

CHEF

Culinary Health Education
& Fitness Program

Responses to Rural Health Network Development Final Evaluation Questions

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Partners working together to promote healthful eating and activity and build healthier communities





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PROGRAM GOALS & OBJECTIVES

GOAL 1

Implement nutrition-focused culinary education courses to empower children and families in Lincoln, east Linn and rural Benton counties to be self-sufficient in the kitchen and to make healthy food choices.

Objective: Train at least 96 volunteers and medical students.

Culinary education instructor trainings were conducted by Oregon State University (OSU) Linus Pauling Institute and subsequently transferred to OSU Moore Family Center (in Linn and Benton counties) and Food Share of Lincoln County.

Trainings covered the following topics: an introduction to the C.H.E.F. Program and team members; volunteer responsibilities and qualifications; an overview of cooking class curricula and resources; classroom management skills; caring for the shared spaces; dress code; tips for success; awareness of target population behavior and development; youth safety; basic first aid; and reporting requirements.

This training objective was largely met and was associated with statistically significant gains in volunteers' knowledge and confidence around delivering the curricula and their own personal cooking skills.

- Over the three-year program period, 89 College of Osteopathic Medicine of the Pacific-Northwest (COMP-NW) students and community volunteers were trained to deliver culinary education courses. Due to COVID-19, the effort to train at least 96 volunteers fell slightly short of meeting this objective at the time of this report, but this did not compromise the staffing of culinary education classes.
- Volunteers were satisfied with the training they received. A majority strongly agreed (76%) or moderately agreed (14%) that the training content was well organized and easy to follow. Most (85%) felt that the training session was the right length (typically two to three hours).

- All volunteers (100%) strongly or moderately agreed that the trainers were knowledgeable and well prepared. They appreciated the content of the training, especially techniques for managing children's behavior and keeping them focused during the class.
- The combined effects of the trainings and the experience of teaching the cooking classes were reflected in statistically significant gains in volunteers' confidence with regard to cooking using whole-food ingredients (24.7% gain, $z=2.6$, $p<.009$), reading food labels (21.3% gain, $z=2.0$, $p<.04$) and shopping for food on a budget (18.8% gain, $z=2.5$, $p<.013$).
- Similarly, after completing training and teaching one or more classes, statistically significant gains were made in the percentages of volunteers who rated themselves as "very confident" in their ability to use the curricular written resources (34.2% gain, $z=2.5$, $p<.01$) and to teach basic cooking skills (26.8% gain, $z=2.0$, $p<.04$).
- Although gains were observed in volunteers' confidence in their ability to manage children's behavior, talk about choosing healthy foods and teach knife skills, these gains were not statistically significant.

Objective: Conduct 69 culinary education courses across the tri-county region, serving at least 1,380 adults and children.

Cooking courses in east Linn and rural Benton counties used Fresh Grown Cooking, a curriculum developed by OSU Linus Pauling Institute's Healthy Youth Program. In Lincoln County, a partnership with Food Share of Lincoln County allowed for the use of Cooking Matters for Kids, Teens and Families curricula. Both these evidence-based curricula are highly similar in content: They emphasize preparing healthy meals on a budget and give participants tools for meal planning, smart shopping and kitchen skills.

- The culinary education courses were taught by nutrition education staff from OSU Linus Pauling Institute and subsequently transferred to OSU Moore Family Center, students from COMP-NW and community volunteers.

- Prior to COVID-19, culinary education classes were conducted at a diverse array of sites including industrial culinary education classrooms, school cafeterias, church kitchens, library community kitchens and conference rooms. Typically, the classes met once a week for five weeks.
- Three Spanish-language Family Cooking classes were held, serving a total of 60 community members. Classes were provided in east Linn County (2018, serving 14 people), Benton County (2019, serving 27 people) and Lincoln County (2020, serving 19 people). These classes were the result of collaborations with community partners (the OSU Healthy Youth Program and OSU Extension).
- By March 2020, when COVID-19 school closures forced the suspension of the cooking classes, 56 culinary education courses had been delivered across the tri-county region, reaching 866 children and adults.
- Had a statewide mandatory stay-at-home order not been issued by Governor Brown, C.H.E.F. was on track to meet the objective of conducting 69 culinary education classes and serving approximately 1,380 adults and children.

