



LOMA LINDA UNIVERSITY  
HEALTH

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Institute for Community Partnerships

Community Health Education Workers

Program Progress Report – Phase 5

Prepared for the San Bernardino City Unified School District

"They are trustworthy and speaks our language."  
–Focus Group Participant on CHEWs (Parent)

Phase 5

July 1, 2019 - June 30<sup>th</sup>, 2020

The Institute for Community Partnerships implemented a multi-year pilot intervention with the San Bernardino City Unified School District and El Sol Neighborhood Educational Center in order to provide specialized services to some of the most at-risk students and their families in the district. Implementation began January 2017, and as of June 2020, the project has completed the fifth phase of development in testing the deployment of four community health education workers (CHEWs) throughout the entirety of the program, beginning with six from July 2019-December 2019 (as in previous phases) and four of those continuing from January 2020-June 2020. All the CHEWs involved worked to intervene with families of children facing barriers to meet school attendance requirements. With the completion of Phase 5, the program has matured into a compelling intervention with a model that has emerged from the five phases that has been completed to date showing: the CHEWs increased engagement with district families, assisted in increasing vaccination compliance for school readiness, worked specifically with families and youth who are chronic absent, and in the last four months of Phase 5, provided emergency Covid-19 outreach, education, and addressed food insecurity for at-risk families and were able to do this swiftly and effectively because of their established relationship with those with highest needs. The core objective of this specialty service is to provide the intensive support services that close the gap between district services and resources and community families who need it the most but who are often disengaged. The outcomes from this work is outlined in this report.

### **Primary Program Outcomes**

While CHEWs performed a number of specific outreach and enrollment activities, the primary objective of the intervention was to measure the impact on attendance. To measure the impact of the program, attendance data was collect for 2017-2018, 2018-2019, 2019-2020 of students who received CHEW services during 2018-2019.

The program intended to track trends related to absenteeism, identify the top social determinant barriers experienced by families, and to provide referrals and linkages to supportive public and private sector resources.

#### *Summary of Findings*

FINDING 1: From the intervention data, we found a significant association between consistent CHEW interventions with families, especially year-over-year and in collaboration with the SARB team and reductions in both the number of days missed in school and the overall absenteeism rates for the most at-risk students in the district.

"Made aware of a lot of resources I didn't know were available to me and I said even things I'm pretty sure related if I need help my workers always up"

–Focus Group Participant  
( Parent)

FINDING 2: CHEWs identified top risk factors for chronically absent students were related directly to **poverty**, primarily manifested through social determinants as primary risk factors, with **student behavior** and **parental behavior** as second and third factors.

FINDING 3: CHEWs working with SARB made 493 referrals to the 366 families with a 93% follow-up rate indicating that while referrals are important, a CHEW ensuring families are actually linked to services and follow through with accessing services, providing navigational assistance, and completing tasks like applications and/or paperwork are critical to increasing access for the most at-risk students.

FINDING 4: Direct feedback and communication with community members allowed the implementation team to identify specific themes across multiple focus groups. The most prominent emergent themes included a deep sense of trust and appreciation for specific CHEW's and positive commentary on their work processes and ethics. Additionally, CHEWs were generally recognized as bridge builders and that the community and partners would benefit if this intervention was expanded and replicated.

#### ***Data - Findings on Absenteeism***

Students and families that received phase four intervention through home visits conducted by CHEWs during 2018-2019, with the number of students (n) varying each year, based on enrollment there was a total of 258 unique or unduplicated students. Students attendance data was gathered for the 258 students across 3 year, 2017-2018 (baseline attendance), 2018-2019 (intervention year), and 2019-2020 (post-intervention year). 155 students had three years of complete attendance data shown in table 2.

