



Helping Communities Thrive through Public-Private Partnerships

Impact Report on Healthy Lifestyles Programs

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INTRODUCTION



“It was a unique endeavor for a corporate foundation to bring together a global group of NGOs to share best practices – the Mondelēz International Foundation’s efforts are a major step in the right direction towards improving community health programs’ processes, oversight and outcomes.”

-Rafael Pérez-Escamilla, PhD, Professor of Epidemiology & Director, Office of Public Health Practice, Yale School of Public Health¹

From the fields of rural China to the midlands of the United Kingdom, in 14 nations spanning five continents, the Mondelēz International Foundation (MIF)’s investment in school-based healthy lifestyles is transforming the lives of more than a million children around the world.²

MIF is supporting high-quality, school-based programs in nutrition education, access to healthy foods through gardening, and physical activity. These programs are all based upon innovative Public-Private Partnerships (PPP), which are widely regarded as crucial for fighting obesity and improving children’s health globally by such leading organizations as the National Academy of Medicine (NAM, formerly known as Institute of Medicine), UNICEF, the World Health Organization (WHO) and the World Bank.³ Each program is tracking progress against consensus metrics critical to achieve well-being that were developed in collaboration with community partners and public health experts convened by MIF in 2013.⁴ The three key metrics focus on the following areas: increase in nutrition knowledge; increase in physical activity and increase in access and consumption of fresh fruits, vegetables and other fresh foods.


Since the beginning of 2015, all 14 programs are implementing the metrics in some form. In this article, we focus on seven of these national programs – Brazil, China, Germany, India, Mexico, South Africa and the United Kingdom. Each has been in operation long enough to have comprehensively implemented and tracked MIF’s healthy lifestyle metrics, demonstrating positive program impacts.

¹ www.Mondelezinternational.com/~media/Mondelezinternational/uploads/well-being/mdlz_foundation_factsheet.pdf?la=en

² <http://ir.mondelezinternational.com/releasedetail.cfm?releaseid=933036>

³ Outline prepared by Dr. Rafael Pérez-Escamilla, Yale School of Public Health, for MIF, August 2016

⁴ <http://ir.mondelezinternational.com/releasedetail.cfm?releaseid=933036>



While the situation in each nation varies widely due to political, economic, social, ecological, and geographic factors, leaders of these school-based programs all report significant progress in key metrics and behaviors regarding students' health and well-being.

Across all countries and programs, success is built on solid, transparent partnerships: close consultation with government officials, school principals and teachers, parents, corporations and other key stakeholders. The programs also rely on continual monitoring of programmatic quality, effectiveness, and transparency – and a curriculum that connects in a meaningful way with primary-school children, their families and communities. To build on this success, MIF periodically brings representatives from the various programs together for workshops where organizers can share best practices.

This article provides an overview of the MIF-sponsored programs in the seven nations, including:

- Team members interviewed
- Cities and geographic areas served in each country
- Number of participating students and schools in each country
- Program's organizational structure and goals
- Recent progress and findings, such as health metrics, best practices, and challenges faced and overcome – including drought and lack of arable land for gardens.

BRAZIL



"Everyone feels they are part of the process, because they are part of the process."

-Gabriela Pen, INMED Brasil⁵

Program

Health in Action (Ação Saudável)

www.inmed.org.br

Team members interviewed

Joyce Capelli, Executive Director and President of [INMED Brasil](http://www.inmed.org.br), Gabriela Pen, Director, and Marianita Masiero, Program Coordinator, conducted a telephone interview with a consultant for MIF on September 5, 2016.

Geographic areas, students and schools

The program operates in the Brazilian states of Pernambuco, São Paulo and Paraná – states in the northeast and southeast regions of the nation identified as areas with the most potential to impact children in need.⁶ Phase One was launched in 2010 and lasted until 2013. Phase Two started in 2014 and is scheduled to continue at least through early 2017. During the two phases, the program has engaged with more than 1,000 schools and is expected to reach more than 400,000 students in a total of 14 communities in the three states.⁷ As Phase One was the subject of a 2014 paper⁸, this article will focus on Phase Two, which is projected to reach 218,000 preschool and primary school children.

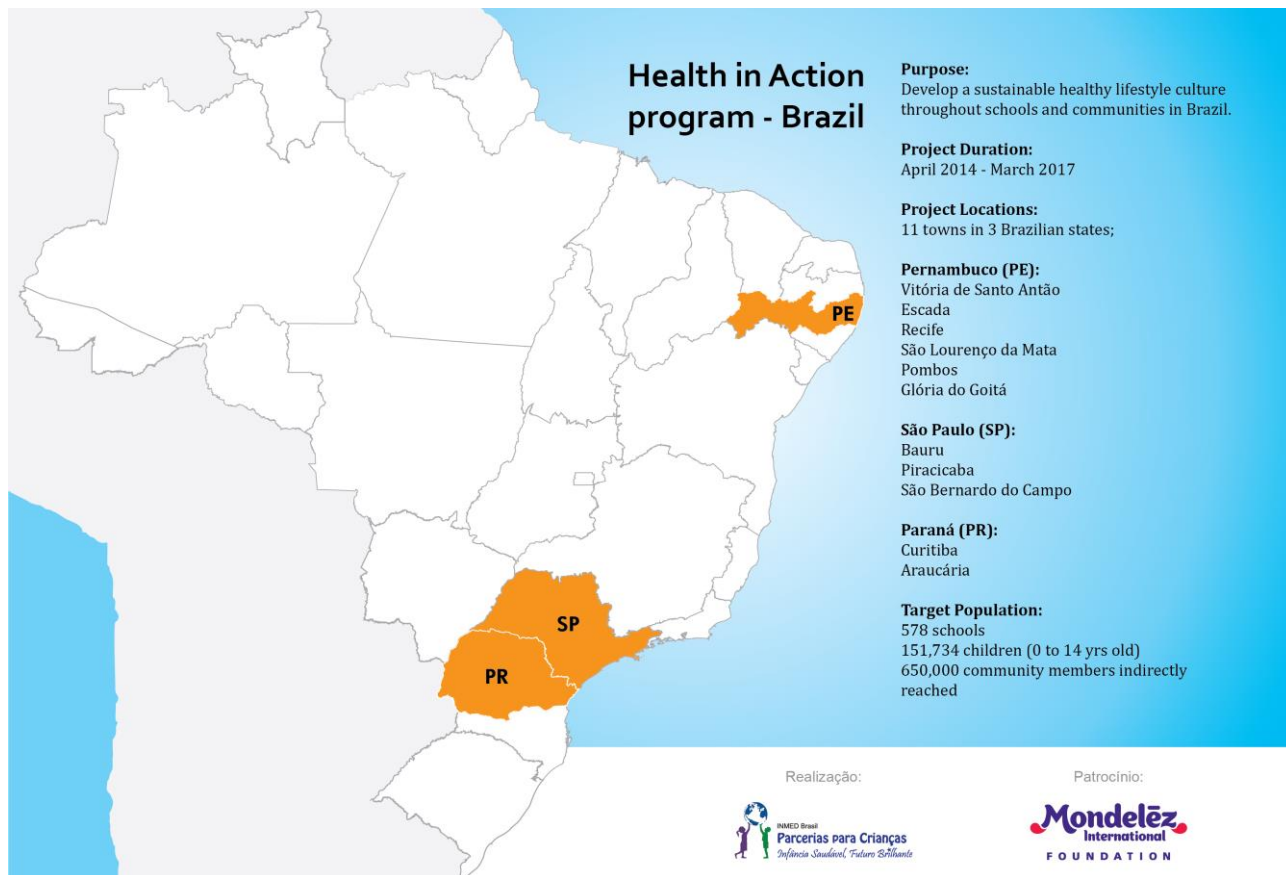
⁵Telephone interview with MIF consultant on Sept. 5, 2016

⁶ *Food and Nutrition Bulletin*, vol. 35, no. 3 2014, Health in Action Program, Brazil. Emily Slater, Mary-Lynn Lasco, Joyce Capelli and Gabriela Pen

⁷ Telephone interview with INMED Brasil on Sept. 5, 2016

⁸<https://www.mondeleznutritionscience.com/~media/mondeleznutritionscience.com/Files/PDF/healthy-eating-behaviors/2014-pdf-robinson>

The following cities and towns selected for Phase Two were chosen based on their needs for health and nutrition support, in close collaboration with Mondelēz Brasil:



What they're doing: structure and goals

The Health in Action program is a partnership of INMED Partnerships for Children, INMED Brasil, MIF, and the Instituto Esporte e Educação (IEE), an organization promoting sports and physical activity in low-income communities. Ação Saudável joins with officials from the Brazilian Ministries of Health, Education and Agriculture, local governments, principals and teachers, and community leaders for programmatic planning and implementation and performance evaluation.⁹ Additionally, INMED has worked closely with Dr. Rafael Pérez-Escamilla, a professor of Epidemiology and Public Health at Yale University, who specializes in nutrition and maternal child health program evaluation, to help develop and validate program monitoring for quality and impact.¹⁰

⁹ *Ibid.*

¹⁰ Email from INMED to MIF consultant Dec. 8, 2016

The program seeks to strengthen support infrastructures in community and home settings, so the principles of healthier living take root, and can be sustained. Before starting the program in any community's schools, INMED meets with local mayors and Departments of Education, Health and Agriculture and signs cooperation agreements.

Training of school staff regarding nutrition and physical activity is a key component of the program,¹¹ including semi-annual, eight-hour training sessions in: health; hygiene; sanitation; nutrition; healthy lifestyles; and gardening. Teachers then share this training with colleagues at their local schools, creating a “multiplier effect.”¹² INMED project coordinators in all towns, and representatives from education departments and other local government bodies, meet regularly to provide program updates, and plan training and other activities.