Objective: At least 80% of participants show a positive change in knowledge, skills and attitudes about cooking meals at home.

Impacts on children

- Cooking class instruction was highly effective for children, contributing to statistically significant gains in their independence in the kitchen and their knowledge about food preparation and healthy food choices.
- After participating in culinary education, children's abilities and confidence in the kitchen increased. Statistically significant gains were measured in children's reported abilities to make themselves a snack of fruit or vegetables and their ability to follow recipe directions (detailed findings are described in Section 3 below).
- Children also experienced statistically significant gains in their knowledge of proper handwashing and knife skills (detailed findings are described in Section 3).

- Messaging about healthy food choices was delivered consistently during classes. As a result, there was a statistically significant increase in the number of children who were able to identify healthier foods.

Impacts on adults

- In general, adult participants already felt positively about cooking and enrolled themselves and their children in the class because they wanted to share that interest with their children.
- Participation did not change the degree to which families planned or prepared their meals together.
- Participation in culinary education increased confidence among adult participants in their cooking and shopping skills. However, the increase was statistically significant in only one area: choosing the best-priced form of a fruit or vegetable.
- Adult participants were very satisfied with the culinary education experience, with 96% indicating they would share what they learned at class with family and friends. Further, written survey comments overwhelmingly indicated that they enjoyed the course and felt that they and their children benefited from the experience.

GOAL 2

Expand Coordinated Approach to Child Health (CATCH) as a sustainable program for promoting health and the attainment and maintenance of a healthy weight for children in Lincoln, east Linn and rural Benton counties.

Objective: Implement CATCH in 11 new schools, increasing the physical activity levels of at least 80% of eligible children.

- C.H.E.F. achieved the goal of expanding CATCH into 11 new schools by the end of Year 2.
- By Year 3, nearly 6,500 students (duplicated count) in participating grade levels had engaged in CATCH activities during physical education (PE) classes.
- Seventy-four faculty and staff participated in in-depth initial CATCH trainings, followed by booster trainings. The trainings were held in partnership with OSU Extension Service of Lincoln County.

- PE teachers served as the primary “CATCH Champions,” but several schools also opted to train classroom teachers in order to use CATCH for “brain breaks” throughout the school day.

GOAL 3

Increase consumption of fruits and vegetables among children in Lincoln, east Linn and rural Benton counties.

Objective: Provide at least 80% of eligible children an opportunity to try new fruits and vegetables by hosting monthly Tasting Tables at CATCH schools.

- C.H.E.F. established monthly Tasting Tables at each of the 11 CATCH schools.
- Tasting Tables gave roughly 8,900 children (duplicated count) at all grade levels an opportunity to try seasonal produce throughout the school year.
- Tasting Tables are successful due to a high level of collaboration between school nutrition services, school staff, school volunteers, C.H.E.F. Program County Coordinators, and partner organizations.
- Tasting Table facilitation methods drew on the strengths and resources of each site. Many sites used parent volunteers, while others had middle school leadership students distribute Tasting Table samples and encourage their peers to engage in healthy eating.
- Tasting Tables have become institutionalized events that students and school staff look forward to each month.

Objective: At least 80% of children at CATCH schools receive instruction on selecting healthy foods.

- Samaritan Health Services (SHS) produces Pick of the Month flyers in English and Spanish through the marketing and nutrition services departments at Samaritan Lebanon Community Hospital. The flyers contain nutritional facts and a recipe for the featured produce item, which was often used by school nutrition services to prepare Tasting Table samples.
- Pick of the Month flyers were sent home with approximately 8,900 (duplicated count) students in all grade levels enrolled in the 11 CATCH schools.

- Pick of the Month flyers are widely distributed throughout the community by Coast to Cascades Community Wellness Network (CCCWN), Partners for Health (PFH), the 11 CATCH implementation sites, and community partners.

Objective: Establish a health-conscious culture that promotes healthy choices at all CATCH school events.