Two primary outcomes measures were identified from the pilot program: the first related to the overall population trends for all students by comparing each academic year with corresponding trends in days missed and absenteeism rates (the days missed reflect the average number of days students missed and the absenteeism rate reflects the percentage using the total number of students and the typical number of days in a school year). The second outcomes data related to a cohort of students who had three years of attendance data, the 155 students where there were data available for 2017-2018, 2018-2019, and 2019-2020. In each data set, **both average number of excused and unexcused absence days and the average rate for absenteeism decreased** for the students who received interventions. Table 1 illustrates the rates as measured each year. Table 2 illustrates the rates as measured year-over-year for students who had data available all three years. There was a statistically significant decrease with a p value less than .001.

| <b>TABLE 1:</b><br><b>Total Student Population that Received CHEW Intervention</b><br><b>Academic <u>Year-to-Year Comparison</u> (N=258 Unique Students)</b>  |   |
|---|---|
| Average Number Absent Days (Excused and Unexcused)  | Average rate of Absenteeism   |
| 32 days in AY 2017-2018<br><span style="border: 1px solid red; padding: 2px;">39 days in AY 2018-2019</span><br>23 days in AY 2019-2020   | AY 2017-2018 was 17.7%,<br><span style="border: 1px solid red; padding: 2px;">AY 2018-2019 was 21.5% and</span><br>AY 2019-2020 was 12.7% |
| <b>9 day reduction in total absent days</b>   | <b>5% reduction in Absenteeism overall from AY 2017-2018 to 2019-2020</b>   |
| <ul style="list-style-type: none"> <li>Intervention year outlined in red.<br/>               N=258 students (Unduplicated received CHEW services in AY 2018-2019)</li> <li>* the Intervention year showed the highest absenteeism percentage since the design of the CHEW program was to connect with families when they were already categorized as chronically absent. Therefore, results of intervention would not be seen until the year following intervention.</li> </ul> |   |

Of the 258 unique students in the data set, 155 students had attendance data available for all three years (Table 2):

| <b>Table 2:</b><br><b>Student Population who Received CHEW Intervention</b><br><b><u>Three years in a Row</u> (N=155 Students)</b>  |  |
|---|--|
| Average Number Absent Days (Excused and Unexcused)  | Average rate of Absenteeism  |
| 30 days in AY 2017- 2018<br><span style="border: 1px solid red; padding: 2px;">34 days in AY 2018-2019</span><br>23 days in AY 2019-2020  | AY 2017-2018 was 16.8%<br><span style="border: 1px solid red; padding: 2px;">AY 2018-2019 was 19.0%</span><br>AY 2019-2020 was 12.9% |
| <b>7 day reduction in absent days</b>   | <b>3.9% Reduction in absenteeism</b>   |
| <ul style="list-style-type: none"> <li>Intervention year is outlined in red.</li> <li>A drop in the rate of excused and unexcused absences in AY 2019-2020 was noted when compared to AY 2018-2019. A total of 455 excused absent days and 1,257 unexcused absent days were reported in AY 2020 vs. AY 2019. Even with Covid-19 impacting the last 4 months of 2019-2020, the annualized number of days is lower in 2019-2020 than 2018-2019.</li> <li>In AY 2019-2020, during the CHEW intervention phase, there were 49 fewer students with an annual absent rate of &gt;10%</li> </ul> |  |

Evidence that the separate average absence rate between groups 1 and 2 reduced after the intervention is seen in Figure 1. (1=2017 ‘Before’, 2=2019 ‘After’)

