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Community-Based Priorities for Improving Nutrition and Physical Activity in Childhood

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KEY WORDS

childhood obesity, child health, citizen priorities, consumer participation, child nutrition, physical activity

ABBREVIATION

SAY—Shaping America's Youth

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abstract

Overweight among America's youth has prompted a large response from foundations, government, and private organizations to support programmatic interventions. The architecture for many of these programs was derived from "experts," whereas the perspective of families, and communities—those most affected and most instrumental in altering behavior—is rarely the driving force. Shaping America's Youth (SAY) was established to assess programs that target nutrition and physical activity and to promote the necessary family and community input. In a 2004 report, SAY documented how community efforts are motivated, funded, structured, and evaluated. It identified discordance between that effort and the opinions of experts. To ensure that the voices of families and communities are integrated into such local and national policies and programs, SAY initiated a unique series of 5-day-long town meetings, input from which was independently statistically analyzed. Across a range of demographics, the results indicated that participants perceive the barriers and solutions similarly. There was broad agreement that the family has primary responsibility, starting with a need to focus on improved quality and duration of family time directed at nutrition and activity. Concurrently they identified needed actions from external sources, including clear and consistent nutrition information; ready access to healthy foods; and a built environment that promotes physical activity. Rather than one-dimensional or governmental solutions, they expressed a need for community-based partnerships integrating health care, education, environment, government, and business. Although this citizen-engagement process did not identify specific actions, it defined basic steps that communities must integrate into future approaches. *Pediatrics* 2010;126:S73–S89

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Overweight in childhood has become a major focus of public health efforts in the United States. Numerous studies and reports from experts have provided extensive assessment of the scope of what is recognized as an epidemic and have produced an array of recommendations on how to improve it. However, despite societal and health professional awareness and concern, there is little evidence of progress in reversing the trend of excess weight among youth.[1] Although the most recent assessment by the Centers for Disease Control and Prevention reported that the prevalence of high BMI in children has remained stable for the past 10 years,[2] it has not decreased. The fact remains that nearly one-third of children and adolescents in this country are at ≥85th percentile of BMI for age. In addition to the long-term consequences that excess weight in childhood imposes on the physical and mental health of the affected individuals, its impact on future health care costs, productivity, and longevity is profound and likely exceeds that of any health issue the United States has ever confronted.[3]

The marked increase in the prevalence of childhood obesity over the past 3 decades has occurred in parallel with the changing social structure of our nation.[1,3] The increasing number of single-parent families and parents working outside the home; changes in dietary practices including what, when, and where we eat; the electronic revolution that has lessened children's physical activities; the time and budget constraints on our teachers and schools; the wider marketing and availability of foods in general and those of low nutritional value in particular; and changes in our communities, transportation, and the built environment that limit outdoor and leisure-time pursuits have all contributed to the epidemic of childhood obesity.

As a result of concerns in both the public and private sectors regarding the increase in childhood obesity, the Shaping America's Youth (SAY) initiative was created in 2003 with input from the Office of the US Surgeon General, the American Academy of Pediatrics, and several major corporations (Appendix). SAY was established to assess ongoing efforts to reduce excess weight in young people to identify the most effective means of prevention and intervention and of their implementation. SAY's objectives emerged from the belief that, at its roots, this health crisis is a problem of social norms and behavior that have led to the development of unhealthy nutritional and physical activity habits from the earliest years of life. Members of SAY postulated that to be successful, recommendations for lifestyle changes must incorporate the input of those who are most pivotal in instituting the changes: parents, families, and community members. SAY's review of the strategies of various expert panels revealed that the voices, opinions, and perspectives of these individuals were seldom considered. We therefore charted 2 initial programmatic components: (1) a nationwide survey of community-based funding and service programs that target childhood and adolescent nutrition and/or physical activity; and (2) a national citizen-engagement process based on the historical precedent of early-American town meetings and updated for the 21st century to gather a cross-section of citizen voices.

The program survey was undertaken as the first step to define America's effort at the community level (ie, a snapshot of how motivated organizations and individuals were targeting the problem of overweight youth).[4] As a natural extension of the program survey, the town-meeting process was implemented as a means to give a voice to those at the grassroots level to determine how the individuals in families and in the community perceive the barriers to and solutions for improved nutrition and physical activity for their children.

Data from the Centers for Disease Control and Prevention strongly indicate that excessive weight is a health concern evident from infancy and well established by the time most children enter school.[5] In contrast, evidence gathered in the SAY survey,[4] which ascertained comprehensive data from 1100 programs, revealed that few were targeting the preschool years or the parents and caregivers who influence early childhood development. For example, lack of family involvement was identified as the largest barrier to success for most programs, yet only 50% of the programs surveyed directly involved the family of the affected child, and <10% specifically engaged families. Thus, the collective evidence available by 2005 suggested a critical disconnect between where the emphasis could do the most good and where it was actually being directed.

The SAY survey also revealed that the majority of ongoing programs lacked the funding, duration, and/or mechanisms necessary to document measurable outcomes, ensure sustainability, and promote collaborations. The limitations faced by most of the programs directed at the childhood obesity crisis are particularly concerning in light of the reported $3 to $5 billion that were expended on these programs in 2003–2005, a figure that is likely to be substantially higher in the future.