- The C.H.E.F. Program Director, often with the C.H.E.F. County Coordinators, participated in over 20 community and school events from 2017–2020 to provide education around the C.H.E.F. Program, engage community members in health-promoting activities and offer information on healthy food choices. Examples of community events include back-to-school events, farmers markets, health and resource fairs, and Boys & Girls Club events.

SECTION II

C.H.E.F. DASHBOARD (JULY 1, 2017 THROUGH JUNE 30, 2020)

1. Dashboard Measures

GOALS	STRATEGIC OBJECTIVES		DETAILS
<p>A. By April 2020, implement CATCH in 11 schools, increasing physical activity levels of at least 80% of eligible children.</p> <p>Sites: Hamilton Creek School, Lacombe School, Seven Oak Middle School, Central Linn Elementary, Monroe School, Alsea School, Taft Middle School, Oceanlake Elementary, Yaquina View Elementary, Waldport Middle School, Siletz Valley Schools.</p>	Outcomes	# schools	<p>CATCH</p> <ul style="list-style-type: none"> The no-cost extension was approved. C.H.E.F. will be able to continue providing CATCH implementation support and resources through December 31, 2020. Opportunities for virtual CATCH trainings have been shared with CATCH Champions.
	Year 1	7/11 schools 1,176 students	
	Year 2	11 schools 2,588 students	
	Year 3	11 schools 2,662 students	
<p>B. By October 2018, provide at least 80% of eligible children with the opportunity to try new fruits and vegetables by hosting monthly Tasting Tables at 100% of CATCH schools.</p>	Outcomes	# schools	<p>Tasting Tables</p> <ul style="list-style-type: none"> The no-cost extension was approved. C.H.E.F. will be able to continue providing Tasting Table implementation support through December 31, 2020. Pick of the Month flyers are being shared with partner organizations.
	Year 1	7/11 schools 2,311 students	
	Year 2	11 schools 3,221 students	
	Year 3	11 schools 3,377 students	
<p>C. By April 2020, conduct 69 culinary education courses across the tri-county region, serving at least 1,380 adults and children.</p>	Outcomes	# courses taught	<p>Culinary Education</p> <ul style="list-style-type: none"> The no-cost extension was approved. C.H.E.F. Program will be able to continue providing cooking class implementation support through December 31, 2020. Virtual cooking classes are being developed.
	Year 1	15 courses 294 participants	
	Year 2	26 courses 379 participants	
	Year 3	15 courses 193 participants	
	<p>Total courses: 56 Total participants: 866</p>		
<p>D. By April 2020, train at least 96 volunteers and medical students to deliver culinary education courses.</p>	Outcomes	# trained	<p>Culinary Education Volunteers</p> <ul style="list-style-type: none"> The no-cost extension was approved. C.H.E.F. will be able to continue providing cooking class implementation support until December 31, 2020. OSU dietetics interns and an OSU Extension nutrition education intern will be assisting with the virtual culinary education classes.
	Year 1	35	
	Year 2	29	
	Year 3	25	
<p>Total trained to date: 89</p>			

2. Meeting/Events: The Community Health Summit on Generational Poverty has been rescheduled as a virtual summit on September 11, 2020.

3. Upcoming Deadlines/Updates: The no-cost extension was approved, allowing for continuation through December 31, 2020. The PIMS report is due July 31, 2020.

MOST SUCCESSFUL OR IMPACTFUL ASPECTS OF C.H.E.F.

Overall, we believe the effective delivery of the C.H.E.F. multicomponent program—as evidenced by the positive effects measured at the individual and community levels—is our most impactful accomplishment. We are very proud of the way in which our partners worked together to improve the health and well-being of our rural communities. Additionally, we have identified two unexpected areas of impact that we believe are noteworthy.

- **Most successful impact.** Network members, community partners and volunteers collaborated on integrating the three C.H.E.F. components—culinary education, CATCH and Tasting Tables—resulting in more than 17,025¹ contacts with children and adults who received instruction and services relating to healthy eating and movement. Some people participated in multiple activities (e.g., most children participated in at least two activities regularly: CATCH and Tasting Tables), providing consistent and repeated exposure to messaging and experiences that support a healthy lifestyle. Some children also participated in culinary education. This multipronged approach to impacting healthy behaviors strongly supports the overarching intention of the project to improve the health and shift the lifestyles of children and families in the tri-county region. Detailed information about the short- and long-term impacts on C.H.E.F. participants is provided below.