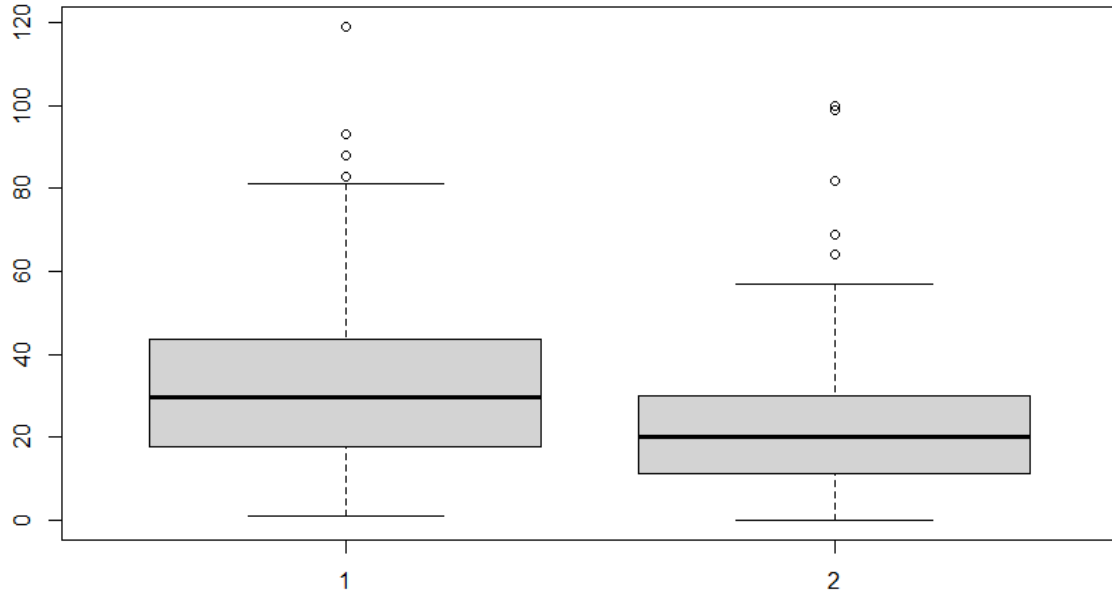


Figure 1. Box Plot - Average Absence Means Before and After Intervention

To test the hypothesis that the AY 2017-2018 ('Before') and AY 2019-2020 ('After') means were equal, a dependent samples *t*-test was performed. The null hypothesis of equal resilience means was rejected,  $t(154) = 4.3019, p < .001$ . Thus, the mean of the year after intervention was statistically significantly lower than the mean of the year before the intervention. A graphical representation of the means is represented in Figure 1.

From the intervention data, it appears that there is a strong association between CHEW interventions with families and reductions in both the number of days missed in school and the overall absenteeism rates for the most at-risk students in the district.