To address its goal of engaging the public in reversing childhood obesity, SAY conducted town meetings in 5 locations across the United States. Participants in the meetings were drawn from each local community, and every effort was made to include a representative cross-section of the area's pop-

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ulation makeup. On the basis of the belief that families and communities have the greatest influence on and responsibility for children's development of healthy behaviors, we sought to engage these individuals in determining the barriers to better nutrition and physical activity and proposing and evaluating possible means of overcoming them. In this report we describe the findings from these town meetings. These findings add an essential element to America's discussion surrounding how we can most effectively meet this public health challenge from the viewpoint of those who are most instrumental in doing so.

METHODS

Community-Perspective Data Collection Using a Town-Meeting Process

SAY issued a nationwide request for proposals to identify an organization with experience in citizen-engagement initiatives that generate usable data for setting public policy. After reviewing 7 proposals, the organization AmericaSpeaks was selected to partner with SAY to organize and conduct the town meetings. AmericaSpeaks is a nonpartisan, nonprofit organization founded in 1995 to involve citizens in the public decision-making process by creating an opportunity for them to give their civic leaders direct, substantive feedback on key issues.

The concept of involving the general public in health care–related decision-making is being increasingly promoted and practiced in various forms.[6–8] Focus groups, town meetings, group interviews, and community-based participatory research are all formats for acquiring input from lay people on topics ranging from personal, local health care issues to national health care reform. Although the designs used in each of these formats vary widely, SAY opted to use the 21st Century Town Meeting model developed by the internationally recognized organization AmericaSpeaks based on its 15 years of experience and proven success in other public policy arenas.[9,10]

A primary goal of the town-meeting process was to ensure neutrality, fairness, and balance in all stages, including participant recruitment, meeting content and presentation, and data analysis. To this end, SAY and AmericaSpeaks committed to the following set of core objectives for the development of an effective citizen dialogue.

Diverse Representation

To ensure that the meeting outcomes represented the views of the entire community, the participants had to reflect the rich diversity of their region. In each city, a local coalition of organizations hosted the meeting and worked with SAY and AmericaSpeaks to tailor a site-specific recruitment strategy to meet demographic targets (for age, gender, race, etc).

Informed Participation

Meeting participants were provided with (1) a comprehensive 30-page "participant guide" that included descriptions of the SAY initiative and town-meeting objectives and factual, objective information about the crisis of excess weight among American youth, and (2) a 4-page "issue overview" that provided a simplified depiction of the primary issues related to childhood obesity. These documents included both national and site-specific data (available as PDF files at www.shapingamericasyouth.org).

Facilitated Deliberation

The town meetings were intended to ensure that every attendee played an active role in the deliberations and that every viewpoint was heard. The meeting agenda and presentation were designed to promote participation and allow all individuals to openly discuss their ideas and opinions.

Town-Meeting Sites

Five town meetings were held in 2006 and 2007 in Memphis, Tennessee; Dallas, Texas; Philadelphia, Pennsylvania; Chicago, Illinois; and the state of Iowa. Their selection was based on the presence of a regional coalition or organization committed to the issue of childhood obesity, a commitment from regional leadership to support a town meeting, demographic diversity in the area, and the ability to meet an aggressive time line. After town meetings in 4 major metropolitan areas, the state of Iowa was chosen as the fifth meeting site to gather rural input, with Des Moines serving as the host city. Requests from a substantial number of additional cities were considered; however, budget and scheduling limitations necessitated limiting the initial round of town meetings to these 5 sites.

Participant Recruitment

At each site, SAY and AmericaSpeaks worked with a local host organization and a local communications firm to develop and implement a comprehensive community-outreach campaign to promote participation in the SAY town meeting. The primary objective of the outreach efforts was to attract an audience that was demographically representative of the entire community in terms of age (≥16 years), gender, income, education, occupation, religion, and racial and ethnic composition. US census data for each site were used to establish outreach targets for each relevant demographic characteristic. The target for desired scale was established relative to the size of the local community and local assessments of how large an audience could be expected.

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Outreach Strategy Development

The initial step in each city was to convene a local host committee. Each city had at least a core coalition of organizations working to address childhood obesity. These organizations were the Healthy Memphis Common Table, the Dallas Area Coalition for the Prevention of Childhood Obesity, the Childhood Origins of Disease of Adulthood (CODA) in Philadelphia, the Consortium to Lower Obesity in Chicago Children (CLOCC), and Iowans Fit for Life. The local coalitions served as the basis to form a more inclusive steering committee and host organization for the town meetings.

The host committees were primarily responsible for providing feedback on outreach strategy and messaging, recruiting participants, and developing strategies for acquiring input on local issues. To recruit the scale and diversity of participants we were seeking, a local communications firm was engaged to drive the participant recruitment.

The most effective strategy used by the local organizations was direct, face-to-face outreach at community events, conferences, health fairs, and similar gatherings. This strategy was complemented by telephone and e-mail outreach using available lists from members of the steering committees and other organizations that represent youth, parents, educators, community leaders, and service providers (Appendix). Special efforts were also made to recruit local policy-makers to participate.