- **Noteworthy impact.** Statistically significant changes were measured in medical students' attitudes and intentions. The experience of teaching these classes changed the way medical students thought about the relationship between food and health. Statistically significant gains were measured relating to medical students' intentions to talk with their future patients about the foods they eat (32% gain, $z=2.8$, $p<.004$), their own commitment to learning about diet and nutrition (36% gain, $z=3.1$, $p<.002$), and their intentions to volunteer in community settings in the future (26.9% gain, $z=1.8$, $p<.05$).

- **Noteworthy impact.** Survey responses and evaluator observations indicated that medical student volunteers brought energy and enthusiasm to their classes and that middle school students connected strongly with them. Many middle school students showed great interest in the medical students, asking questions about their lives and studies. In this way, the medical students turned out to be unanticipated role models. In the words of one community volunteer, “I found the children’s interest in the medical students amazing. Most of them immediately attached themselves to the medical students. The children asked questions about the classes the medical students were taking and wanted more personal information from them. I was impressed with the children’s interest and happy to see they could talk about something besides their phones or their games.”

CULINARY EDUCATION

Short- and Long-Term Impacts

Short-Term Impacts

Short-term impacts were measured by responses on pretest and posttest surveys completed by children and adults. Surveys were available in English and Spanish. As no systematic differences were detected in the patterns of responses on the two versions of the surveys, responses were combined for the summative analysis.

- There were significant gains in children’s exposure to new foods, confidence and skills in the kitchen, and knowledge about healthy food choices. Statistically significant gains were measured between the pretest and the posttest in the proportion of students who had positive gains in these areas: tried a new fruit in the past two weeks (18.7% gain, $z=5.0$, $p<.00001$); tried a new vegetable in the past two weeks (24.9% gain, $z=6.7$, $p<.00001$); were confident in their abilities to make themselves something to eat without help from an adult using vegetables (20.6% gain, $z=5.8$, $p<.00001$) and using fruits (17.7% gain, $z=5.3$, $p<.00001$); knowledge of the correct way to use a knife (9.8% gain, $z=3.8$, $p<.00001$) and the proper length of time to wash hands before preparing food (33.8% gain, $z=8.2$, $p<.00001$).

¹ Based on PIMS reports with 6,266 served in 2017–2018, 4,454 in 2018–2019 and 6,305 in 2019–2020.

- Statistically significant gains were measured in the percentage of children who correctly identified the “healthiest” foods from an array of choices. Healthier foods correctly identified by children after culinary education were brown rice (21.4% gain, $z=4.7$, $p<.0001$), tomato (20.9% gain, $z=5.3$, $p<.00001$), bell pepper (15.8% gain, $z=3.4$, $p<.0005$), whole wheat bread (15.2% gain, $z=4.5$, $p<.0001$), grapes (14.8% gain, $z=3.5$, $p<.0004$), bananas (10.2% gain, $z=2.8$, $p<.004$) and oatmeal (9.8% gain, $z=2.3$, $p<.02$).
- Adults who attended culinary education experienced measurable (though not statistically significant) increases in their knowledge about nutrition and cooking and their confidence in their ability to cook healthy meals at home. Many enrolled in culinary education because they already felt confident in the kitchen and wanted help instilling that confidence in their children.
- As mentioned in section 1 of this report, adult volunteers who taught the classes experienced statistically significant gains in their confidence in their own cooking and food purchasing skills as well as their skills as a culinary education instructor.

Long-Term Impacts

- Children and adults acquired greater capacity to prepare healthy foods at home. We expect that increased cooking knowledge and skills, and the reported changes in eating preferences measured in adults and children who participated in the culinary education component of the program, may be retained over a lifetime.
- Local communities have acquired the capacity to sustain culinary education as a vital component in local obesity prevention efforts. Online training has been developed for community volunteers, creating a free and sustainable method for preparing volunteers to capably teach culinary education classes.
- After teaching culinary education, a statistically significant increase in the proportion of medical students who plan to talk with their future patients about healthy eating was observed. Participation in C.H.E.F. is likely to have contributed to a lifelong

shift in the way that this next generation of physicians approach the topic of nutrition with their patients. The increase in post-graduation intentions to teach culinary education in their local communities and to talk with future patients about healthy eating was also statistically significant. On a personal level, they learned important teaching and class management skills, while also gaining valuable cooking skills they can use at home.