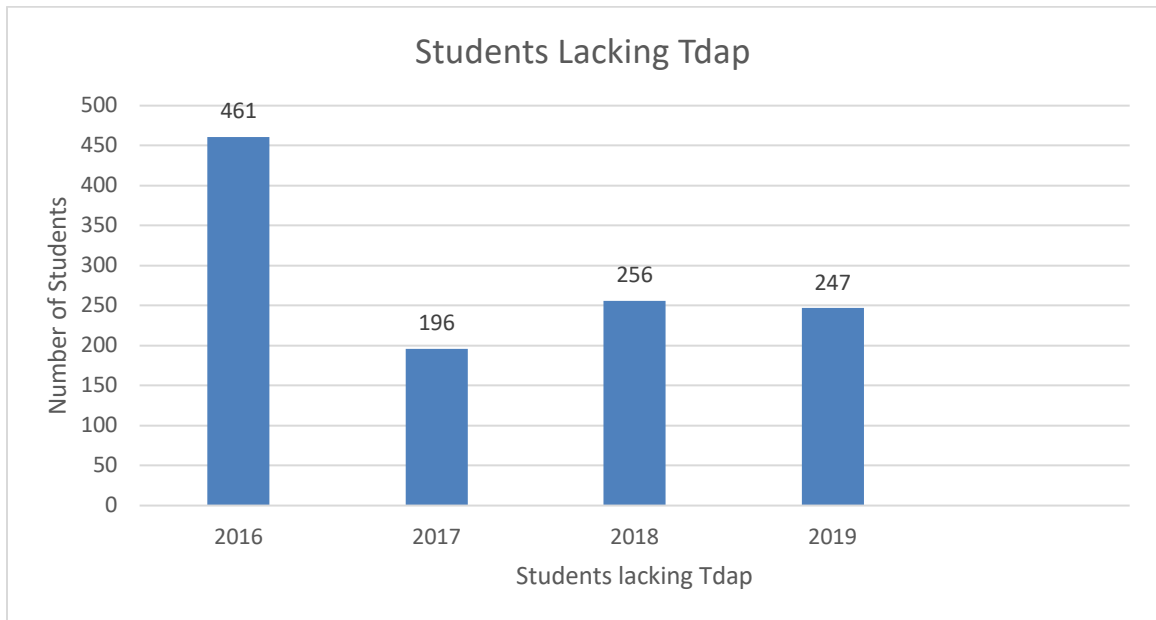
### Secondary Outreach Outcomes

In Phase 5 (2019-2020) the CHEWs provided the following interventions to help the district extend access and equity to students most at-risk in the district:

#### *Vaccinations to start school (Summer 2019)*

In an effort to focus on general wellness and absenteeism related health concerns within the district, the program team invested time in the summer vaccination intervention which was a success. Students who could not start due to lack of vaccinations dropped by almost half from

start of the intervention beginning in 2017. CHEWs were a critical piece of this intervention as they assisted the health services department on this project.



*Figure 2. Students Lacking Tdap*

Figure 2 shows an increase in Tdap students lacking Tdap for 2018 and 2019. Many factors contribute to this including the varying number of students enrolled in each year and varying total number of students in the call sheet supplied to ICP each year.

- CHEWs made 1,396 phone calls to students who did not receive Tdap vaccinations and were at risk for delayed start to school for the 2019-2020 school year.
- CHEWs performed 308 home visits to provide families with information of Tdap clinics at school sites.

### *Enrollment Visits for Sierra High School*

CHEWs continued the enrollment project with Sierra High School for the third year in a row (collaboration on this specific effort began in 2017). In partnership with Mr. Murrieta, CHEWs provided outreach home visits to juniors and/or seniors who were credit deficient and at risk for not graduating. The primary goal this past year was to enroll students at Sierra High School or refer students to San Andreas to increase district graduation rates. If students did not enroll at a continuation Sierra or San Andreas, they would forfeit graduation.

CHEWs conducted home visits with 40+ families and provided support to complete applications to increase enrollment of high school seniors who were credit deficient.

*Student Attendance Review Team (SART) Home Visits (August 2019 – December 2019)*

"Wish I had CHEWs growing up"  
–Focus Group Participant (Parent)

CHEWs performed 589 early-intervention (Tier 2) home visits with families who were on a SART list at their respective school site.

*Family Satisfaction Data of CHEWs based on 27 surveys (SBCUSD) with SARB families:*

1. How likely would you be to recommend a community member to a C.H.E.W.? (Please rate this statement on a scale of 1 to 10, 1 = Not at all likely, 10 = Extremely likely)
  - a. 100% said they are extremely likely to recommend a C.H.E.W.