Overarching goals are:

- Promote sustainable improvements in children's health through school-based education and activities on nutrition, physical activity and healthy lifestyles
- Increase access to fresh produce through the establishment of school gardens, and the promotion of home and community gardens
- Collaborate with partner organizations to increase school-based and leisure-time recreation and play, emphasizing making physical activity fun and habitual
- Strengthen parental involvement in education and activities to improve nutrition and encourage healthier lifestyles
- Build a foundation for long-term sustainability, by actively partnering with local and state government, academic institutions, non-government and community-based organizations, and private-sector entities.¹³

How it's working: progress and findings

Health in Action leaders report significant progress across the range of the program's objectives of improving health, hygiene and nutrition at school and home. They attribute

¹¹ Telephone interview with INMED Brasil on Sept. 5, 2016

¹² *Food and Nutrition Bulletin*, vol. 35, no. 3 2014, Health in Action Program, Brasil. Emily Slater, Mary-Lynn Lasco, Joyce Capelli and Gabriela Pen

¹³ INMED Partnerships for Children/INMED Brasil (INMED) Health in Action Program Quarterly Progress Report to MIF, July 2016

this success to shared goals and close coordination with local officials, school principals, teachers and staff, children and parents.

Local governments are seen as key stakeholders, as governmental support provides a foundation upon which to build strong relationships with schools, Director Pen says. After identifying towns with the most need for assistance in nutrition and physical activity education, “we met with all the mayors and education and health and agriculture departments and signed cooperation agreements,” Pen says. “... This opened the doors of the schools for us. Teachers can participate in our training. It gave us free access to the schools, the teachers, to the students, cafeteria workers.” Executive Director Capelli says INMED works closely with education and health departments and schools on the programs: “If each school doesn’t buy in, the program won’t work, so we make sure the principals are aligned with what we are doing.”¹⁴

INMED presents a strategic plan for local governments to approve, thus paving the way for cooperation, Pen says. Regular meetings are held with government officials to talk about results, upcoming activities and other important topics. Capelli says parents are generally extremely supportive of medical evaluations and recommendations for individual students - for example, treating anemia. “Everyone feels they are part of the process because they are part of the process,” Pen says. Transparency is vitally important - if a programmatic component at a school is changed, the decision to do so is made with all partners involved, she added¹⁵.

Pen says the programs start with a presentation to all of the schools. After the programs are up and running, a local INMED coordinator goes to each school at least once a month to check in, get feedback and monitor success or other developments - for example, if a school has a new principal. “Our local coordinators with the schools come up with ideas,” Capelli says. “Last week, in one northeast town, they had an all-day bicycle tour around the town.”¹⁶

The Health in Action program includes school nutrition education, vegetable gardens, physical activity promotion, and training for community health agents who, working as part of family health teams in each community, make home visits to parents to promote proper diet and hygiene. They monitor body mass and check for anemia, as some communities have a high rate of children entering school with anemia, Capelli says.¹⁷

¹⁴ Telephone interview on Sept. 5, 2016

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Email to MIF consultant Dec. 16, 2016

Schools and program participants currently involved

Town	# of Schools	# of Children	# of Teachers	# of Cafeteria Workers
Recife, Pernambuco	132	40,251	2,595	141
Vitória de Santo Antão, Pernambuco	42	2,432	117	54
Pombos, Pernambuco	30	2,159	85	49
São Lourenço da Mata, Pernambuco	36	6,840	268	71
Escada, Pernambuco	45	5,185	261	87
Gloria do Goitá, Pernambuco	30	2,232	91	44
Bauru, São Paulo	34	14,975	986	73
Piracicaba, São Paulo	41	13,732	1,073	97
São Bernardo do Campo, São Paulo	84	49,721	1,915	374
Curitiba, Paraná	45	7,116	481	76
Araucária, Paraná	56	14,242	1,424	84
CURRENT TOTALS	575	158,885	9,296	1,150

In addition to the central leadership team, INMED has at least two staff members in each community assigned to visit schools and monitor performance. The larger schools also have trained volunteers working with the program.

Pen says Phases One and Two covered a combined total of 300 schools with full gardens, plus some form of plant production, including containers, in every school: the result of careful planning, sensitivity to local dietary preferences, and partnership with local agriculture departments. Local coordinators first analyze the availability of water, soil conditions, and other key factors. Then, the communities, including the schools, decide what vegetables to plant. Many feature lettuce, cabbage, and squash, with corn more common in the northeastern communities. Students help run the gardens, providing them with practical training and physical activity,¹⁸ a major component of the program.

IEE, in collaboration with INMED and local schools, plays a key role in the program, helping to train teachers, evaluate students' performance, and document program outcomes in physical activity.¹⁹ As with the gardens, careful planning and coordination with schools is seen as the key to success.

¹⁸ Telephone interview with INMED Brasil Sept. 5, 2016

¹⁹ Instituto Esporte & Educação Health in Action Quarterly Progress Report, March-May 2016

Local control of Ação Saudável allows for easy implementation and adjustment at the local level. For example, when Brazil experienced outbreaks of Zika and dengue viruses, eight schools in the city of Escada mobilized to help disseminate prevention information to students, parents, and their communities. This included a march to promote awareness of mosquito control. In Recife, students from the Jandira Botelho school cleaned the area around their school, collecting trash and removing standing water where mosquitoes could breed.²⁰

Summary

Serving hundreds of thousands of students since its inception in 2010, Health in Action has taken root in many Brazilian communities with the greatest need. Based on the philosophy that programmatic sustainability and success are best achieved through private sector and community partnerships, the program – led by INMED, MIF and IEE – engages with government officials, communities and schools. Partnerships are followed by extensive teacher training and then instruction, both in the classrooms and the gardens, to help students live healthier lives.²¹ Reflecting on the program's impact in the city of Glória do Goitá, Mayor Dr. Zenito Miranda Vieira says, "It's very important to talk about healthy eating with kids, and INMED has been doing that. I give thanks for our partnership, and I hope it keeps strengthening the children of our town."²²

²⁰ INMED Partnerships for Children/INMED Brasil (INMED) Health in Action Program Quarterly Progress Report to MIF, July 2016

²¹ *Food and Nutrition Bulletin*, vol. 35, no. 3 2014, Health in Action Program, Brazil. Emily Slater, Mary-Lynn Lasco, Joyce Capelli and Gabriela Pen

²² INMED Partnerships for Children/INMED Brasil (INMED) Health in Action Program Quarterly Progress Report to MIF, July 2016

CHINA



Before

“The Mondelēz Hope Kitchen-Nutrition & Healthy Lifestyles Program is very practical, comprehensive and systematic in terms of content, implementation, and measurement. Hope Kitchens provide a best practice and lay a solid foundation for conducting a larger scale of food and nutrition education programs across China in the future.”

-Ma Guansheng, former Deputy Director, National Institute for Nutrition and Health of China CDC²³



After

Program

Mondelēz Hope Kitchen - Nutrition & Healthy Lifestyles Program

www.Mondelēzinternational.com/newsroom/our-stories/mdlz-hope-kitchens

Team members interviewed

Gu Lan, Director, China Youth Development Foundation, and Nana Zhao, Assistant Manager,

Corporate & Government Affairs for Mondelēz China, conducted a telephone interview with a consultant for MIF on September 28, 2016.

Geographic areas, students and schools

The Mondelēz Hope Kitchen (MHK) program (funded since 2009), was established to promote healthy lifestyles, and is an iconic community involvement program in the world's most populous nation²⁴. In response to the compelling needs of students, parents, and teachers at primary schools in less developed rural areas of China, the program addresses school children's hunger and undernutrition. By funding kitchen equipment, as well as teacher and kitchen staff training in health and nutrition knowledge and practice, MHK improves the capability of rural schools to provide warm, cooked meals, helping students

²³ www.Mondelēzinternational.com/~media/Mondelēzcorporate/uploads/well-being/mdlz_foundation_factsheet.pdf?la=en

²⁴ Report prepared for MIF by Mondelēz Hope Kitchen, August 2016

to access safe and nutritious food and, ultimately, improve their nutritional intake and health. By the end of 2016, 307 MHKs and 50 Delicious Veggie Gardens were completed in 21 provinces and cities across a wide swath of China, benefiting 150,000 rural students.²⁵ The program operates in the following provinces and municipalities:

1. Anhui
2. Beijing
3. Chongqing
4. Guangdong
5. Guizhou
6. Hebei
7. Heilongjiang
8. Henan
9. Hubei
10. Hunan
11. Jiangsu
12. Jiangxi
13. Jilin
14. Liaoning
15. Qinghai
16. Shanghai
17. Shanxi
18. Shaanxi
19. Sichuan
20. Yunnan
21. Zhejiang



What they're doing: structure and goals

MHK, a partnership of the Chinese Youth Development Foundation (CYDF), the Chinese Centers for Disease Control and Prevention (CDC), and Mondelēz International Foundation (MIF), joined by community volunteers and social organizations, aims to promote healthy lifestyles to young rural students through a three-part strategy of nutrition education, vegetable gardens and active play.²⁶ The program was developed “in response to major challenges facing students, parents, and teachers in primary schools in poverty-stricken rural areas.”²⁷

²⁵ Report prepared for MIF by Mondelēz Hope Kitchen, August 2016

²⁶ www.Mondelēzinternational.com/newsroom/our-stories/mdlz-hope-kitchens

²⁷ *Food and Nutrition Bulletin*, vol. 35, no. 3 2014, “Identifying common metrics for evaluating school-based health lifestyles programs in seven countries,” Rafael Pérez-Escamilla and Michael Alberg-Seberich

How it's working: progress and findings

Before the program, 70% of students surveyed felt hungry during class, more than 30% reported at least occasional food insufficiency, and schools often lacked the clean, well-equipped cooking facilities regarded as vital to ensuring students receive three nutritious meals a day²⁸. But as of October 2016, the program is helping 150,000 rural students across China, with 307 MHK kitchens established. MHK draws input from five key sectors: CYDF, grassroots-level community service centers, schools, local governments, and the business sector.²⁹ And, the program is providing a strong platform to inspire volunteerism, according to Gu Lan, Director, CYDF.³⁰

Lan says the three-pronged healthy lifestyles strategy involves raising children's awareness of nutrition through education; developing gardens which provide children access to healthy fresh vegetables and fruit; and, developing active play programs.

The leadership team's approach was methodical, and built upon the foundation that CYDF had established during the previous quarter-century – by leveraging its network of government officials, community partners, and resources in 29 communities across China. As the entity responsible for evaluating rural students' nutrition and improvement, Lan says, the CDC in China is an important partner.