- Higher education has attained a sustainable model of engaging students in community cooking classes. The culture of community volunteerism as a student requirement has become institutionalized at COMP-NW; we expect that future culinary education classes held in adjacent communities will have access to a pool of student facilitators.

CATCH

Short- and Long-Term Impacts

Short-Term Impacts

Assessment of short-term impact experienced by children as a result of their participation in CATCH was based on reports from their teachers.

- All children in participating grade levels in CATCH schools were engaged in moderate to vigorous physical activity during PE. The CATCH curriculum increased the amount of time that children engaged in daily moderate to vigorous exercise (if not daily, they participated several times a week depending on the number of PE classes allowed in the school’s master schedule). Key informants and CATCH Champions indicated that the games were the most popular component of CATCH, as they ensured that all students were engaged and no one was “out.”
- Children learned how to judge the healthfulness of the foods they eat. Teachers reported that their students learned basic nutritional concepts through instruction about “Go, Slow and Whoa” foods.
- CATCH Champions gained new instructional skills. Those who taught the CATCH curriculum reported that they learned new approaches for nonexclusionary activities and, during training, were introduced to other PE teachers across their district with whom they established valuable collegial relationships.

Long-Term Impacts

- The evaluation data strongly suggest that sustained use of CATCH will continue to promote better health and the maintenance of a healthy weight for children in the tri-county region.
- PE teachers will continue to use CATCH physical activities and educational concepts in the classroom. CATCH Champions agreed that CATCH physical activities would be sustained at their schools. Shared sentiment expressed in comments included, “Yes, CATCH will still be used at our school in the future,” and “All students now participate and there are no or low wait times before activity begins. We will continue to use the activity boxes.”
- CATCH educational concepts will continue to be taught. The middle school health curriculum was positively regarded by CATCH Champions, particularly the lessons on vaping. Key informants and CATCH Champions agreed that coverage of Go, Slow and Whoa foods would be sustained beyond the project period.

TASTING TABLES

Short- and Long-Term Impacts

Short-Term Impacts

- Monthly Tasting Tables enabled all students in participating schools to sample the Pick of the Month, increasing their exposure to fruits and vegetables.
- Tasting Tables contributed to a shift in children’s attitudes about trying new foods. Students looked forward to Tasting Tables. One volunteer shared that she is recognized in the hallway on Tasting Table day and hears excited comments such as “Look, the Tasting Table lady! It’s Tasting Table day!” Most children taste the new food boldly because they are not pressured to eat the food if they don’t like it. Peer pressure creates a lively environment, and children enthusiastically cast their votes by placing stickers on a voting board.

Long-Term Impacts

When schools reopen and COVID-19 has been managed, sustained presence of Tasting Tables in the 11 CATCH schools is expected to continue increasing children’s consumption of fruits and vegetables, as has been observed in the original

27 schools participating in the first CATCH grant. Looking ahead, Lebanon Community School District has expressed its long-term commitment to Tasting Tables and also expanded this service to its teachers in 2019. This support is expected to continue. In Lincoln County, OSU Extension and the school district will work together to resume Tasting Tables when allowed.

In addition to the current 11 schools, Tasting Tables have now been adopted at COMP-NW’s “Wellness Wednesdays” and in other community settings, increasing adults’ access to local produce and supporting a communitywide culture shift toward a healthy lifestyle.

SUMMARY

How has C.H.E.F. benefited the community, and will those benefits continue to be realized after the grant?

C.H.E.F. has benefited local communities in several ways. Here, we describe how responsibility for the program has further strengthened the functioning of CCCWN and its oversight network, as well as PFH (the boots-on-the-ground community partnership that facilitated the practical and logistical aspects of C.H.E.F. implementation).