Demographic information was acquired from participants at the time they registered to attend the meetings to determine if demographic diversity targets were being met and to adjust outreach strategies as needed to ensure representative participation. Weekly registration reports (increased to daily reports in the final 2 weeks before the event) and teleconferences were used to review current registrations and discuss recruitment and marketing tactics.

Local marketing of the event through both earned and paid media supported our recruitment activity. Examples of earned media include local television and radio interviews with SAY's national leaders and local steering committee members, event announcements in regional parenting magazines and newsletters, and blog posts on local news and community Web sites. Paid media included drive-time radio advertisements, announcements on public radio, and newspaper advertisements.

Town-Meeting Format

SAY and AmericaSpeaks developed a detailed agenda and day-long script that served as the template for all 5 meetings. These were used to track the themes, suggested actions, and recommendations derived from each meeting and to compare them between and across meetings. The meeting agenda provided adequate time periods for information-sharing, discussion, and feedback to achieve the desired outcomes and to ensure participants' continued engagement throughout the day (eg, exercise breaks, quizzes, raffles). The meetings concluded with a site-specific component in which the local coalition presented its own set of discussion and polling questions directly related to a local agenda, policy, or action plan. As part of the meeting process, the local coalition provided regional data for the participant guide as well as handouts and worksheets that focused on a local agenda.

For each meeting, the room was set in round tables that seated 10 participants each. A keypad polling device was provided to each participant for his or her anonymous and confidential input. A laptop computer was used at each table to instantly transmit the ideas generated at that table to a central computer. This format ensured that every idea entered into the computer became part of the permanent record for the meeting. Two moderators from AmericaSpeaks directed all 5 town meetings, which began with introductions of the guest speakers and visiting dignitaries, who varied according to meeting but collectively included state governors, city mayors, city and county council members, state and city health commissioners, and the US Surgeon General and state senators via videotape. The moderators introduced the key data and context surrounding each topic area, explained how the discussion would proceed, and reviewed recommendations after each round of questions.

A trained facilitator worked at each table to ensure that all individuals were engaged, had a meaningful opportunity to participate, and that the group remained on task. Facilitators were recruited both from local networks and from the AmericaSpeaks national network. In general, we selected people who had table-facilitation experience of at least 2 years in either his or her own professions or outside activities. All facilitators received 2 hours of training before the town meetings during which the meeting design was explained and their roles were reviewed. Facilitators were trained to stay neutral, to be inclusive, and to help the group look for synergy and common ground. Postmeeting feedback indicated that the vast majority of facilitators did either a good or excellent and well-balanced job at the tables.

After the moderators outlined a question for discussion, 10 to 30 minutes were allotted for the table discussion; collective responses from those at each table were entered into that ta-

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ble's computer by the group's designated secretary and submitted to the central servers. Collected comments from each table were categorized into common themes by the "theme team," a group of local individuals who were selected for their backgrounds related to childhood weight, nutrition, physical activity, communications, and generation of public policy. The team reviewed the individual comments from the each of the tables, categorized each comment, and then reported the common ideas, or themes, back to the participants via jumbo video screens. After considering the categorical themes that had been identified, participants voted on their keypads for the theme they thought was most important. Polling results were reported instantly to the entire group on the video screens.

The participants' vote tally generated a prioritized list of barriers to and steps for improving childhood nutrition and physical activity within each of the family and community elements considered. Each keypad carried a unique identifier so that a participant's vote could be combined with the demographic information that he or she had entered at the beginning of the meeting. Thus, as discussed below, the demographic information identified with each keypad was combined with polling data from that keypad for statistical analysis of the data. That analysis permitted the within- and across-sites comparisons necessary to assess the broad applicability of the data.

Town-Meeting Content

At each town meeting, participants discussed the following topics sequentially.

Family Actions

What actions can families take to improve nutrition and increase activity among their children? One-third of the room focused on children prenatally and 0- to 5-year-olds, one-third focused on 6- to 11-year-olds, and one-third focused on 12- to 19-year-olds.

Barriers to Family Actions

What barriers impede actions that families might take? These barriers were discussed according to the 3 age groups listed above.

Supporting Families

In what ways can stakeholder groups support families to positively affect children's behaviors? Stakeholders were defined as (1) educators and schools, (2) community programs and leaders, (3) members of the health care community, (4) legislators and policy-makers, and (5) corporations and the private sector. The room was divided into 5 equal sections for this discussion, with each section assigned 1 stakeholder group.

Creating Partnerships

How can local stakeholder groups collaborate on issues of youth overweight to achieve a greater impact than they can achieve individually?

National Actions

What actions can national leaders and organizations take to improve nutrition and increase activity among children? The room was divided again into the same 5 stakeholder groups as for the "supporting families" discussion.

Next Steps/Local Action

In the final stage of the meeting, participants discussed topics linked to either developing or providing feedback on a local agenda, policy framework, or action plan.

At the end of the meeting, interested participants were asked to make personal commitments as to what they would do to combat youth obesity. All participants were asked to respond to a series of questions evaluating the meeting. As they exited, each participant received a 4-page summary report that was prepared throughout the day that detailed the meeting content, participant demographics, and the predominant themes and results.