During March-July 2016, the nutrition and health course was run continuously at 50 MHK schools in Pingquan County, Dunhua City, Wufeng County, Pingjiang County and Longyang District. First, teacher training enhanced instructors' knowledge of nutrition. These teachers then taught the nutrition and health course in the 80 pilot schools, reaching 245 nutrition teachers and 22,758 students (with the participation of CDC nutrition experts).³¹

The vegetable gardens are important not only for providing fresh produce to children, but also for integrating nutrition education and physical activity into the curriculum, according to Lan. The gardens build a good platform for nutrition education: students can learn the growth cycle and nutrient content of various vegetables, enjoy the fun of farming and harvesting, and develop a habit of loving physical work and cherishing food by planting their gardens.³²

²⁸ Food and Nutrition Bulletin, Vol. 35, No. 3 2014, Mondelez Hope Kitchen Program, China, A Program Impact Pathways analysis, Yanran Li, Xiaoxun Yao, and Lan Gu

²⁹ Food and Nutrition Bulletin, Vol. 35, No. 3 2014, Mondelez Hope Kitchen Program, China, A Program Impact Pathways analysis, Yanran Li, Xiaoxun Yao, and Lan Gu

³⁰ Telephone interview with MIF consultant Sept. 28, 2016

³¹ Mondelez Hope Kitchen - Nutrition & Healthy Lifestyles Program, February-July 2016 (August 2016)

³² Email from Nana Zhao to MIF Feb. 7, 2017

Bai Guowei, a teacher from a pilot school, says, "Previously, I just had limited knowledge about nutrition and sometimes could not fully convince students of my answers on the class. Through systematic learning, I have gained a holistic understanding of nutrition and health and learned how to teach the course. Now, I am fully confident in answering students' questions and ready to further improve the teaching quality."³³

The project team runs contests for excellence in teaching plans, and in written essays and oral presentations from students about the program. These competitions and awards promote the implementation of the program in the schools, organizers say. Homework assignments continue learning outside of school and engage parents to encourage healthy eating habits at home.³⁴

As with the gardening and nutrition education initiatives, the active play component of the program began with teaching the teachers. Physical education teachers in rural China are part-time, "so we train them to increase the quality and competence of the teachers," Lan says. The program gave schools equipment, such as jump ropes and ping-pong tables, to help achieve the goal of an hour of exercise per day.

By July 2016, the first phase of the program was completed in 30 schools in Pingquan County of Hebei Province, Wufeng County of Hubei Province, and Baoshan County of Yunnan Province. Three typical schools from each county were chosen for endline surveys on the nutritional status of more than 5,100 students involved in the program, as well as on their knowledge, attitudes and behaviors about healthy lifestyles.³⁵

Data from the surveys are very encouraging, Lan says. In the areas where the MHK program was implemented, the percentage of students from grades 2-6 with a healthy lifestyle showed significant improvement, creating a model for sustained improvement in rural elementary schools. Some key findings³⁶:

- Overall, the program has played a positive role in heightening awareness of nutrition and health, improving eating behaviors and nutrition, and increasing physical activity.

³³ Mondelez Hope Kitchen - Nutrition & Healthy Lifestyles Program, Phase I Effect Evaluation Report, December 2016

³⁴ Mondelēz Hope Kitchen - Nutrition & Healthy Lifestyles Program, February-July 2016 (August 2016)

³⁵ Mondelez Hope Kitchen - Nutrition & Healthy Lifestyles Program, Phase I Impact Evaluation Report, December 2016

³⁶ *Ibid.*

- Compared with baseline and midpoint surveys, students in the endline surveys demonstrated a much stronger grasp of core nutrition points, with 88.2% showing improvement in the rate of correct responses to questions.
- More students are eating a balanced diet, essential for children's physical and intellectual development. The percentage of students who eat three kinds of vegetables or more each day went up 5.9 percentage points; that for students who eat fruit every day went up 4.5 percentage points.
- 93.5% of students spend more than 30 minutes a day on physical activities.
- Students with a normal Body Mass Index (BMI) are up 6.3 percentage points in 2016 from 2014, while students suffering from malnutrition are down 10 percentage points.

Beyond the direct impact on MHK program participants, its success holds promise of inspiring similar work around China. Since its launch in 2009, local education authorities have observed MHK's success, and are urging schools to emulate the program and learn from its best practices. And, Lan notes, both CDC and CYDF are responsible for giving advice to the Chinese government on health and nutrition topics, and thus could influence future planning.³⁷

Summary

The structure of engaged partners – government agencies, communities, various schools, teachers, students and their families – has proven vital to the program's success. Because the community centers are best positioned to understand local demands and culture, they are regarded as vital for the local customization of the program, to accommodate different needs and demands of the various participating communities.³⁸

³⁷ Telephone interview with MIF consultant Sept. 28, 2016

³⁸ Food and Nutrition Bulletin, Vol. 35, No. 3 2014, Mondelez Hope Kitchen Program, China, A Program Impact Pathways analysis, Yanran Li, Xiaoxun Yao, and Lan Gu

GERMANY



“Klasse2000 generates added value by being a key element throughout elementary school, addressing the issue of health promotion from a variety of angles, providing a well-thought-out structure that includes school-compatible materials, and cooperating with health promoters.”

-Petra Kolip, professor of public health, Bielefeld University³⁹

Program

Klasse2000

<http://www.klasse2000.de/>

Team members interviewed

Brigitte Horst, Program Manager, Klasse2000, and Andrea Dokter, Grant Manager, Klasse2000, conducted a telephone interview with a consultant for MIF on Sept. 22, 2016.

Geographic areas, students and schools

Klasse2000 began in 1991. From its roots as a tobacco-prevention program in Bavaria, it has evolved into a multi-faceted effort for promoting overall health and preventing addiction and violence among young people. Serving more than 1.4 million children since 1991, it is the nation's largest program for primary-school students (grades 1-4, ages 6-10).⁴⁰ Klasse2000 operates in all 16 German states, and served 438,226 students during the 2015-16 school year. MIF is the largest among almost 7,700 active donors.⁴¹

³⁹ Klasse2000 report to MIF, June 30, 2016

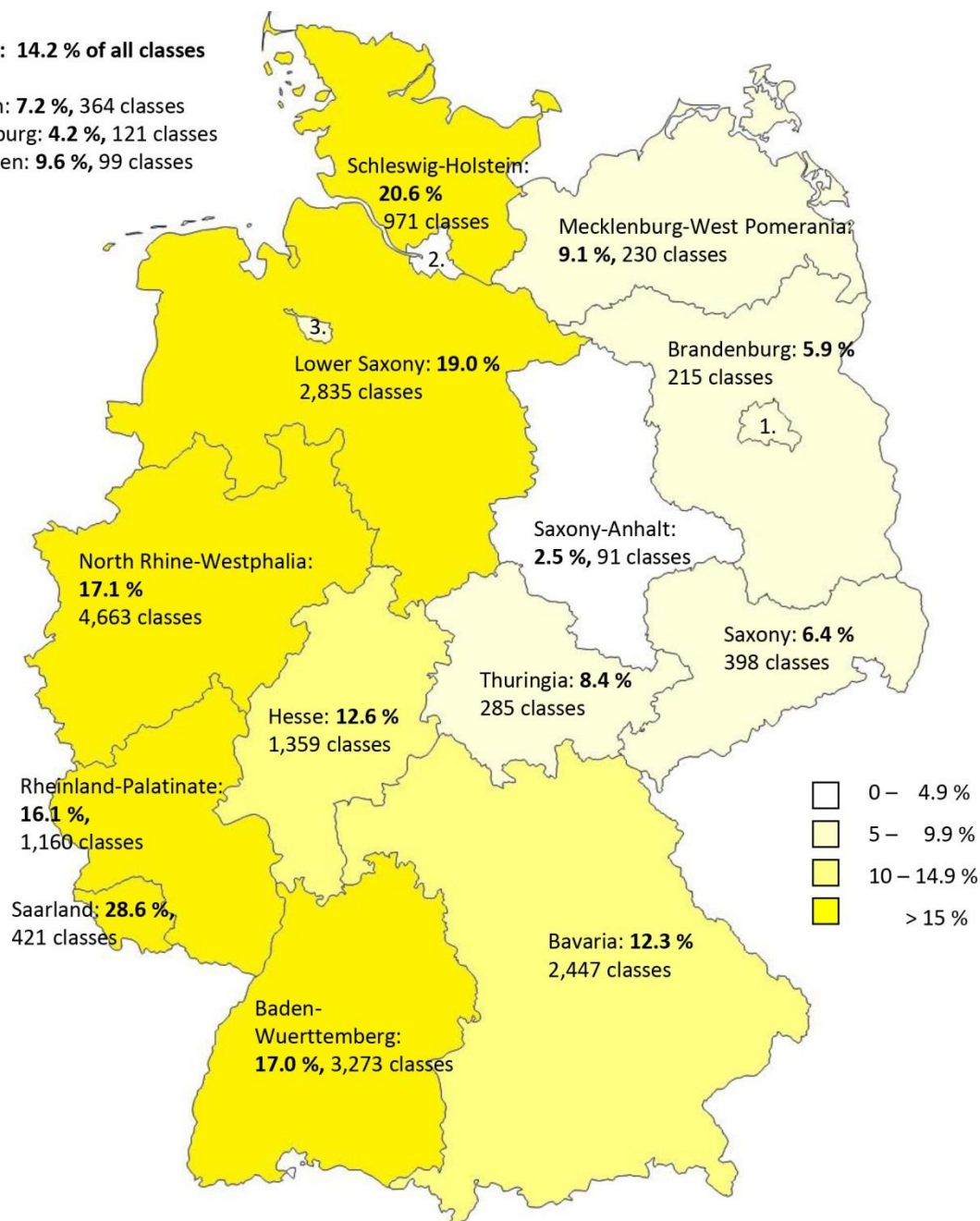
⁴⁰ Strong and Healthy in Primary School Klasse 2000 Program, Germany: A Program Impact Pathways Analysis, Andrea Dokter and Brigitte Horst, *Food and Nutrition Bulletin* September 2014 Vol. 35 No. 3