- **CCCWN.** The functionality of CCCWN has been sustained for the past 10 years. Serving in an oversight role for the implementation of C.H.E.F. and other Network-sponsored projects strengthens relationships between partners conducting project activities and cements the Network as a vital contributor to local community health. C.H.E.F. was instrumental in strengthening connections between member organizations that work together on common goals. SHS’s commitment to and consistent support for the functioning of CCCWN, and its staff’s coordination of the larger goals of the C.H.E.F. Program, has been and will remain key to the Network’s effective functioning.
- **PFH.** PFH met consistently over the three-year period, with good attendance and member engagement. This group is not focused exclusively on C.H.E.F. but rather provides support for projects conducted by all of its members. The group’s input is instrumental in troubleshooting problems and finding practical solutions for a wide array of community programs. PFH holds an extended meeting each spring to review the partnership’s progress and plan for sustainability

(May 8 in both 2018 and 2019, and May 10 in 2020). In the past few years, they have been particularly attentive to C.H.E.F. Program leaders and communities and have worked together to blend the three program components into a comprehensive regional approach to individual and community wellness. Support for

shifting our community culture around healthy eating runs deep among most partners, and working together increases their individual efforts as well. C.H.E.F. Program activities have also strengthened the PFH infrastructure and increased partners' capacity to engage in activities benefiting community health.

SECTION IV

LEAST SUCCESSFUL OR IMPACTFUL ASPECTS OF C.H.E.F.

The most challenging aspect of the C.H.E.F. Program was recruiting and maintaining committed volunteers for culinary education and Tasting Tables and gaining schoolwide support for CATCH.

CULINARY EDUCATION

Recruiting an appropriate number of competent volunteers to staff and support culinary education classes was especially challenging in Lincoln County. Primary barriers included lack of time for volunteers and a limited population size, which led to a smaller pool of potential volunteers. Although classes in Lincoln County were headed by a committed Cooking Matters Coordinator, community volunteers were essential to support class implementation.

Most Linn County classes were run by a paid staff person at OSU Linus Pauling Institute's Healthy Youth Program (who later moved to OSU Moore Family Center) and supported by students from COMP-NW in Lebanon. While some students struggled to fit volunteer time into their school schedule, the educational requirement for community volunteer experiences ensured a ready supply of enthusiastic volunteers.

CATCH

Effective implementation of CATCH requires staff buy-in from PE instructors, classroom teachers and school administrators. The limited number of hours in a school schedule (time) was a barrier to establishing schoolwide buy-in. For some PE teachers, adopting the new CATCH curriculum while also promoting CATCH throughout the school was, at times, more than they had time to manage. An unusually high turnover of PE teachers also required a further investment of time, necessitating additional CATCH trainings as well as ongoing efforts to develop buy-in among new PE teachers.

TASTING TABLES

Many schools were able to implement Tasting Tables quickly and smoothly, due largely to one or two committed parent volunteers who managed the tables each month. Cafeteria staff and nutrition services buy-in also led to strong Tasting Table programs. Lack of a committed volunteer, or disinterested cafeteria staff, made implementation challenging in some schools.

SECTION V

PROGRAM OUTCOMES THAT DEMONSTRATE HOW C.H.E.F. HAS POSITIVELY IMPACTED COMMUNITY

- Our community partners have worked together well on C.H.E.F. and have committed to continuing to work together to support evidence-based programs and strategies to improve the health of our communities.
- Over the past three years, more than 860 adults and children learned to cook healthy meals with fresh ingredients through hands-on cooking classes. Nutrition education also occurred during the cooking

classes, reinforcing the concepts of healthy eating and the importance of fresh fruits, vegetables and whole foods to which children were also exposed through CATCH and Tasting Tables. Children and adults who participated in culinary education showed statistically significant gains in knowledge and attitudes.

- All students in participating grades in 11 middle and elementary schools increased their levels of moderate to vigorous physical activity through implementation of CATCH. CATCH also provided basic nutrition education and consistent messaging.
- All 11 participating schools implemented Tasting Tables, providing an opportunity for students to try

a new fruit or vegetable each month. Tasting Tables greatly expanded children's exposure to different fresh foods as well as providing an additional level of nutrition education.