Data Analysis

From the outset, we realized that a statistical analysis of a database of the magnitude we envisioned would present an unprecedented challenge. Specifically, the analysis team was confronted with developing an appropriate statistical strategy for organizing, summarizing, and examining the data to identify relationships among the tens of thousands of bits of data this scientific process collected. The analysis had to be done in a way that distinguished between potentially important and unimportant factors and trends while preserving the uniqueness of the sites and the points of view of different groups of participants.

To meet this challenge, we relied on statistical techniques that allowed us to (1) simultaneously examine and control multiple factors, (2) distinguish between factors that were found to be empirically important or extraneous, and (3) determine if an observed relationship was stronger than what was likely to arise by chance. We also relied on commonly used statistical methods such as multiple linear regression, logistic regression, and analysis of variance to reliably identify similarities and differences among sites and groups. In addition, we recognized that results had to be presented in a way that acknowledged that each site was its own descriptive study rather than an experiment with a control group and therefore observed that relationships were not necessarily causal.

The initial data analysis was conducted after the town meetings held in the first 4 sites and before the Iowa meeting. That initial analysis used data gathered from 543 Chicago, 467 Dallas,

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880 Memphis, and 333 Philadelphia participants. These data included age, gender, family income, and racial/ethnic group. The database also indicated which strategies the participants felt would be most effective for improving nutrition and physical activity to reduce obesity in children. In addition, the data captured the language families and community entities used in their discussion or consideration of the issues surrounding childhood obesity. Two concurrent data analyses were conducted for reliability, and a deeper look at both suggested activities and ranked priorities: a quantitative data analysis of priority polling data based on categorized themes and a qualitative content analysis of raw data gathered from each tables' collective responses.

Polling-Data Analysis

An initial summary multivariate analysis of the polling data was performed for the first 4 sites. Each participant provided substantial demographic information through his or her individual handheld keypads used for voting on topic priorities. Thus, it was possible to first determine if, within each city, the priorities varied on the basis of a given population characteristic. That analysis revealed that individual demographic characteristics did not predict the results of the polling within any city.

The relevant questions, similar across sites, covered 3 areas: participant demographics; perceptions of the nature of the childhood obesity problem and motivation to improve it; and evaluations of the perceived effectiveness of a selected set of stakeholder actions for combating childhood obesity. The evaluation questions addressed the following societal groups whose potential action was targeted:

- families with children aged 0 to 5 years;
- families with children aged 6 to 11 years;
- families with children aged 12 to 19 years;
- educators;
- community leaders;
- health care professionals;
- business leaders; and
- legislators and policy-makers.

In addition to these societal elements, the evaluation questions incorporated national initiatives.

To examine whether men and women within a site tended to have the same or different preferences for the strategies on which they voted, the analysis team constructed a table with 1 row for each of the suggested activities and 1 column for each group. The cells in this table showed the percentage of the group that voted for the activity. Thus, each column summed to 100%. There was a separate table for each of the 4 sites and the targeted societal groups, because the suggested actions at 1 site were not necessarily the same as those suggested at other sites or not expressed in exactly the same way.

For the first 4 cities, the analysis required the construction of 36 tables for gender and another 36 for race, for a total of 72 data matrices. The correlation coefficient between men and women was used as a measure of the degree to which they agreed with each other regarding the likely relative effectiveness of the different strategies. Coefficient α was used to obtain a comparable measure of agreement among racial groups. For both of these indices, the higher the value, the greater the consistency in the preferences of the groups being compared. Values over 0.85 indicate a high degree of agreement.

The correlation analyses were run separately according to site, because the categorized themes of suggested activities varied somewhat across sites. To address this feature of the data and allow for more in-depth analyses, SAY staff unified the suggestions from the different sites into a common set applicable to all sites. The resulting crosswalk between this staff-developed common set of suggestions and the site-specific set was used to create a database that contained each participant's first choice of the possible actions listed in the common set for a given societal group. This database also contained the participant's demographic characteristics. This exercise resulted in identifying 51 actions common to at least 2 sites, 23 of which were common to all 4 sites.

Separate multivariate logistic regression models were computed for each of the 51 actions. The outcome variable in each model was whether the action was the participant's first choice (coded 1 or 0, respectively). The independent variables were race, site, gender, age, and income level. For race, "dummy" variables were used to classify a respondent as black, white, or Hispanic. The reference group was "all others" (most of whom did not indicate their race). Chicago was the reference-group site for all the models except when the action was not an option identified in the Chicago data set.

The size and algebraic sign of the coefficients in these models indicate the degree to which a participant's race, gender, age, income level, or site were related to whether participants did or did not prefer a given action. A statistically significant coefficient indicates that the groups differed more in their preferences than was likely to arise by chance alone. Because of missing-data problems, noted below, only 45 of the 51 models could be estimated.

After completion of the Des Moines meeting, the corresponding Iowa-specific data set was then merged with

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that of the first 4 sites. Rather than repeating the polling analysis, which had already statistically established the relative uniformity across numerous demographic variables in the first 4 sites, the analysis used the content analysis of all 5 sites to determine if the state of Iowa differed in its priorities from Memphis, Dallas, Philadelphia, and Chicago.