⁴¹ Telephone interview with MIF consultant Sept. 22, 2016

Distribution in the Federal States 2014/15, number and percentage of classes

Nationwide: 14.2 % of all classes

1. Berlin: 7.2 %, 364 classes
2. Hamburg: 4.2 %, 121 classes
3. Bremen: 9.6 %, 99 classes



What they're doing: structure and goals

As a fully national program, Klasse2000 engages with a number of community partners, in addition to German federal and local governmental authorities and MIF. German Lions Clubs are very important supporters, not only because of financial support but also due to the members' advocacy with other partners and donors in their regions. Currently, 685 Lions Clubs are engaged with Klasse2000.⁴²

The program addresses children's health from a broad perspective, focusing on such topics as healthy eating, exercise, making friends, solving problems without violence, avoiding tobacco and alcohol, and relaxation techniques. The physical activity component is not about competition, rather it encourages students to exercise. Klasse2000 aims for all children to enjoy movement and physical activities, not only the fastest, quickest or strongest kids.⁴³

Organizers report significant cultural differences between former West German and East German states, with the latter initially less engaged in the program due to the political culture in the former German Democratic Republic. Still, progress is being made in East Germany, thanks in large part to MIF's investment. The program is now operating in 6.4% of elementary schools in East Germany, compared with 3.1% in the 2010-2011 academic year.⁴⁴

How it's working: progress and findings

With 1.3 million children served since its founding, Klasse2000 has been highly successful in serving diverse populations of students in Germany. Organizers report "a great deal of buy-in" from federal and local stakeholders. Program officials say those involved with Klasse2000 "on the ground" are well-motivated and want Germany's children to grow up strong and healthy. As in other countries, keys to the program's success are cooperation with school officials, monitoring performance, and updating curriculum on a regular basis.⁴⁵

As in any complex multi-stakeholder enterprise, problems or conflicts sometimes arise. "If despite all of our previous agreements a problem occurs, we try to clarify it in personal conversation and try to resolve it," Horst says. "It's the advice we give to the children."⁴⁶

⁴² <http://www.Mondelēzinternational.com/well-being/the-voice/interview-with-thomas-dupree>

⁴³ Telephone interview with MIF consultant Sept. 22, 2016

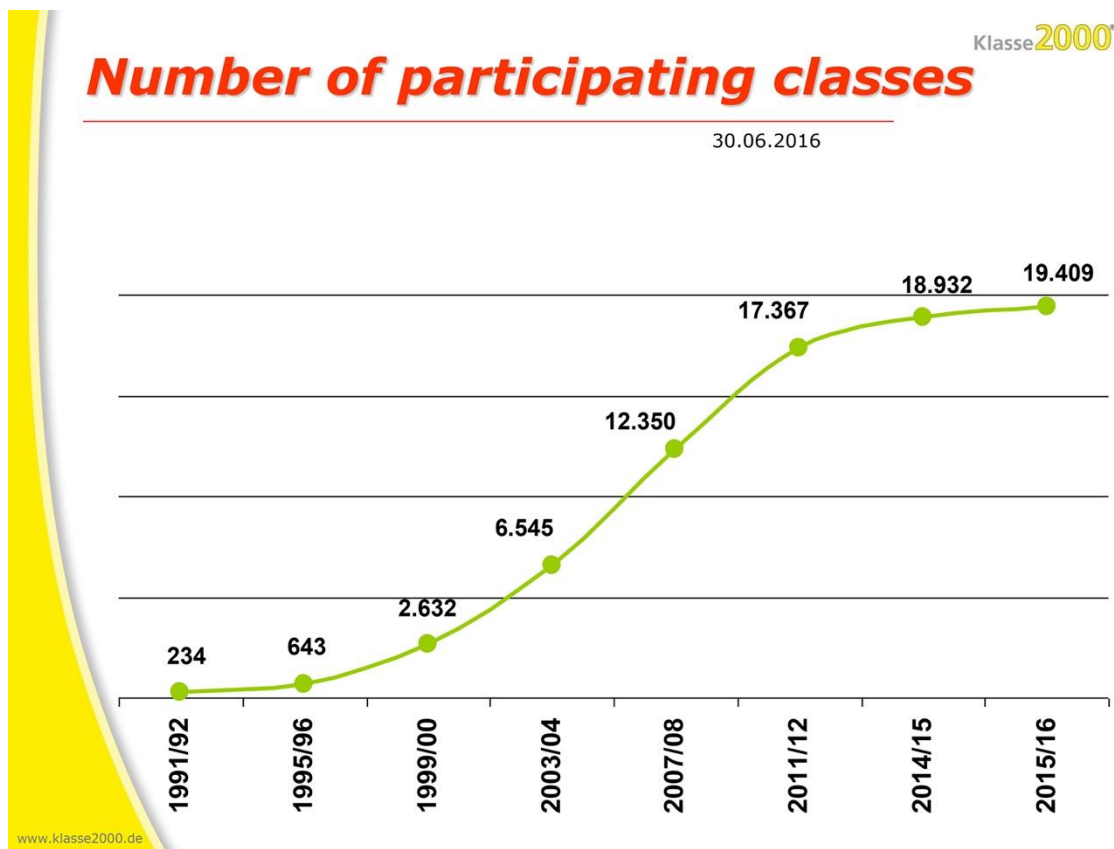
⁴⁴ *Ibid.*

⁴⁵ Telephone interview with MIF consultant Sept. 22, 2016

⁴⁶ *Ibid.*

Through the program, 1,300 trained external health promoters go to classes and work with the students two to three times a year. All external promoters must have a health-related or educational background, such as nutrition and physical therapy, as well as experience working with children. Students enjoy interacting with the external visitors and the games and materials they bring. Parents are invited to evening activities and receive written materials on health- and nutrition-related topics. Their children's homework assignments further encourage family discussions.⁴⁷

Klasse2000 sees its impact as resulting, in large part, from anchoring topics over the entire course of grade school, with continual updates. Horst says, "Each year we do an internal evaluation - questioning either parents, teachers, children, principals or donors. We get feedback, send out questionnaires to all the teachers, for example, in first grade, ask questions about if they did this and that lesson, how practical was it, did they like it, did they use it?" Every year, Klasse2000 revises one grade of curriculum, so during every four-year period, the curriculum for every grade will have been revised.⁴⁸



⁴⁷ <http://www.Mondelēzinternational.com/well-being/the-voice/interview-with-thomas-dupree>

⁴⁸ Telephone interview with MIF consultant Sept. 22, 2016

A randomized control group study by the University of Bielefeld analyzed data from 2013-2015 and validated the program's effectiveness. Parent responses indicate that children in the intervention group exhibited more positive results regarding nutrition behavior than children in the control group.⁴⁹ Some highlights:

- The intake of fast food, sweets, and soft drinks increased to a greater extent in the control group than in the intervention group.
- Regarding the goals of five servings of fruit and vegetables per day and maximum one serving of sweets per day: over the course of the study, the results deteriorated more in the control group than in the intervention group.
- 80% of parents said their children talked about the program at home – about the aspects of nutrition, exercising, relaxation, and solving disputes.
- 20% of the parents reported that Klasse2000 had changed their family's daily life.
- Responses from children also reflected positively on the program. In the intervention group, a larger percentage of children increased their water intake (three or more glasses of water per day).
- In the control group, a larger percentage of children decreased their daily water intake.
- Knowledge regarding the recommended number of servings of sweets per day declined in a larger percentage of the children in the control group.

“Compared to programs that are offered over a brief period of time and focus on specific topics only, Klasse2000 generates added value by being a key element throughout elementary school, addressing the issue of health promotion from a variety of angles, providing a well thought-out structure that includes school-compatible materials, and cooperating with health promoters,” writes Petra Kolip, PhD, a professor at the School of Public Health, Bielefeld University. “Another gratifying aspect of Klasse2000 is that teachers rate the program positively and appreciate the cooperation with health promoters. The impact of the program is intensified by the fact that parents and teachers observe changes in the children who participate.”⁵⁰

⁴⁹ Klasse2000 report to MIF, June 30, 2016

⁵⁰ Evaluation - executive summary, Dr. Petra Kolip, Bielefeld University, 2015 www.klasse2000.de

In Germany, there are various programs designed to prevent violence, crime, addiction behavior and other problems of children and adolescents. As a result of the Bielefeld evaluation of Klasse2000's proven record of achievement for Germany's schoolchildren, the program in January 2017 was upgraded on the "Green List of Prevention" by the Communities That Care (CTC) Crime Prevention Council of Lower Saxony.

The "Green List of Prevention" aims to map the state of development of selected programs as precisely as possible. Recommended programs are divided into three stages in order to show their effectiveness:

- Effectiveness theoretically well-founded
- Effectiveness much likely
- Effectiveness proven.

Because of Klasse2000's proven results, the program has been advanced from "effectiveness much likely" to "effectiveness proven."⁵¹

Summary

With 1.4 million children served and the program operating for a quarter-century, Klasse2000's scope and sustainability speak to its importance in encouraging healthy lifestyles for German students. A key to its success is the public-private partnership. In addition to collaborative programmatic development, implementation and review, Klasse2000 is funded by donations and subsidies from diverse organizations and individuals, mainly in the form of sponsorships for individual classes. The program has been embraced by almost 8,000 sponsors, including companies, Lions Clubs and other service clubs, schools, parents, associations, foundations and others.⁵² Looking to the future, Horst says that while there are not specific growth targets, "we try to always become better and bigger. Over the last 25 years it has worked, and we hope it will work longer."⁵³

⁵¹ Telephone call March 9, 2017, between Klasse2000 and MIF officials

⁵² Strong and Healthy in Primary School Klasse 2000 Program, Germany: A Program Impact Pathways Analysis, Andrea Dokter and Brigitte Horst, *Food and Nutrition Bulletin* September 2014 Vol. 35 No. 3

⁵³ Telephone interview with MIF consultant Sept. 22, 2016

INDIA



“Before the program, my team and I were facing a lot of difficulties in reaching out to the community for various health-related issues. But now with the initiation of Shubh Aarambh, we were able to see a significant change among the community members.”

- Dr. Rahul, Block Medical Officer, Village of Periapodhu⁵⁴

Program

Shubh Aarambh (Auspicious Beginning)

<http://ccdtrust.org/shubh-aarambh/>

Team members interviewed

Luciana Bonifacio, Senior Director, Global Corporate Partnerships, Save the Children US; Sumita Kirti, Project Manager for Shubh Aarambh; Meena Sriramane, Senior Manager, Corporate Marketing, Save the Children India; Mohini Venkatesh, Technical Advisor on School Health and Nutrition to Shubh Aarambh in India, and Dileesh Verghese, Knowledge Management Coordinator for Shubh Aarambh, conducted a telephone interview with a consultant for MIF on Sept. 9, 2016.