- Spurred by the energy and messaging of the C.H.E.F. Program, C.H.E.F. concepts around healthy lifestyle change—in addition to other health initiatives, such as the 5-2-1-0 Challenge—have begun to spread across the tri-county region. If other rural communities are seeking a replicable community health model, the C.H.E.F. Program can be adapted to fit local needs and used as a starting point for positive changes in a community's culture around health.

SECTION VI

EVALUATION MEASURES + INSIGHTS

Participatory evaluation is highly recommended for local programs in rural communities.

We found that the presence of professional evaluators, who can function as program implementation coaches, at all team meetings is beneficial.

Because of the participatory nature of the C.H.E.F. evaluation, continuous improvements to the implementation process were made in an ongoing and relatively spontaneous manner. Regional and local partners were highly involved in the development of solutions to programmatic stumbling blocks and are proud of its success. Because evaluators were part of the team and attended program and networking meetings, discussions about strategies for optimizing programmatic success occurred at least monthly.

Word objectives around the concept of statistical significance.

Several of our objectives were worded in terms of desired percentages of participants showing positive change in knowledge, skills and attitudes. However, we chose to analyze and report our data in a slightly different way, examining the difference between pretest and posttest average scores. This approach is largely equivalent to our original approach, but it is more sensitive to the data because every score—and

the size of the scores—are taken into account in the analysis of findings.

Keep surveys short.

For practical reasons relating to the availability of already-trained cooking class facilitators, two different curricula were used in the C.H.E.F. Program. Cooking Matters curricula were delivered in coastal Lincoln County, while Fresh Grown Cooking was delivered in the inland counties.

Both curricula were highly similar in their content and methods of delivery. However, Cooking Matters required the administration of standardized pretest and posttest surveys for adults so that data could be pooled on a national level. As is appropriate for their national purposes, these surveys collected extensive demographic information and, through four additional pages of questions, gathered in-depth information about personal eating habits. Only three questions addressed attitudes about cooking, and six questions addressed confidence in the kitchen.

The evaluation team was interested in learning about changes in attitudes (three questions) and confidence (six questions) but did not believe that changes in personal eating habits were a reasonable expectation (30 questions) for C.H.E.F.

culinary education classes. Thus, before C.H.E.F. was launched, we sought permission to create a unique survey for the Fresh Grown Cooking curricula used in Linn and Benton counties, which consisted of a few of the Cooking Matters demographic questions and the nine questions regarding attitudes and confidence in the kitchen.

Cooking Matters would not permit any alteration of their instrument, even though the data collected in Linn and Benton counties would only be used by the C.H.E.F. evaluators and not reported elsewhere.

After considerable discussion, we chose to use the intact Cooking Matters instruments in all three counties so the evaluation would collect comparable data across the region.

Unfortunately, completing the Cooking Matters survey was burdensome for the adult participants (and for the cooking class instructors who helped adults wade through pages of questions before and after the classes).

The evaluation team observed the amount of time these surveys took away from learning time and the stress it placed on adult learners who, regardless of their native language, frequently appeared to struggle with reading and language skills (surveys were available in Spanish and English).

In the end, we opted to only report items from the Cooking Matters survey regarding attitudes and confidence.

Anticipate the need to modify survey instruments to accommodate iterative improvements to program delivery each year.

Systematic improvements to program design and delivery necessitated making ongoing modifications to our pretest and posttest surveys for children. These changes were essential to ensure measurement of the effects of new program modifications and were also helpful as we assessed gain scores at the end of each program year.

However, when conducting the summative analysis, modifications to the survey instruments complicated matters. We were able to collect three years of data on a core set of items, but each year new questions were added and others were dropped because they were no longer relevant. As a result, the number of children completing individual questions on the surveys varied. While these variations were accommodated statistically, it can be confusing for readers of the reports.

NO-COST EXTENSION ACTIVITIES (JULY 1, 2020 THROUGH DECEMBER 18, 2020)

EVALUATION FINDINGS

It was an unprecedented time in Oregon's history due to challenges of the COVID-19 pandemic and the historic wildfires affecting our region. And yet the C.H.E.F. Program continued to function, completing all of its activities and objectives, and ultimately achieving its goal of improving the health and well-being of our communities.

The purpose of the evaluation during the no-cost extension was to document the transition from in-person activities to virtual activities and to judge the relative effectiveness of the new strategies.