Content Analysis

The multivariate analysis revealed that the barriers identified and the solutions proposed from 4 distinct venues were generalizable to the US population, a finding that supported the pooling of the ≥14 000 inputs entered from table discussions at the 5 sites in response to the comparable questions posed at each venue. The pooling of responses allowed for a formal content analysis of all the comments that were provided.

In analyzing and summarizing participants' responses, the analytical team first reviewed the responses and the summary themes for each question to develop an initial framework for coding the individual responses included in each of the meeting transcripts. Using this initial coding scheme, the team reviewed each response recorded in the meeting transcripts to assign it to the appropriate category. This process generally identified other common categories of responses, which then were incorporated into the scheme to continue the coding process. In the course of coding the responses to individual questions, a minority of responses were either not decipherable or did not seem to be related to the question that had been posed. In some instances a single response incorporated more than 1 idea and, therefore, could be coded into more than 1 category. In these cases, multiple codes were assigned to the same response. In summarizing the data, the analytical team calculated the total number of responses in each category divided by the total number of responses recorded to that question to define the percentage of responses in each category. This process allowed us to calculate the rank order of the responses fitting a defined category for a response to each question posed at each site.

RESULTS

The magnitude of this data set is such that only selected tables are included in this publication. The analysis of the full data set, tables generated, and all 14 000+ primary responses from each meeting table are available online at www.shapingamericasyouth.org.

Participants

Demographic characteristics and community roles of the participants at each site are shown in Tables 1 and 2. Although there was substantial variability for selected characteristics between sites, we were able to account for them by using an analytical approach. The demographics of the participants adequately reflected several of the known variables associated with excess weight in children. In general, the participants in each city were reasonably representative of the metropolitan area; for each case in which there was overrepresentation of a demographic group, it tended to favor factors associated with an increased risk for excess weight. Thus, the participants represented a good cross-section of that portion of the US population for whom solving this health crisis is particularly important. As noted in Table 2, there was significant representation from adolescents and young adults, aged 15 to 21, for whom the challenge of weight control has even greater immediacy. Their input was particularly valuable in considering the effectiveness of current school-based initiatives. Many of the participants identified with more than 1 role in the community; thus, the total percentages exceed 100.

Polling Data

Table 3 depicts the gender and race coefficients that were generated by the multivariate analysis of the polling data. Notable are the unusually high coefficients among the different gender and racial groups in all 9 targeted societal groups at each site. The major exception to this trend was at Philadelphia, where there were noticeable

TABLE 1 Demographic Characteristics According to Meeting Site

	Memphis, %	Dallas, %	Philadelphia, %	Chicago, %	Iowa, %
<35 y old	46	38	53	55	35
Less than $50 000/y income	25	47	43	42	29
Male	28	22	35	28	27
White	31	48	25	13	86
Black	57	27	60	54	7
Hispanic	4	37	7	29	2

TABLE 2 Participants' Community Roles

	Memphis, %	Dallas, %	Philadelphia, %	Chicago, %	Iowa, %
Youth (15–21 y)	33	21	26	35	4
Parent/guardian	43	53	21	19	29
Educator	30	26	15	15	21
Community leader/service provider	29	22	20	15	20
Business leader/private sector	16	18	7	5	9
Health care provider	22	25	11	11	14
Legislator/policy-maker	3	2	1	0	4

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TABLE 3 Race and Gender α Correlation Coefficients

	Memphis	Dallas	Philadelphia	Chicago	Average
Race					
Family actions					
0–5 y	0.80	0.64	0.87	0.94	0.81
6–11 y	0.85	0.95	0.99	0.79	0.89
12–19 y	0.94	0.94	0.66	0.92	0.86
Stakeholder actions					
Educators/schools	0.96	0.96	0.59	0.92	0.86
Community leaders/service providers	0.93	0.96	0.68		0.83
Health care community	0.72	0.95	0.86	0.96	0.87
Business/private sector	0.88	0.98	0.70	0.86	0.86
Legislators/policy-makers	0.93	0.99	0.59	0.91	0.86
National actions	0.95	0.97	0.50	0.98	0.85
Average	0.88	0.93	0.72	0.89	0.86
Gender					
Family actions					
0–5 y	0.85	0.86	0.81	0.88	0.85
6–11 y	0.89	0.91	0.81	0.57	0.80
12–19 y	0.89	0.43	−0.22	0.82	0.48
Stakeholder actions					
Educators/schools	0.93	0.78	0.32	0.57	0.65
Community leaders/service providers	0.73	0.92	0.13	0.64	0.60
Health care community	0.97	0.85	0.89	0.97	0.92
Business/private sector	0.88	0.98	0.83	0.76	0.86
Legislators/policy-makers	0.98	0.97	0.68	0.98	0.90
National actions	0.94	0.97	0.31	0.96	0.79
Average	0.90	0.85	0.51	0.79	0.76

disagreements (much lower coefficients), especially among gender groups in several polls that targeted specific societal groups.

Table 4 shows the coefficients in the 45 models that could be estimated. For example, the first row of this table indicates that after holding the other variables in the model constant, Memphis participants were more likely than Chicago participants to select "Mothers should eat healthy and be physically active during pregnancy" as their top choice for families with 0- to 5-year-old children, whereas white participants (regardless of site) were statistically significantly less likely to select this option relative to the reference group of participants (ie, those who did not identify themselves as white, black, or Hispanic).