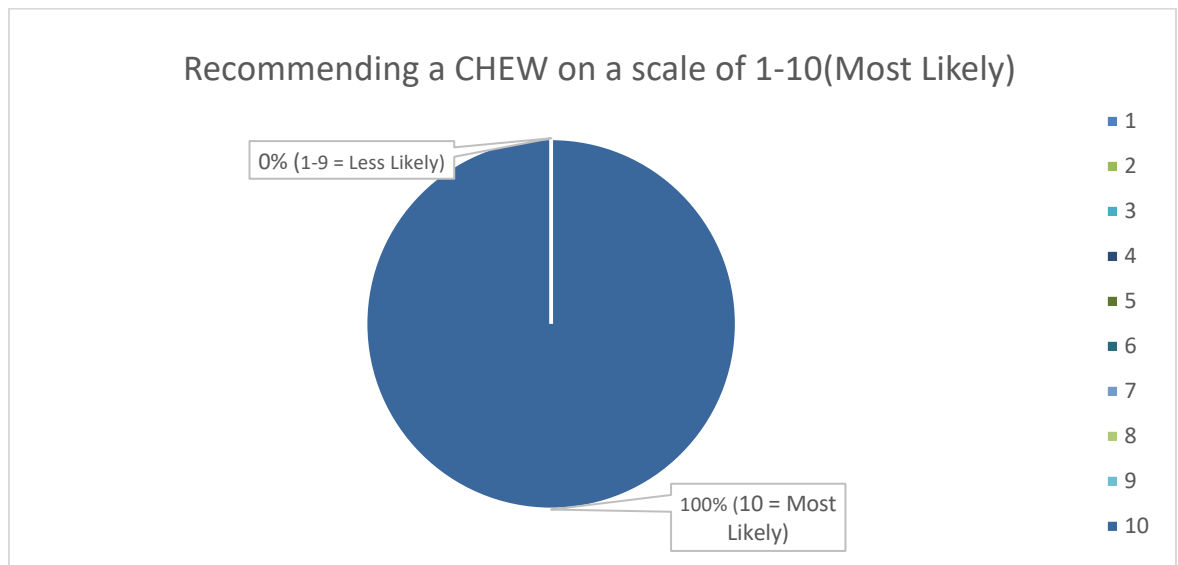


Figure 3. Recommending a community member to a C.H.E.W.

2. Recommending a CHEW Overall, how satisfied or dissatisfied were you with your C.H.E.W.?
  - a. 93% (25) Very Satisfied
  - b. 7% (2) Somewhat satisfied

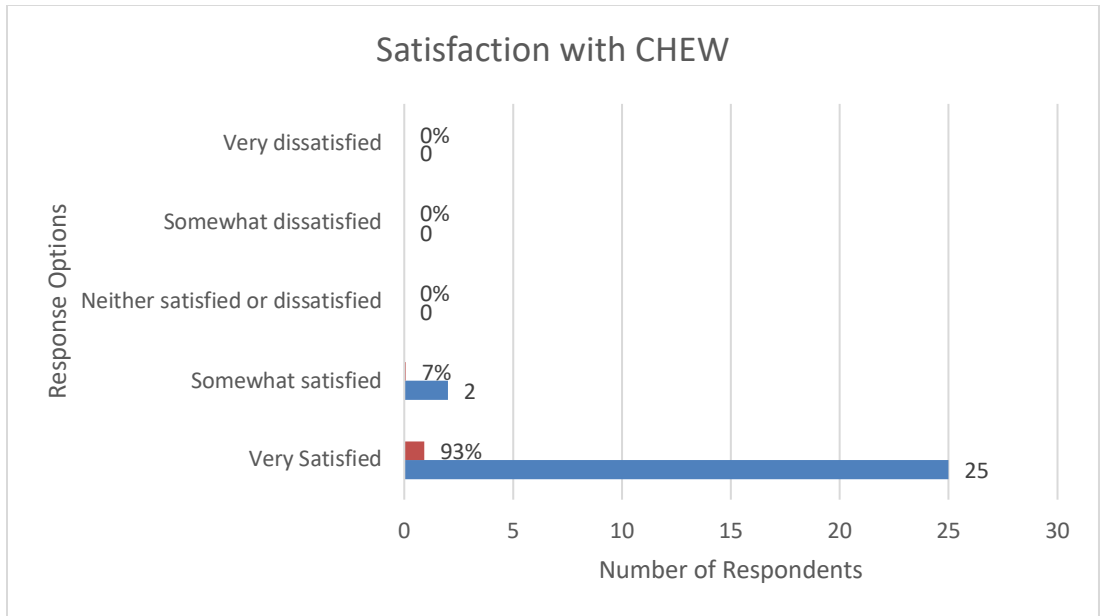


Figure 4. Satisfaction with CHEW

3. How would you rate the quality of your C.H.E.W.'s services?
  - a. 96% (26) Very high quality
  - b. 4% (1) high quality