NETWORK LEADERSHIP

With sustained leadership provided by Coast to Cascades Community Wellness Network (CCCWN) and the collaborative efforts of Partners for Health (PFH), the C.H.E.F. Program was able to overcome barriers presented by the COVID-19 pandemic. With the exception of one PFH meeting that was canceled because fires were impinging on those living in Lincoln and Linn counties, all meetings were convened virtually on their scheduled days.

CCCWN most recently met in November 2020. One major accomplishment of this meeting was the members' decision to sign a renewal of the memorandum of agreement for 2021–2023. This is unambiguous evidence that the Network will be sustained. The CCCWN Steering Committee met every two to three months, providing timely guidance on program activities. PFH met monthly to address and solve day-to-day issues. Generally speaking, these formal meetings had higher attendance than they had when they were held in person. Travel time (some members must drive over an hour to attend the meetings) was no longer a barrier. Meetings were conducted efficiently, sometimes ending earlier than scheduled. Because of the high functionality of these leadership groups, as well as the hard work of the program staff, the new (virtual) C.H.E.F. activities were resumed as soon as possible.

VIRTUAL SUMMIT

The annual Community Health Summit originally scheduled for April was rescheduled for September 11 as a virtual event.

Program staff and community partners carefully researched online platform options and decided to use Zoom. After modifying the conference agenda to be suitable for a virtual event, the conference leadership team practiced hosting the event until they acquired the necessary technological and professional skills. To their credit, the event took place flawlessly with no technical glitches. Attendance was high; 140 participants learned about generational poverty.

Ratings on the participant satisfaction survey were remarkably high: Approximately 90% of the 67 participants who completed the survey “strongly agreed” that they would recommend this event to their friends (the remaining 10% “agreed” with the statement). Just over 85% “strongly agreed” that they had learned things they would apply in their personal and professional lives. It is recommended that future summits be based on a hybrid model, accommodating in-person as well as virtual attendance.

CULINARY EDUCATION

Eight remote cooking courses serving 124 participants were conducted during the no-cost extension period, for a total of 64 courses and 990 participants. OSU Extension Service of Lincoln County conducted two remote nutrition and culinary education sessions (three classes each), which used a modified version of the Cooking Matters curriculum. One of the sessions provided bilingual instruction for Latinx families.

OSU Moore Family Center conducted six remote cooking class sessions (four classes each) in east Linn and rural Benton counties. The format of these sessions closely aligned with the in-person cooking classes provided before the pandemic, although the content and instructional strategies were modified to accommodate remote instruction. Participants received packets of instructional materials ahead of time as well as modest financial support to cover the purchase of the foods needed for each session.

The evaluator observed a sample of these sessions and found them to be conducted with integrity, warmth and humor. In some ways, virtual classes had advantages over in-person classes conducted in a remote location: Participants were working in their own kitchens, extended family members

could participate, and children learned where to find kitchen tools and ingredients in their own homes. Although some classes were challenged by variable attendance, the same challenge occurred during in-person classes. One advantage of virtual learning is that a single class could include families from all three counties, reducing the problem of low enrollment in in-person classes restricted to a single community. Now that the curriculum has been converted for a virtual format, there are good reasons to retain the virtual option in addition to in-person classes (when they can be resumed).

CATCH

CATCH Champions were asked what strategies they recommended for others who were trying to implement CATCH for at-home learning. The most frequently recommended resource was the CATCH Global Foundation website, which quickly developed resources last spring for physical education teachers who have to connect with their students virtually. Four CATCH Champions participated in CATCH's virtual trainings and found them to be helpful. C.H.E.F. provided additional information and online resources to all 11 sites for hybrid and online learning.

TASTING TABLES

Unfortunately, Tasting Tables were discontinued when the schools closed. They had been institutionalized by many schools prior to the pandemic. Nutrition Services leadership have indicated that they will be resumed when barriers presented by the COVID-19 pandemic are resolved.

The Pick of the Month flyer—featuring nutritional information and recipes for local, seasonally available produce—will continue to be produced and shared regionally. The flyer is produced by Samaritan Health Services and is available in both English and Spanish.