Slightly fewer than 50 of the nearly 400 coefficients in Table 3 were statistically significant, but ~20 would be significant by chance alone. Thus, taken as a whole, the participants' background characteristics were generally not systematically related to their preferred actions. However, a disproportionately large number of the significant coefficients were related to site differences, whereas there was only 1 significant coefficient in the gender column and none in the income column. Viewed collectively, these findings indicate that location was generally more closely related to the participants' preferred actions than was their race, gender, or income.

The Iowa site was added to the project in 2007. Some of the scripted queries at this site differed slightly from those used at the other sites. Although identical scripts were used at all sites regarding barriers and solutions for family action, Iowa participants addressed a new series of questions, "stakeholder actions in support of families," that were identified in the analysis of the initial 4 sites. Under each general stakeholder action, participants were provided 3 to 4 specific, theoretical examples of an action that a stakeholder might take. Participants evaluated the examples or proposed alternative actions they deemed more likely to be effective in supporting the family unit. This modification in the day-long script for Iowa was substituted for the open-ended discussion of stakeholder actions used in the earlier town meetings. The discussion regarding "creating partnerships" was eliminated from the Iowa meeting to provide additional time for discussion of specific actions by stakeholder groups.

This adjustment in the second half of the Iowa town-meeting format and script was made to assess whether it was feasible to engage the participants over a more specific or detailed list of theoretical actions by stakeholders. This was done in anticipation of such a line of engagement being used in a new round of town meetings. Specifically, the putative second round of national town meetings would target the identification of specific action steps for the families and their communities to take that would be deemed responsive to the general action concepts identified in SAY's initial round of national town meetings. When the Des Moines script was identical to that of the other 4 sites, the data generated were incorporated in the overall analysis of "family actions and national actions."

Content Analysis

Table 5 summarizes the data regarding the number of suggestions per site about "barriers to family action" as they relate to nutrition and physical activity. In this table and Tables 6 through 9, "*n*" indicates the number of suggestions that were made at each site in response to each of the open-ended questions posed to the participants. In each cell of Table 5 the percentage of those suggestions that relate to the 4

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TABLE 4 Correlation Coefficients for the 45 Barriers to Improvement Based on Participant Responses

Action	Black	White	Hispanic	Male	Income	Age	Dallas	Memphis	Philadelphia
Support for families with children aged 0–5 y									
Mothers should eat healthy and be physically active during pregnancy	−0.510	−1.480[a]	−0.610	−0.060	0.130	−0.060	0.190	1.160[a]	—
Encourage breastfeeding	−0.270	−0.010	−0.490	0.190	−0.010	0.100	−0.830	0.000	—
Limit television time and video games in the home	−0.780[a]	−0.190	−0.510	−0.030	−0.090	0.010	0.150	0.500	0.130
Make healthy home-cooked meals and keep healthy foods around the house	0.540	0.300	0.610	−0.010	0.010	0.030	−0.980	−1.060	—
Parents should lead by example	2.160[a]	2.730[a]	2.520[a]	0.210	−0.070	0.120	—	—	0.430
Spend more time playing with your kids (eg, dancing, playing sports)	0.160	−0.430	0.100	0.540	0.100	−0.120	—	—	0.020
Exercise with your children outdoors	−0.200	−0.110	−0.180	0.250	−0.020	−0.220[a]	−1.270[a]	—	−0.780[a]
Support for families with children aged 6–11 y									
Parents should lead by example	−0.330	0.350	−0.520	0.200	−0.080	0.040	0.720[a]	−0.080	—
Cook and eat homemade meals together as a family	0.010	0.030	0.300	0.170	−0.050	0.210	−1.150[a]	0.070	2.160
Families can participate in physical activities together	0.460	0.320	0.830[a]	−0.400	0.050	−0.060	−1.810[a]	−0.560[a]	1.270
Provide healthy snacks and food in the home	0.370	−0.150	−0.040	−0.170	0.160	0.020	−0.340	−1.330	−2.110[a]
Educate parents and children about healthy eating	0.150	−0.520	−0.040	−0.390	0.030	0.140[a]	13.650	13.160	0.000
Support for families with children aged 12–19 y									
Parents should lead by example	0.150	0.210	0.040	−0.180	−0.010	0.110	−0.070	—	−0.250
Cook and eat homemade meals together as a family	−0.330	0.100	−0.490	0.290	0.010	0.100	−0.930[a]	−0.970[a]	−0.180
Provide healthy snacks and food in the home	0.130	0.360	0.090	−0.160	−0.060	0.020	0.780[a]	0.470[a]	−0.020
Families can plan and participate in physical activities together	−0.420	−0.520	−0.160	0.210	0.030	−0.130[a]	0.220	0.140	−0.400
Educate parents and families about healthy eating and nutrition	0.010	0.090	0.140	−0.050	−0.100	0.250	—	0.600[a]	−0.700
Parents should advocate physical education in schools	0.520	0.590	−0.190	0.150	0.040	0.000	—	—	−0.220
Educators									
Involve parents in school physical education and nutrition program planning	−1.180[a]	−0.720	−1.020[a]	−0.910[a]	−0.030	0.250[a]	0.840[a]	—	—
Schools should provide healthier food and beverage options in cafeterias	−0.010	0.420	0.370	0.250	0.020	−0.080	−0.130	−0.270	0.960[a]
Increase activity and nutrition at school, increase physical education	0.230	0.460	0.000	0.000	0.020	−0.060	0.230	0.130	1.130
Increase nutrition education for students, faculty, parents	0.370	0.490	0.730	−0.200	0.040	0.060	−0.540	−0.210	−0.830[a]
Community leaders									
Community organizations should provide classes	0.300	0.110	0.670	−0.360	−0.030	0.010	−1.370[a]	0.870[a]	1.110[a]
Encourage media to offer public service announcements about nutrition	−0.800	−0.300	−0.590	−0.060	−0.010	−0.090	—	−0.610[a]	—
Provide financial support for nutrition education and physical activities	−0.120	−0.070	−0.070	−0.340	−0.010	0.110	—	−0.930	—
Make farmers' markets accessible to communities	−0.160	−0.430	−0.770	0.700	−0.360	−0.130	—	—	1.580[a]
Add security in neighborhoods to allow for physical activity	−0.080	−0.170	0.510	0.080	0.140	−0.020	—	—	−0.380
Create parks and beautify neighborhoods to encourage exercise	−0.580	−0.020	0.150	0.350	0.190	−0.010	19.040	0.940[a]	0.970[a]
Encourage schools to serve healthier foods, emphasize health and nutrition	−0.050	−0.380	−0.760	0.620	0.060	−0.050	—	—	−0.510
Health care sector									
Produce materials about nutrition and physical activity	0.070	0.230	0.170	−0.090	−0.040	0.140[a]	−1.310	0.730[a]	—
Insurance companies should play an active role	0.190	0.300	0.460	0.140	0.050	0.050	0.260	−0.700[a]	0.850[a]
Doctors provide prescriptions and referrals for physical activity and nutrition	−0.390	−1.020[a]	−0.760	−0.230	0.010	−0.230[a]	—	−0.020	—
Professionals reach through educational events and health fairs	−0.020	−0.440	−1.220[a]	−0.120	−0.100	0.170[a]	—	−0.940[a]	0.570