Geographic areas, students and schools

Shubh Aarambh, a joint program of Save the Children India, Magic Bus, and MIF, serves 48 villages in four Indian states: Himachal Pradesh in the north, Madhya Pradesh and Maharashtra in central India, and Tamil Nadu in the south. The target population includes almost 40,000 children and adolescents, and more than 27,000 women (mothers / expectant mothers).⁵⁵

⁵⁴ Shubh Aarambh Report to MIF July-December 2015

⁵⁵ Shubh Aarambh Program Impact Pathway presentation to MIF, May 2016

What they're doing: structure and goals

Shubh Aarambh's goals are to improve feeding practices, health-seeking behavior and community-based health, nutrition, and childhood development services in five locations across four states in India. In order to achieve these goals, the project implements activities under three broad pillars:⁵⁶

- Health and nutrition education:
 - Capacity-building of the government's health and nutrition frontline workers
 - Child, adolescent and mothers' community group formation and strengthening
 - Home visits to follow up on health and nutrition services
 - School and community events to raise awareness on nutrition and healthy lifestyles
- Growing fresh foods:
 - Kitchen garden development in institutions (schools, community spaces), homes
 - Cooking demonstrations to promote nutritious meals
 - Linking kitchen garden produce to school and home meals
- Active play:
 - Community active play sessions with children, 7-14 years of age
 - School-based active play sessions with children
 - Development of safe playgrounds.

Save the Children India had a long history of partnership with MIF, and Shubh Aarambh arose out of the partnership among MIF, Save the Children and Magic Bus. The “key pillars” of the project align with MIF's goals, contextualized for local conditions in the Indian states in which it operates, Coordinator Verghese of Shubh Aarambh says.⁵⁷ Project leaders worked to identify areas in India where Shubh Aarambh would find fertile ground, literally and figuratively – the right mix of space, community needs, and enthusiastic partners.

Because the communities in which the program operates are low-income and experience under-nutrition, organizers decided to work with children from birth to age 18, as well as expectant mothers. The comprehensive nature of the program helps ensure that children enter preschool and primary school healthy and ready to learn, according to Technical Advisor Venkatesh.⁵⁸

⁵⁶ *Ibid.*

⁵⁷ Telephone interview with MIF consultant Sept. 9, 2016

⁵⁸ *Ibid.*

The project consortium, which comprises MIF, Save the Children, and Magic Bus, collaborates with a range of government stakeholders including: public education departments (for Shubh Aarambh's work with children ages 7-14); agriculture departments (to help promote and create more kitchen gardens); and social welfare and health departments (for community health initiatives, including support for pregnant women). Besides building trust and transparency, a key to the program's success has been skill-based training for school personnel, health workers, and child welfare workers in support of Shubh Aarambh's goals. Program leaders hold meetings every six months with government officials from the states to review the project status and resolve any issues or concerns.⁵⁹

Shubh Aarambh Project Overview and Locations

- **Partnership for Children's Nutrition and Healthy Lifestyles**

- Mondelez International, Save the Children, Magic Bus

- **Purpose:** Improve feeding practices, health seeking behavior and community-based health, nutrition and childhood development services

- **Project Duration:** July 2014- June 2017

- **Project Locations:** Five locations across four States in India

- **Implementing Partners:** Five NGOs, one per location

- **Target Population:**

- Households: 33,765;
- Mothers: 32,671; Children, 0-18 yrs (Total : 42,555; Adolescents: 9457)
- Total Population: 133,465



⁵⁹ Ibid.

How it's working: progress and findings

Officials report improved fitness and nutrition in key program areas, including: awareness of healthy lifestyles (including sanitation and hygiene); active play, more householders accessing fresh fruits and vegetables from kitchen gardens; and increased consumption of iron and folic acid. As with other participating countries, the project is succeeding thanks to consultation with and cooperation among many stakeholders – government officials, principals, teachers, parents and children, project staff, community leaders and MIF. Program leaders report great satisfaction with the results to date, with very active engagement from children, regular meetings with parents at schools, metrics showing improved nutrition, and 113 operating gardens. That is almost three times as many as had been envisioned for the three-year project.⁶⁰

Here are some of the key findings reported for the first half of 2016:⁶¹

Reach

- Children, youth, parents and other community residents are more active participants and decision-makers on nutrition, health and physical activity. Evidence includes their large-scale participation in nutrition and active play events and in the sustained presence of kitchen gardens in communities.
- As a result of the activities in the past six months, Shubh Aarambh directly reached a project cumulative total of 15,465 7-14 year olds (89 percent of project target) and 31,674 mothers (>100% of project target; engagement in nutrition and physical activity will further intensify in year three (2017).
- Community Health and Nutrition Workers (CHNWs) and youth mentors supervised children's and youth group sessions led by community youth leaders (CYLs) and discussion leaders (DLs), as well as monthly sessions with mothers. In total, there are 665 children's sports for development groups, 355 adolescent groups and 1,571 mothers groups. From January-June 2016, Shubh Aarambh completed 825 school sessions and 3,820 community sessions with children, 551 adolescent sessions, and 4,531 mothers' sessions.

⁶⁰ Shubh Aarambh January-June 2016 Status Update to MIF

⁶¹ Shubh Aarambh Progress Report to MIF, July 2016

Gardening

- With 113 (Nearly triple the original target of 41) community and institutional gardens established, kitchen gardening is a popular activity with children and adults alike. Many households have also set up their own individual kitchen gardens.

Active Play

- Safe play spaces are another example of visible changes, with 29 of 30 spaces already set up. Volleyball nets and game items afford children the opportunity to play team sports. These spaces provide children with an easily accessible and safe community playground they can use for daily physical activity.

Knowledge

- Training events and refresher sessions strengthen the knowledge and skills of mothers' committees.
- Monthly events and campaigns on nutrition and physical activity engaged entire communities, and commemorated special days including Republic Day, Women's Day and Mother's Day. Mondelēz International employees joined project staff across locations in community events and connected with the Shubh Aarambh cause.

Advocacy

- The project has started to strengthen and reactivate government structures that have a mandate to ensure children's well-being, including school management committees (SMCs), child parliaments and Village Health and Nutrition Committees (VHNCs). These structures are critical for the sustainability of school- and community-based nutrition services and education.
- Government health screening and services in schools and Anganwadi centers (preschools), which are a Ministry of Health mandate, are taking place more regularly.
- CHNWs and government frontline workers, such as Anganwadi workers and health assistants, work in close coordination to ensure health services for children and mothers. For example, CHNW encourages mothers to collect take-home rations (THRs) at Anganwadi centers and use them in healthy, tasty recipes. District and block health and education departments are acknowledging the efforts of Shubh Aarambh to support government services.

“Bringing about policy and system change takes time,” says Technical Advisor Venkatesh. “What we aim for is interventions that can be self-sustaining – inbuilt mechanisms for financing those interventions through government or other partnerships, and opportunities for retraining. A large pool team of youth volunteers has been developed, and young people facilitate many of the sessions. They are the change-makers; they can influence younger pupils and peers. ... A lot has been achieved, but there is still a lot more to do.”⁶²

Summary

Establishing the program and building the public-private partnership essential for Shubh Aarambh’s success in an enormous and complex nation took planning and patient engagement. Program organizers had to connect with five different government departments, and did so in separate meetings, rather than in group settings, to facilitate dialogue and, ultimately, buy-in. The organizers then moved to the local level, engaging with community officials, schools, and parents. Regular stakeholder meetings, including biannual briefings for key government officials, are an important part of the process.⁶³

“This is the first time in my life I have observed corporations, civil societies, public representatives and government officials join together on a single platform to ensure the health and development of children in the villages,” says Shiv Kumar Sharma, Joint Director, Ministry of Women and Child Development, Chambal Division.⁶⁴

⁶² Telephone interview with MIF consultant Sept. 9, 2016

⁶³ Ibid.

⁶⁴ Shubh Aarambh Progress Report to MIF, July 2016

MEXICO



“Children spend a significant part of the day at school, and in this period are developing eating and physical activity habits that will determine their adult life.”

-Jorge Vidal, Director of Programs, Save the Children/Mexico

Program

Alianza por el Bienestar de la Niñez (Partnership for Child Wellbeing)

www.savethechildren.mx/old/noticias-old/celebra-mondelez-mexico-firma-de-alianza-con-save

Team members interviewed

Mariana Valdes Riveroll, JD, Director of National Strategic Alliances, Save the Children Mexico, and Fatima Andraca, School Health and Nutrition Leader, Save the Children Mexico, conducted a telephone interview with a consultant for MIF on Sept. 5, 2016. Jeanne L. Long, Senior Specialist, School Health and Nutrition, Save the Children USA, and Ms. Andraca conducted a telephone interview with the MIF consultant on Sept. 7, 2016.

Geographic areas, students and schools

The purpose of Alianza por el Bienestar de la Niñez (Partnership for Child Wellbeing) is to lay a foundation for healthy lifestyles, ultimately improving the nutrition and physical activity of children aged 2-13 years in 20 primary schools in Puebla and Mexico City, and 84 early childhood development (ECD) centers in Mexico City and the State of México. The program currently serves 9,099 primary-school children and 4,126 preschoolers.⁶⁵

⁶⁵ Alianza por el Bienestar de la Niñez Six-Month Report: February-July 2016

What they're doing: structure and goals

Alianza por el Bienestar de la Niñez is in the first of a four-year partnership between Save the Children Mexico and MIF to improve children's nutrition and physical fitness through school and community center-based programming in three areas of Mexico. Mexico currently has the highest prevalence of childhood overweight and obesity globally, estimated at 33% nationally. In Mexico City, Mexico State and Puebla, overweight and obesity averages for children ages 6-11 from 35.15% to 22.6%, respectively (National Health and Nutrition Survey, ENSANUT 2012).⁶⁶

The program was designed around four key objectives:

- Improving nutrition services, with a focus on detection and referral for prevention and treatment of obesity
- Improving community knowledge and feeding practices through nutrition education and promotion of physical activity
- Implementing nutrition gardens through community participation to develop an enabling environment for obesity prevention
- Improving the public policy environment to ensure sustainable change on successful measures for childhood obesity prevention.

