting intervention.
- Ability to leverage existing resources and programs. Partners with funded program.
- Provides an opportunity to integrate resources from Accountable Health Communities initiative in a smaller more sustainable manner for our rural community. The intent is to adopt and align the survey instrument developed under the ACH for use in this intervention.
- Broadens scope and strengthens community service worker and promotora cadres.
- Integrated with home-based intervention (Intervention 1) and aligns with Intervention 7.

Intervention 6: Increase quality of care for child asthma through the adoption and implementation of the National Asthma Education and Prevention Program training for asthma care across safety net providers.

- High degree of evidence-based documentation supporting intervention.
- Ability to leverage existing resources and programs.
- Aligns and supports all interventions.
- Builds on training that has already occurred.

Intervention 7: Increase consistency of information for children/families with asthma and the community through the adoption of training standards for Community Health Workers/Promotoras across agencies/organizations.

- High degree of evidence-based documentation supporting intervention.
- Ability to leverage existing resources and programs.
- Aligns and supports all interventions.
- Builds on training that has already occurred and supports the sustainability of the community service worker and promotora cadres.
- Provides an opportunity to measure and improve provider satisfaction.

Intervention 8: Integrate asthma metrics and outcomes as benchmarks in Salton Sea Restoration and Renewable Energy Initiative and Salton Sea Mitigation Plan.

- High degree of evidence-based documentation supporting intervention.
- Support high impact imitative with broad community support, mobilization and advocacy.
- Provide initiative data to support and measure progress.
- Broadly defined target population inclusive of the whole community and that spans income levels.
- Disproportionate impact on disparity communities due to proximity of environmental threat.

Domain	Interventions	Timeframe	Potential Metrics to Measure Outcome
Clinical Services	Focus and stabilize home based multi-component family/patient education with environmental focus and community resource linkages to reduce asthma exacerbations and increase successful long-term asthma management w/ priority target of children residing in asthma disparity communities; Improve linkage between acute care services and primary care w/ priority target of ED discharge linkage to primary care.	Short	Asthma patients receiving Primary Care follow-up within timeframe documented on ED/Hospital discharge Asthma Action Plan Patient/Family and Provider Perception/Satisfaction of asthma care Asthma related ED utilization over 12-month period Asthma related hospitalizations over 12-month period Asthma disparity communities ED/Hospital utilization due to asthma over 12-month period
Community Programs and Resources	Improve asthma management in schools through partnership with school nurses and increased compliance with Guidelines for the Management of Asthma in California Schools and Flag Alert Program w/ priority target of schools located in asthma disparity communities Reduce exposure to second-hand smoke, through the adoption and implementation of voluntary smoke-free multi-unit housing policies w/ priority target of disparity communities	Medium	Students/Families residing in asthma disparity communities who receive asthma education and school asthma management strategy development with school nurse Number of School Days Missed due to Asthma Multi-unit housing complexes with voluntary smoke-free policies in place that include asthma priority
Community-Clinical Linkages	Integrate family centered assessment and linkages with community resources/programs in home based asthma intervention w/ priority target of families residing in asthma disparity communities	Short	Disparity community families who receive a family assessment w/ navigation to community services/programs Proportion of barriers reduced for asthma disparity communities families with asthma
Public Policy and System Changes	Increase quality of care for child asthma through the adoption & implementation of NAEPP training for asthma care across safety net providers Increase consistency of information for children/families with asthma and the community through the adoption of training standards for Community Health Workers/Promotoras across agencies/organizations	Medium	Safety-net provider practices/organizations identifying Physician Asthma Champion Patients who receive written asthma action plan and evaluated for environmental triggers Community Health Workers/Promotoras demonstrating asthma competency based on adopted training standards
Environmental	Integrate asthma metrics and outcomes as benchmarks in Salton Sea Restoration and Renewable Energy Initiative and Salton Sea Mitigation Plan	Long	PM 10 and PM 2.5 related to exposed Salton Sea playa