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TABLE 4 Continued

Action	Black	White	Hispanic	Male	Income	Age	Dallas	Memphis	Philadelphia
Businesses									
Provide preventive benefits for employees through policies, incentives	0.300	0.510	0.050	0.020	−0.010	0.050	−0.930	1.050	−0.710
Sponsor, support, or donate to community health programs and events	−0.360	−0.400	−0.240	−0.100	−0.090	−0.010	1.160	−0.770	0.610
Offer and promote healthy food options on television and at restaurants	0.440	0.480	0.570	0.430	0.030	0.010	−1.460	—	—
Be responsible when advertising to children (limited yet truthful advertisements)	0.910	0.740	0.410	−0.390	0.080	0.120	—	−1.110	—
Legislators									
Mandate and increase funding to improve nutrition and physical education in schools	−0.040	0.390	−0.260	−0.180	0.060	0.070	0.760	0.980	0.050
Make healthy food more affordable and accessible through subsidy	0.220	−0.220	0.140	0.040	0.020	−0.110	−0.160	—	−0.460
Plan and build safer communities that support physical activity	0.280	0.170	0.500	0.310	−0.030	−0.040	—	−0.520	0.340
Provide and fund facilities for outdoor activities	0.170	0.810	0.660	0.540	−0.200	0.040	−2.100	—	—
Increase funding for physical activity and nutrition education programs	0.170	0.650	0.890	−0.410	0.070	0.030	—	—	−1.130
National agenda									
Develop, fund, and require national standards for school nutrition and physical education	−0.500	−0.060	−0.640	0.140	0.010	−0.040	0.720	—	—
Encourage collaboration between legislators, businesses, and educators to promote and fund nutrition and fitness initiatives	−0.200	0.240	0.040	−0.150	−0.030	0.000	−1.380	−0.400	−1.080
Create a national marketing and education campaign for nutrition and physical activity	−0.040	−0.400	0.080	0.190	−0.070	−0.050	—	−1.510	16.390

[a] $P < .05$.

most prevalent suggestions is recorded. What is evident in Table 5 and follows through in Tables 6 through 9 is the consistency of the rank order across the top 4 suggestions of the critical barriers that were identified at the 5 sites despite the diversity of participants that each town meeting included.

Table 6 provides similar data about the number of suggestions per site about "family actions" that can be made to improve nutrition and physical activity for each of the 4 target age groups. Once again this table shows the number of suggestions that were made, and the cells show the percentage of those suggestions that relate to the 4 most common types of suggestions. For example, Table 6 shows that, as a group, the Memphis participants made 238 suggestions regarding how families can improve nutrition for 0- to 5-year-old children, and 28% of those involved families providing healthy snacks and meals. Table 7 provides a comparable presentation of the data regarding "stakeholder support of family actions" as was presented in Tables 5 and 6. The top 4 actions for stakeholders to take are again provided. As in Tables 5 and 6, the consistency of the rank order of the percentage that a given suggestion was noted across the 5 sites is evident. This set of questions was not presented at the Iowa meeting.