Save the Children works with school staff and Early Childhood Development (ECD) center coordinators to shape nutrition and active play workshops. Promoters are the Save the Children staff who work in the schools and ECD centers implementing the program on a daily basis; most have backgrounds in nutrition⁶⁷. Regular internal meetings are held, both to train the promoters on new workshop materials, as well as get feedback from the promoters on program performance and ideas for how to improve activities during the year. Save the Children sought additional external expertise to enhance active play methods in schools, for both teachers and promoters, through a partnership with Sports World, a Mexican company and operator of sports clubs and gymnasiums.⁶⁸

⁶⁶ Summary prepared by STCM for MIF, September 2016

⁶⁷ Email to MIF consultant Dec. 2, 2016

⁶⁸ Ibid.

Participating schools by location, shift and student enrollment, 2015-2016

LOCATION	SCHOOL NAME	SHIFT	No. of children enrolled September 2015	No. of children enrolled July 2016
MEXICO CITY	Laura Méndez de Cuenca	Afternoon	157	149
	República del Congo	Afternoon	120	130
	Héroes de la Naval	Afternoon	157	157
	Guadalupe Victoria	Morning	771	742
	José Inés Novelo	Morning	395	389
	Maestro Candor Guajardo	Morning	562	555
	Martín Torres Padilla	Extended	374	359
	Participación Social No. 5	Full shift	340	295
	Quirino Mendoza y Cortes	Morning	239	255
	República de Camerún	Afternoon	350	401
PUEBLA	Fundación Rafael Hernández Villar	Morning	100	103
	Fuerte de Guadalupe	Morning	458	468
	Emiliano Zapata	Morning	959	960
	Manuel Rivadeneyra y Palacio	Morning	352	358
	Los Héroes Puebla	Morning	682	688
	Manuel M. Flores	Morning	688	689
	Rafael Ávila Camacho	Morning	468	475
	Profesora Amalia Contreras de Lobato	Afternoon	575	582
	Jesús González Ortega	Morning	828	833
	Justo Sierra	Morning	524	524
TOTAL			9,099	9,112

*The enrollment of children changes during the school year.

Participating schools by location, intervention level and enrollment, 2015-2016

MUNICIPALITY OR BOROUGH	Participation level	No. of participating ECD centers		No. of children enrolled in ECD centers	
		Sept 2015	June 2016	Sept 2015	June 2016
Álvaro Obregón	Bimonthly	4	4	213	221
Coyoacán	Bimonthly	1	1	88	92
Cuajimalpa	Bimonthly	1	1	58	58
Gustavo A. Madero	Bimonthly	15	15	844	897
Iztapalapa	Bimonthly	23	23	1,015	1,025
Milpa Alta	Bimonthly	2	2	61	77
Nezahualcoyotl	Bimonthly	5	5	325	335
Tlahuac	Bimonthly	4	4	84	80
Tlalpan ¹	Bimonthly	8	7	308	363
Tlalpan	Continuous	16	16	1,031	1,042
Xochimilco ²	Bimonthly	5	4	99	72
Total		84	82	4,126	4,306

1. One ECD center in this borough withdrew from the program.

2. The reduction of ECD centers is due to the merging of two centers into one.

How it's working: progress and findings

The program's first full academic year involved 20 primary schools with 9,099 children and 84 ECD centers with 4,126 children. The nutrition program emphasizes making healthy eating choices, showcasing the history and tradition of the Mexican diet, teaching children about the benefits of fruit and vegetable consumption, eating locally-produced and -grown foods and differences between fresh and processed foods. An experiential component in some workshops lets children try new foods. Initial metrics show progress in addressing obesity issues and strong engagement with stakeholders, including corporate volunteers.

This first year included 12 workshops for more than 13,000 children in the states of Mexico and Puebla and in Mexico City – six focusing on nutrition, and six on physical activity.⁶⁹ The interactive workshops teach students about specific themes, e.g., how to read food labels, understand what they are eating, and avoid excessive sugar (one highly interactive

⁶⁹ STCM Six-Month Report: February-July 2016

60-minute module for fourth and sixth graders is “Hidden Sugar,” in which the students learn to determine how much sugar is in a beverage or serving of processed food).⁷⁰

Workshops include age-appropriate games and repetition of messages to reinforce learning, according to Director Valdes.⁷¹ In addition, 57 workshops were geared toward parents, 17 for teachers and 33 for kitchen staff at schools and Early Childhood Development (ECD) centers.⁷²

Save the Children also worked directly with parents, coordinators (ECD staff) and cooks in ECD centers to support them to improve the diets of young children. Teacher workbooks and parent flyers promote “conscious eating” - healthy cooking and diets to emphasize the importance of fresh vegetables and fruit consistent with Mexican dietary traditions, says Andraca, Save the Children senior program manager and a nutritionist.⁷³

Findings from the first six months of 2016 include:⁷⁴

- The endline survey showed that the percentage of children who knew they should exercise 30 minutes a day tripled, and almost twice the number of children reported eating three or more vegetables the previous day (52.3% versus 27.2% at baseline).
- During focus group discussions with children in Puebla and Mexico City, program staff discovered that children have learned much about how to eat healthier and exercise more. But some messages around processed foods and fat versus sugar need further reinforcement so children understand how to make healthier choices. Six new nutrition workshops were developed for the 2016-2017 school year to fill in the knowledge gaps and use new methods of child-participation to enhance learning.
- Additionally, children recognize that more adult involvement (from family and teachers) is necessary so they can improve their eating habits.
- Ten gardens also were established, most of them at ECDs, with another 10 planned for 2016-17. Students in grades 4-6 will help to maintain the school gardens and learn nutrition. Food grown in the gardens will supplement meals served in schools.

⁷⁰ Report to MIF by Dr. Rafael Pérez-Escamilla on field visit with STCM May 11, 2016.

⁷¹ Telephone interview with MIF consultant Sept. 5, 2016

⁷² STCM Six-Month Report: February-July 2016

⁷³ *Ibid.*

⁷⁴ STMC Six-Month Report: February-July 2016

Parent involvement has been key throughout the program. We began with 10-day summer camps in Puebla and Mexico City to reinforce healthy lifestyle basics and initiate contact with parents. On the last day of summer camp in Mexico City, parents, promoters and children played together in the yard, celebrating a successful two weeks and lessons learned. Children showcased the nutrition knowledge they gained and shared important health messages with their parents.

Improvements going forward will include ways to respond to rain and pollution in Mexico City, which often inhibit outdoor play workshops. The Save the Children team is working on how to adapt physical activity sessions for smaller indoor spaces.

“We’re making small changes, good changes inside the schools,” Director Valdes says, noting that students spend half their days in school, so changes there can have a ripple effect when the students return home. “Kids are learning and realizing that what they’re eating is not as healthy as it should be, but this [change behavior] is not something you can do in a year. ... Self-awareness is a good start.” One challenge, she notes, is that in poorer communities, with both mother and father working, getting a parent to take time off to attend a workshop can be difficult. And, “to have that additional change to child nutrition, you have to reach the person making choices about what is bought into the household.”⁷⁵

As the 2015-2016 school year ended, all participating schools and ECD centers committed to another year of participation. Collaborative relationships have been established between schools and promoters, as teachers and administrators noted a positive change in the habits of their students.

Summary

With crucial support from MIF, Save the Children worked closely with Mondelēz in Mexico and private partners such as Sports World to establish a program that is contextually and culturally relevant to building healthy lifestyles among Mexican schoolchildren. Workshops for children and direct outreach to parents, teachers and cooks in schools and in Early Childhood Development centers are establishing a foundation for sustained improvements in children’s daily diets and physical activity.⁷⁶

⁷⁵ Telephone interview with MIF consultant Sept. 5, 2016

⁷⁶ STCM Six-Month Report: February-July 2016

SOUTH AFRICA



"It's the first time ever that we received training on meal planning and healthy lifestyles. We'll make sure that we impart knowledge gained as we prepare meals for learners, both in schools and at our homes."

- Belinda Moonsammy, a food preparer at Malabar Primary School in the Port Elizabeth District⁷⁷

Program

Health in Action South Africa

inmed.org/what-we-do/health-and-nutrition/health-in-action-south-africa/

Team members interviewed

Unathi Sihlahla, MA, Program Director for the Health in Action Program at INMED South Africa, Sandra Pretorius-Rivalland, PhD, Program Coordinator and specialist in intervention programs for chronic diseases, and Kristin Callahan, MS, Director of International Programs for INMED Partnerships for Children, were interviewed via Skype on Sept. 16, 2016.

Geography, students and schools

Health In Action South Africa was launched in 2015 in the areas of Johannesburg and Port Elizabeth. A total of 116 schools in lower-income areas - 46 in Johannesburg and 70 in Port Elizabeth - with more than 100,000 students ages 6-12 are being targeted in this phase of the program.⁷⁸



⁷⁷ INMED Partnerships for Children/INMED South Africa (INMED) Health in Action Program Quarterly Progress Report to MIF, August 2016

⁷⁸ Skype interview with MIF consultant Sept. 16, 2016

What they're doing: structure and goals

A partnership of INMED and MIF, Health in Action South Africa's goals, below, are supported by corresponding team members and governmental and non-governmental partners:⁷⁹

- Promote sustainable improvements in children's health and nutritional status through participatory education and activities on nutrition, physical activity and healthy lifestyles, including hygiene and sanitation. Selected lead teachers are trained as "multipliers" who, in turn, train their colleagues.
- Improve nutrition and reduce hunger by increasing access to fresh produce through the establishment of school, home and community gardens, and through the installation of a large aquaponic system in each project province to serve as a learning tool – and source of abundant fresh produce and nutritious fish protein to supplement meals in targeted schools. "Garden champions" selected by school governing boards from among local unemployed youth will lead cultivation activities, including organizing other volunteers to help.
- Increase participation in physical activity, both through school-based physical education and leisure time recreation and play, with an emphasis on making activity fun so that it becomes a welcome habit. School governing boards select "break-time buddies" from among local unemployed youth. They encourage children to take an active part in recess time, guiding activities and monitoring safety.
- Promote positive changes in the school food environment, including advocacy for compliance with government feeding program mandates and providing basic food preparation supplies where needed. Training for school food workers includes food hygiene and preparation of nutritious meals incorporating garden produce. Snack vendors who sell to school children are encouraged to offer healthier food options.
- Build the foundation for long-term sustainability by partnering with parents and community members, local and state governments, academic institutions, non-government and community-based organizations, and private-sector entities.