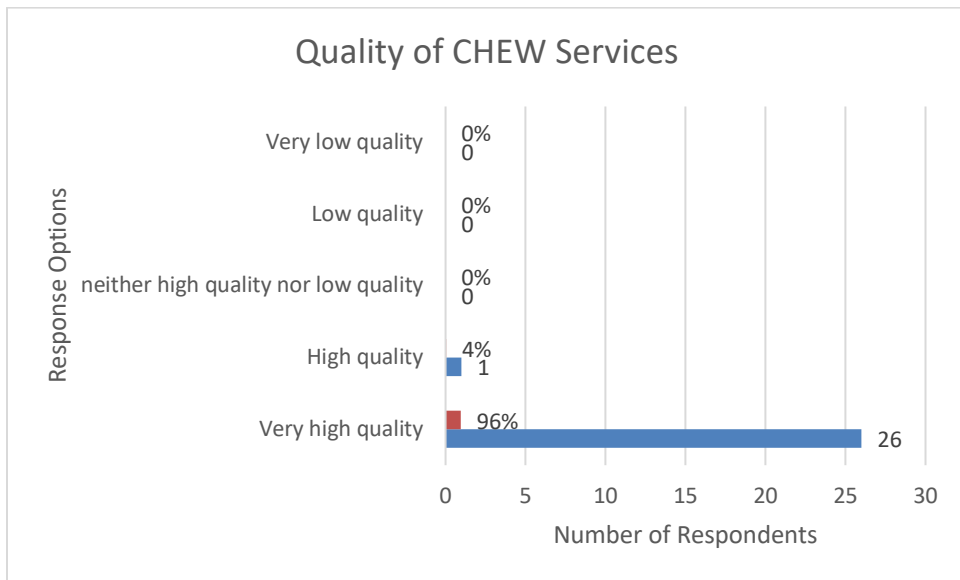


Figure 5.. Quality of CHEW Services

4. How responsive has your C.H.E.W. been to your questions and concerns?
  - a. 85% (23) extremely responsive
  - b. 15% (4) very responsive



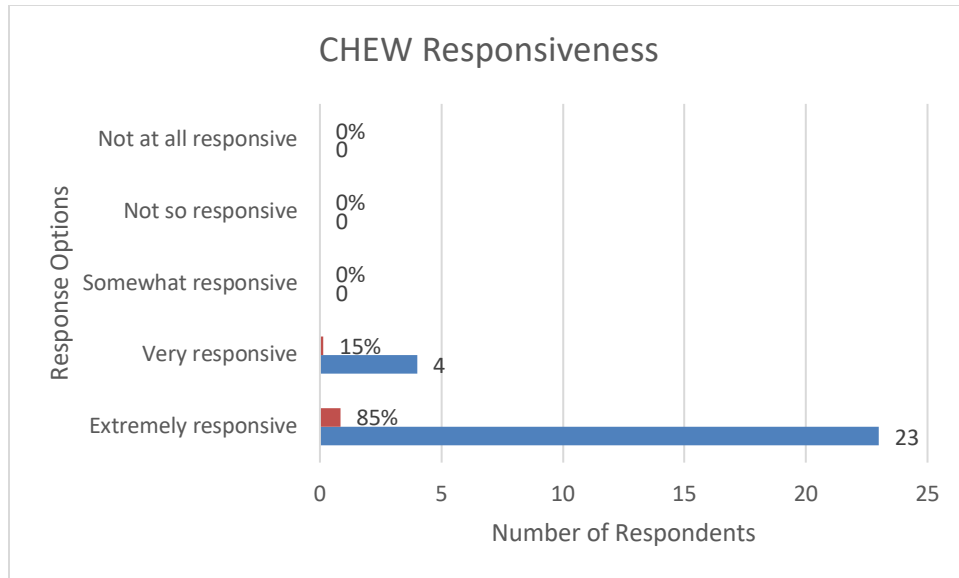


Figure 6.. CHEW Responsiveness

*Student Attendance Review Board – Tier III CHEW Home Visits to Screen for Social Determinant Barriers*

"I think that the [CHEW] has done even more, [they have] gone even farther. [CHEW] has done everything in [their] power and if not [they] investigates it. I have no suggestions, I am very satisfied with [CHEW]"  
 -Focus Group Participant (Parent)

A total of 128 families were initially screened by the CHEWs with follow-up home visits for families willing to receive resources, and provided with linkages and referrals to specific services:

- 128 families received at least 1 home visit
- 366 home visits conducted for entire reporting period

From the SARB screenings, follow-ups, and home visits, referrals were made by the CHEWs and tracked to ensure families were linked to critical services needed.

- 493 referrals were made to families with 93% completed by families due to CHEW follow-up.
  - CHEWs documented referrals and followed-up with families to confirm whether or not they had completed the referral by accompaniment, home visit or phone call. Follow through was self-reported (except when CHEWs physically provided accompaniment), by the family and not documented with a specific tracking measure since resources and follow up methods varied widely.
- The most common referrals were to:
  - Health insurance enrollment
  - Child/youth services
  - Local community organizations/ agencies

- Food resources
- Workshops/presentations
- Clinics

From the screening of families on social determinant barriers and risk, the district asked the CHEWs to identify the top risk factors for absenteeism:

**Top Risk Factor: Social determinants of health barriers** were the top risk factors for students who were chronically absent in schools: Poverty, unstable employment, single parent households, lack of transportation and lack of food and clothing were top reasons.

**Second-Risk Factor: Student behavior**, as defined by the four primary behaviors:

- Students were not motivated to go to school or think about the future
- Lack of interest in school
- Excessive screen time
- Lack of sleep

**Third Risk Factor: Parental factors**, specifically two primary reasons:

- Parent had a general health issue preventing student from going to school (Cancer, hospitalization, back injury, disability, multiple chronic health issues)
- Lack of education regarding impact of chronic absenteeism.

### *Outreach Calls to Families & Addressing Food Insecurity During Covid-19*

"The communication that they've had is really good. You can tell the plan that they have, everything over the students, over the education. Yes they do have good communication. Good dialogue. And they prepare us well."

-Focus Group Participants  
(Staff)

With the impact of Covid-19 on schools and families since Mid-March, 2020 the CHEWs shifted from home visits to conducting outreach and risk-screen calls to district families to continue to provide intervention and connect families to food bank resources through Loma Linda University Health's food box delivery emergency response program.

Starting March 17<sup>th</sup>, CHEWs were taken off field-based work and re-assigned to telephone interventions. While many calls went unanswered, the CHEWs were able to consistently connect with families and screen for food insecurity.

- Four CHEWs made, on average, 450 calls a week since March 16th, for a total of almost 7,200 calls.

- As of June 30th, 2,469 food bank boxes were delivered by the collaborative team of CHEWs across the entire County of San Bernardino-with 700 SBCUSD families receiving boxes (32% of total boxes delivered went directly to SBCUSD families). CHEWs began to contact their caseload families to assess family's food needs with the senior SBCUSD CHEWs (2) contacting families they served for the last 3 years. Reinforcing the connections with their case load families led to an abundance of referrals in the community for other school district families and community members who needed food boxes.
- LLUH contributed 30+ volunteers (approximately 120+ volunteer hours) to assist with food deliveries to community member averaging 5-10 volunteers (some recurring) per week. The students primarily focused on delivering to families who were not enrolled in SBCUSD and the CHEWs primarily focused on SBCUSD families.