⁷⁹ INMED Health in Action Program Quarterly Progress Report to MIF, August 2016

How it's working: progress and findings

The MIF approach facilitates international collaboration, encouraging and enabling colleagues in different nations to readily draw upon each other's experiences and best practices. In the case of INMED South Africa, the program was strongly influenced by the success of INMED's Health in Action (Ação Saudável) program in Brazil.

Director Sihlahla says, "The first phase of the Health in Action program in Brazil which preceded expansion of the program to South Africa was highly successful in terms of healthy lifestyles outcomes ... as well as in the range of partnerships developed with local governments - even departments that typically wouldn't have been involved in a project of this type [such as] school systems, universities and other community groups - and in the level of community mobilization, all ... created a strong foundation for the program's long-term sustainability. The same multi-sectoral approach used in Brazil has also formed the foundation of the [South African] program to ensure sustainability."⁸⁰

"With South Africa sharing a lot of similarities with Brazil - in particular with the double burden of malnutrition that includes both undernutrition and overweight - it made sense adapting the model to the local context in South Africa through various changes including ensuring that educational content and messaging is aligned to relevant education curricula standards," Sihlahla says. "Such learnings and continuous sharing of information is still ongoing between Brazil and South Africa teams through regular technical discussion meetings held mostly over Skype."⁸¹

An important first step in the program was meeting with government education and other officials at the national and provincial level to familiarize them with the Health in Action program and get approvals, Sihlahla says. That relationship included not just initial meetings but regular follow-ups and invitations for officials to visit schools and monitor progress.⁸²



Local buy-in was equally important. Parents, teachers, and students are all key stakeholders, and in launching the new program it was vital to get a commitment from

⁸⁰ Email to MIF consultant Nov. 18, 2016

⁸¹ *Ibid.*

⁸² Skype interview with MIF consultant Sept. 16, 2016

them to join, Sihlahla says. At each school, one teacher became responsible for the program, serving as a liaison with Health in Action program staff.⁸³

“Almost 100% of the schools embraced the program, because it actually spoke to issues and their needs,” Dr. Pretorius-Rivalland says. “Initially there were some reservations, but once you indicated you were going to work with them over four years, then they started believing and becoming more interested ... the reception from schools was really very positive, very enthusiastic, because they see the value that we add.”⁸⁴

Obesity and low consumption of fresh fruits and vegetables were two immediate focus areas, as well as establishing a baseline of knowledge on the part of both teachers and students about nutrition, and also of students’ height and weight for age and body mass index (BMI).

“There was a quite high prevalence of obesity, more so in Johannesburg than in Port Elizabeth,” Pretorius-Rivalland says. The problem tends to be more serious in urban areas than rural farming communities. Sihlahla says data revealed there were other areas where undernourishment was more prevalent.

Nutrition Education

As of the first year of the program in August 2016, initial training in Johannesburg served a combined total of 151 school food preparers through three sessions; in Port Elizabeth, 101 food preparers participated in three multilingual sessions (English, Xhosa and Afrikaans). Training of additional participants continues. The training focused on nutritious and balanced meal planning, portion sizes and healthy food preparation, as well as proper hygiene practices. A cooking demonstration illustrated all the elements discussed during the training session, and attendees enjoyed sampling the food prepared.⁸⁵

Gardening

The gardening initiative is off to a promising start, thanks in part to existing government policy encouraging all schools to establish food gardens, both to improve access to fresh produce and also for teaching purposes. The Health in Action program first trains the teachers, who often do not have an agricultural background, and also trains unemployed youth to work maintaining the gardens. With growing interest from parents, training also is being conducted for them. The program also offers resources such as seeds, garden equipment, rainwater harvesting systems, and plans for planting.⁸⁶

⁸³ *Ibid.*

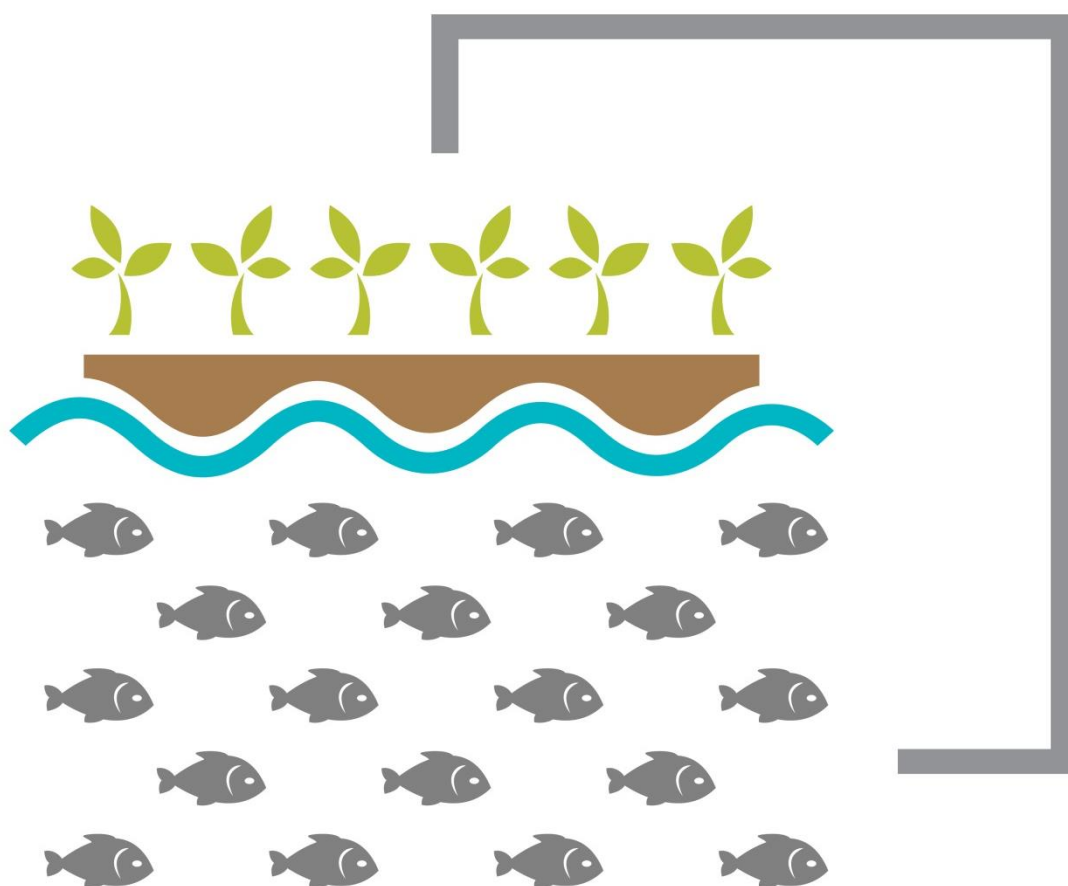
⁸⁴ *Ibid.*

⁸⁵ INMED Health in Action Program Quarterly Progress Report to MIF, August 2016

⁸⁶ Skype interview with MIF consultant Sept. 16, 2016

Lack of water is a significant challenge for many schools, with Sihlahla noting there is a severe drought in South Africa, resulting in water restrictions in Johannesburg. Schools have been encouraged to cultivate plants that require less water such as the orange fleshed sweet potato, which is high in vitamin A.

Another solution—and another educational opportunity for students—is the development of aquaponic systems, one each in Johannesburg and Port Elizabeth, to provide both fresh vegetables and fish, Director Callahan says.⁸⁷



Producing fresh foods through aquaponics is a unique feature of South Africa's Health in Action program

⁸⁷ *Ibid.*

Physical Activity

The physical activity component of the program also includes teacher training and student engagement. The program provided all 116 schools with sports equipment including rugby balls, netball balls, soccer balls and jump ropes, and recruited out-of-school youth as “break-time buddies” to assist in guiding the younger children in physical activity. Several schools to date have offered “fun days” that include tug-of-war and sack racing. To create an enabling environment for physical activity in schools, painted games including hopscotch have been erected in some schools.

Teachers

Sihlahla notes that another challenge for schools is teacher workload. The program relies heavily on educators to drive in-school initiatives. Because many teachers are under a great deal of stress, the Health in Action program is also working with Nelson Mandela Metropolitan University’s psychology department to develop a module on teacher wellness and stress management - another unique feature of Health in Action among the MIF-supported programs.

INMED’s extensive work on the front lines of community-based program implementation in South Africa has given the organization experience in dealing with challenges, and the Health in Action program has proven no different. For example, a number of food preparers from non-Health in Action program schools attended the initial training, and other schools submitted requests to join. As program funds cannot be used for non-program schools, Health in Action officials agreed to conduct additional trainings for food preparers for non-program schools if the Department of Education in Port Elizabeth covers the related expenses. A similar arrangement is being discussed in Johannesburg.⁸⁸

Summary

The South African experience in establishing Health in Action mirrors that of other participating countries. Shaped by lessons learned from INMED’s experience in Brazil, the South African team started by connecting with government education departments, then went to schools to get local buy-in. Schools are managed by a governing body, and Health in Action staff met with all stakeholders – parents, teachers, learners – to win support.

The gardening component is benefiting from existing government policy encouraging all schools to establish food gardens, not only to improve access to fresh fruits and vegetables but to teach students how to tend the land, and is well received by schools participating in the program. Aquaponics systems developed by INMED to provide access to fresh foods is a unique feature of the program. The physical activity component is also successful, engaging students with courtyard games, races and daily exercises.⁸⁹

⁸⁸ INMED Health in Action Program Quarterly Progress Report to MIF, August 2016

⁸⁹ Skype interview with INMED and MIF consultant Sept. 16, 2016

UNITED KINGDOM



"It's so important that children are educated on the importance of being active and eating healthily, now more than ever. The Health for Life program effectively engages young people in a fun and educational way."