### *Focus Group – Qualitative Analysis on CHEW Outcomes*

To further contextualize the effectiveness of the CHEW intervention, focus groups with parents and administrators were conducted. The focus groups involved standardized questions, third party facilitators, and recorded comments that were coded by analysts. Axial coding was used to identify emerging themes in the responses of focus group participants. The following comments were grouped into key themes, and were overwhelmingly positive. CHEWs are seen by both parents and administrators as an extension of the school district, teachers, and school administration. As intended, CHEWs are functioning as bridge builders between community members and service organizations. For San Bernardino City Unified School District, the CHEWs are essential for trust building with students and families which leads to more effective recommendations and referrals. Participants also noted that the CHEWs appropriately build trust through both cultural and environmental community relationship-building and help link students and families to short-term and long-term resources.

Other themes and perspectives on the CHEWs voiced by parents and administrators were:

- CHEWs intensified their work up during a critical time (Covid-19) and were positioned to do so quickly and effectively.
- CHEWs are persistent, they “go the distance”, take initiative, find out and get things done to be helpful, “they go above and beyond”
- CHEWs often act as mentors that (being community members themselves) are additionally able to walk alongside families
- CHEWs promote partnerships between multiple entities, connect the dots.

"Thank God I feel connected because they are always attentive/checking up on us. They give you information over whatever information we need. We can call I always feel connected. Whatever is going on Lorena tells me to call her no matter what."  
-Focus Group Participant (Parent)

One primary area of concern voiced by participants was the acknowledgement that though there are some community resources, isolation and lack of access to resources, defined primarily as health, mental health, and educational resources, have been an issue. In response to CHEW outreach and education, parents experienced or can experience information overload vs. the need for specific/appropriate/direct information. As the intervention model is refined, CHEWs are trained to prioritize information and to respond to the most pressing immediate concerns.

Finally, from a systems perspective, two primary recommendations emerged from the collective input of participants:

- 1) There is a need to ensure more people know about the CHEW Program and in order to support the CHEWs;
- 2) Across the school district, communication is good/abundant but there is also a need to integrate systems further.
- 3) School based approach more effective and direction we are headed?

## **Conclusion**

### *Phase 5 contextualized within the overall CHW Integration Project*

The Institute for Community Partnerships has been working to Integrate Community Health Workers in both education and health systems since 2016. Community Health and Education Worker (CHEW) Program began working in the SBCUSD in 2016-17 training and canvassing with the help of one of the first cohorts of CHWs focused on Education. In subsequent phases 3 (17-18) and 4 (18-19), the evolving team worked with various entities and contacts within the school district to decipher how best to integrate CHWs into school workflows already in place. In 2019 and 2020 it became more apparent that a specific model and team workflow was needed and therefore a Program Manager able to devote additional time to the project was brought on board. This focus on workflow, structure, teamwork and robust/formalized data collection allowed to further understanding on how best to move forward.

By this pilot program, the partnership between an academic healthcare system, community-based organization, and school district has pioneered workforce development for CHEWs in our region but more so, the outcomes over the life of the pilot demonstrate when CHEWs make consistent, long-term engagements with families, there are reductions in chronic absenteeism and missed days from school. Additionally, when CHEWs consistently screen for social determinants it results in clear identification of root cause issues that impact district families, such as poverty, unemployment, housing and food insecurity. These are the underlying issues of chronic absenteeism, and CHEWS, because of their shared lived experience with those who they reach out to can effectively address these complex social determinants of health and education. Finally, families (participants) have indicated high levels of satisfaction in their interactions and experience with CHEWs given the CHEW's shared lived experience and culture that makes them a trusted ally. With the CHEW model for intervention now clear and the promising outcomes, school

districts looking to intervene on the most underserved and at-risk youth in their systems can benefit from long-term deployments of CHEWs who through trust and relationship-building, help the most at-risk families better access the resources, understand the importance of education, and most importantly, infuse equity into the system for often underestimated youth and families.

"Gosh, I guess in an ideal world, there would be a [CHEW] to assign to every school, you know, then, you know, then everyone would know exactly what a CHEW did or, you know, yeah but there's now six for a 50,000 student district."

--Focus Group Participant (Staff)