-Adrian Phillips, MD, Director of Public Health, Birmingham⁹⁰

Program

Health for Life

<http://servicesforeducation.co.uk/index.php/Health-Education/health-for-life.html>

Team member interviewed

Sandra Passmore, PhD, Education Advisor, Health Education Services, UK-Life Education, conducted a telephone interview with an MIF consultant on Sept. 14, 2016.

Geography, schools and students

Now in its fifth year, Health for Life in primary schools has operated in 107 primary schools in the south Birmingham, UK region, impacting more than 80,000 students. The program serves a diverse socioeconomic range of communities, and is targeted at primary school children 4-11 years old and pupils 4-18 years old in schools for students with special educational needs. The program is a partnership between the UK Health Education Service, Life Education Centres West Midlands and Mondelēz International Foundation (MIF).⁹¹

⁹⁰ brumhour.wordpress.com/2016/01/29/south-birmingham-schools-awarded-at-health-for-life-celebration-event/

⁹¹ Health for Life in primary schools, Birmingham - report to MIF February 2016

What they're doing: structure and goals

Health for Life is designed to promote healthy lifestyles, attitudes, and behavior, focused on four interrelated strands: healthy eating and cooking skills; growing food; physical activity; and family involvement – and to make these “not one-off lessons, but a sustainable part of a school’s culture.”⁹²

According to Dr. Passmore, education advisor, the program works because it seeks to make positive change happen both in school and at home. “It’s far more sustainable if we can embed the change in the school, the curriculum, the facilities, work with teachers on the provision and quality of the education,” she says. Equally important is bringing the change home after the school day ends because, “you don’t expect schools to do this and then go home and eat unhealthily and just sit down watching the television.”⁹³

Health for Life requires schools to sign up for participation over a 15-month period for a range of activities which meet the program’s inter-related objectives, identified as most likely to have the greatest impact on children’s healthy lifestyles⁹⁴:

- Develop a sustainable, healthy lifestyle culture throughout the whole school
- Make a measurable improvement in students’ diet through cooking and healthy eating activities
- Engage pupils in growing food to increase their knowledge and understanding of its links with healthy lifestyles
- Enable schools to make a measurable improvement in students’ physical activity through improved use of school grounds
- Engage ‘hard-to-reach’ parents/caretakers in the program’s key messages through healthy eating and cooking skills.

⁹² Health for Life in Primary Schools Program, United Kingdom: A Program Impact Pathways Analysis, Sandra Passmore and Martin Donovan, *Food and Nutrition Bulletin*, Sept. 2014 Vol. 35 No. 3

⁹³ Telephone interview with MIF consultant Sept. 14, 2016

⁹⁴ Health for Life in primary schools, Birmingham - report to MIF February 2016

Health for Life's work begins with an initial audit – finding out whether the school has cooking facilities, and how much physical activity is incorporated into the curriculum, for example. Then the school develops an action plan with key performance indicators, a map for moving forward.⁹⁵ Each participating school collected baseline data from students, and then repeated the survey at the conclusion for that cohort, for consistent school data.⁹⁶

How it's working: progress and findings

Based upon data collected over the first five years, Health for Life sees strong evidence the program has been very successful in changing the knowledge, attitudes and behavior of the pupils with regard to healthy eating, cooking skills, growing food and physical activity. Health for Life credits its philosophy of offering clear goals with a flexible approach tailored to meet the individual needs of each school, but still challenging enough to be able to affect a real, demonstrable change.

Careful planning also feeds into the program's success, Passmore says. Developing each school's action plan can take 10 weeks. Consultations with key stakeholders – teachers, parents, staff, the school's governing body – “make the plan really robust. ... We didn't want it to be a ‘class project’, we wanted to make schools think about sustainability” of the program's key components, she says. Another important element is staff training days to educate personnel in practical cooking, healthy eating, growing gardens, physical activity and safety. Children also are taught different subjects in different years. One year, the program might focus on practical cooking, while the next might center on gardening. Events and competitions – sometimes involving the Lord Mayor of Birmingham – help to encourage excellence, and make the program fun and engaging for the students.⁹⁷

All participating schools have to develop gardens with practical cooking, vegetables and fruits (and sometimes chickens). In some schools, this has involved dedicating an area in the building for cooking and food storage. Physical activity can include active play time, such as games or hula-hooping, or walking or biking to school. Parental involvement is encouraged. Students may bring a recipe home, the family will cook it and the student will write about it or take a picture.⁹⁸ Other strategies to encourage parental involvement include assemblies where parents see their child's work or work directly with their children; family bike rides; schools sending seeds for children to grow at home and keep a diary of what they have grown; and schools inviting parents to cooking sessions.⁹⁹

⁹⁵ Telephone interview with MIF consultant Sept. 14, 2016

⁹⁶ Health for Life in primary schools, Birmingham - report to MIF February 2016

⁹⁷ Telephone interview with MIF consultant Sept. 14, 2016

⁹⁸ *Ibid.*

⁹⁹ Health for Life in primary schools, Birmingham - report to MIF February 2016

Surveys of the latest cohort of students track improvement in a variety of the Foundation's key metrics:

Key indicators of success from the pupils' questionnaire

	Change	Amount of change
Nutrition Education		
Pupils' knowledge about 5-a-day	From 44% to 46%	Increase of 2%
Pupils' knowledge of portion sizes of fruit and vegetables	From 41% to 47%	Increase of 6%*
Pupils' not eating any fruit or vegetables	From 10% to 7%	Decrease of 3%**
Pupils' eating 5-a-day	From 29% to 32%	Increase of 3%**
Pupils' not eating breakfast	From 1% to 1%	No change
Pupils cooking at school	From 34% to 53%	Increase of 19%***
Pupils enjoying cooking	From 68% to 69%	Increase of 1%
Pupils' cooking at home	From 46% to 49%	Increase of 3%
Access to fresh foods/Growing food		
Pupils growing food at school	From 20% to 50%	Increase of 30%***
Pupils enjoying growing food at school	From 60% to 70%	Increase of 10%***
Physical activity/Active Play		
Pupils' knowledge of need for daily activity	From 34% to 38%	Increase of 4%***
Pupils' being active in school PE lessons	From 36% to 46%	Increase of 10%***
Pupils' being active for 60 mins a day	From 42% to 49%	Increase of 7%
Pupils going to physical activity clubs	From 76% to 80%	Increase of 4%**
Pupils' being active outside school	From 80% to 83%	Increase of 3%

N=3146. Significance levels, * p<0.05, **p<0.01, ***p<0.001

Results data from 18 schools that completed the baseline and follow-up pupil questionnaires in cohort 4 of the programme.

A particular focus has been families who, for many reasons, can be characterized as “hard to reach.” For these families, Life Education Centres West Midlands developed Family Learning Workshops to support parental engagement and help them encourage their children’s healthy lifestyles. As of February 2016, the program had worked with children and parents chosen by 23 schools. Surveys show the benefit of the workshop approach:¹⁰⁰

- 100% of parents reported that they enjoyed taking part in the workshops. They praised interesting activities for the children, family fun combined with learning, and clear explanations.
- 82% of parents reported they had learned something new, such as how much sugar is in various foods, the benefits of exercise and healthy eating - especially fruits and vegetables - the amount of fat content in foods, differences between nutritional needs of children and adults, and the importance of sleep.
- 68% of parents reported they would change/do something regarding healthy choices for themselves and their families, such as looking more carefully at labels and changing their child’s lunches and beverages.

Summary

Health for Life exemplifies a best-practice public-private partnership. From local Mondelez volunteers helping schools to establish gardens, to community workshops for “hard to reach” parents, to student showcases and award ceremonies attended by the Lord Mayor and a member of Parliament, the opportunity to instill healthy eating and exercise habits in the city’s schoolchildren has been embraced by the city of Birmingham. The corporate sectors also are supportive: Health for Life was recognized with the Building Stronger Communities Award from the West Midlands organization Business in the Community and received a national award from the UK Food and Drink Federation for health and wellbeing.¹⁰¹

¹⁰⁰ Health for Life in primary schools, Birmingham - report to MIF February 2016

¹⁰¹ *Ibid.*

CONCLUSION

The Mondelēz International Foundation's support of PPPs in the seven nations is having a profound impact on hundreds of thousands of students, their families, their schools and their communities. The evidence-based approach of MIF and its partners - private-sector and community organizations joining together to provide strategic investment and engaged leadership while empowering local officials, school principals, teachers and staff, students and parents, and other key stakeholders - is creating a platform for sustained improvement. The framework also spurs innovative new ways to promote healthy lifestyles for children - from creating gardens out of recycled automobile tires on school rooftops in Birmingham to aquaponics in South Africa. These new approaches and ideas are then shared by partners - the linkages between Brazil and South Africa being an excellent example of ongoing collaboration - and can serve as international models for best practices.

Although the National Academy of Medicine, American Society for Nutrition and others have developed sound conceptual frameworks for designing effective PPPs, there is little documentation on how healthy lifestyle school-based PPPs get established and work in the real world. The efforts by MIF and its partners around the world - including metrics for hundreds of thousands of participating students - offers a unique window into how PPPs result in improved nutrition and fitness for children on five continents.¹⁰²

Building on years and decades of work “on the ground” in these nations, the MIF health lifestyles program measures standard performance indicators in all nations, yet is sensitive to local conditions and needs, enabling program leaders and participants to work with MIF toward the common goal of improving the lives of generations of young people. This strongly suggests that MIF efforts are aligned with one of the key objectives of the UN Sustainable Development Goals (SDGs), which is to improve child development worldwide through improved health, nutrition, and educational opportunities. As Daniel Lombard, former Managing Director of Mondelēz South Africa, says in 2015 at the launch of the Health in Action program: “When [children] are better nourished and healthier, they will have the vitality to work and study to make their dreams come true.”¹⁰³

¹⁰² Outline prepared by Dr. Rafael Pérez-Escamilla, Yale School of Public Health, for MIF, August 2016

¹⁰³ /za.Mondelēzinternational.com/~media/MondelēzCorporate/za/uploads/downloads/press-releases/2015/HIA_102215.pdf

UN Sustainable Development Goals

The Mondelēz International Foundation and its partners are empowering communities to lead healthier lives through programs that offer nutrition education, promote active play and provide access to nutritious fresh foods to help address nutrient needs for at-risk populations – all of which help support of the following [UN Sustainable Development Goals \(SDGs\)](#).