Table 8 summarizes the national actions that stakeholders might take to improve nutrition and physical activity. The format is identical to that of Tables 5 through 7 except that in Memphis and Dallas the question was posed separately for nutrition and for physical activity but combined as 1 question for the other sites. Once again the rank order and percentages are remarkably consistent across the different regional sites and their respective participants.

Table 9 summarizes the "creating partnerships" recommendations from the first 4 sites. The Iowa state-wide town meeting was not queried on this point. More than the top 4 categories are presented, in part, to document that a number of national partnership concepts that have been frequently touted in the past had little or no support from these participants. Once again, however, there was good agreement on the top 4 partnerships and some support for the next 6, although minimal in most instances.

The data in Tables 5, 6, and 8 suggest that the Iowa participants demonstrated good agreement with the participants at the other sites regarding which strategies would work best. Specifically, the rank ordering of their 4 most common suggestions in each set tended to coincide with the rank ordering of the most popular suggestions in that set at the other sites. This finding was consistent with the find-

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TABLE 5 Barriers to Family Actions

Common Priorities (Top 4 per Category)	Memphis	Dallas	Philadelphia	Chicago	Iowa
What barriers prevent families from improving nutrition in children aged 0–5 y? *n*	219	153	76	152	78
1. Parents lack information or knowledge about healthy foods and eating habits, %	32	29	32	22	28
2. Time constraints and other stresses that affect parents, %	20	29	24	20	26
3. Higher costs of healthy food, %	20	16	21	20	23
4. Healthy food is not readily available in many neighborhoods, %	8	12	21	13	6
What barriers prevent families from increasing physical activity in children aged 0–5 y? *n*	225	122	63	131	80
1. Lack of access to safe and/or appropriate places to be active, %	19	36	30	33	33
2. Time constraints and other stresses that affect parents, %	24	26	17	19	26
3. Parents lack motivation or parenting skills, %	15	11	22	27	13
4. Parents lack awareness and/or knowledge about physical activity, %	12	8	10	18	19
What barriers prevent families from improving nutrition in children aged 6–11 y? *n*	266	211	43	134	78
1. Stresses and time constraints that affect parents, %	21	21	30	19	17
2. Parents lack knowledge or awareness, %	19	25	19	20	17
3. Lack of parenting skills or motivation on part of parents, %	20	19	16	24	18
4. Higher costs of healthy food, %	16	21	21	19	19
What barriers prevent families from increasing physical activity in children aged 6–11 y? *n*	157	152	37	130	68
1. Lack of access to safe and appropriate places to be physically active, %	22	27	41	25	40
2. Stresses and time constraints of parents, %	30	26	35	20	18
3. Lack of parenting skills or parental motivation, %	15	20	11	27	10
4. Cost of programs and activities, %	12	11	11	18	10
What barriers prevent families from increasing nutrition in children aged 12–19 y? *n*	213	111	73	98	68
1. Stresses and time constraints that affect parents and older children, %	19	20	22	23	40
2. Lack of knowledge or awareness of proper nutrition, %	15	18	21	20	18
3. Higher costs of healthy food, %	16	8	23	24	15
4. Peer pressure and developmental tendencies, %	7	11	27	19	13
What barriers prevent families from increasing physical activity in children aged 12–19 y? *n*	158	98	59	100	69
1. Stresses and time constraints that affect families and teenagers, %	22	16	41	22	25
2. Lack of accessible resources or options for physical activity, %	13	9	17	27	19
3. Safety concerns, %	4	7	19	29	10
4. Competition from television, video games, and other technology, %	4	17	22	12	7

Shown are the percentages of participants who selected the action.

ings of the initial data analysis that across various demographic and regional factors, the town meetings identified a common set of barriers to and actions for improving nutrition and physical activity among children and adolescents in America.

Limitations

The data presented here are descriptive of the views expressed by town-meeting participants during their deliberations with their tablemates and through the votes they cast via their polling devices. These participants are best characterized as a convenience sample of teenagers and adults who are sufficiently interested in the problem of childhood obesity to devote a full day to discussing its resolution.

There may be subtle factors at work that could affect and homogenize the participants' suggestions, such as what the session leaders said about the problem before the participants discussed and voted or how the theme team's list of suggestions may have been influenced by the views of the table recorders and team members through whom all the suggestions were filtered, translated, and expressed. Moreover, there were no independent checks on the consistency of how table recorders or theme team members worded the participants' suggestions or how their personal views may have seeped into the items on which the participants ultimately voted.

Missing data must also be considered. For example, ~3% of the participants did not report their gender, race, age, or income. In addition, the number of participants who cast a vote varied across the different polls, with more attrition as the day wore on. Nevertheless, the generally high degree of agreement among participants regardless of site and background characteristics indicates that the views they expressed are applicable to the US population in general. Finally, the relative popularity of a suggestion may not be related to its effectiveness in reducing the childhood obesity problem. That could only be determined by outcome measures of any intervention that a community or element of a community might elect to institute.

Participants' Assessment of the Town-Meeting Process

At the conclusion of the meeting, participants were asked several questions to assess the quality of the meeting (Table 10) and whether they thought it would lead to change in the community. Their response to the latter was compared with a similar query

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TABLE 6 Family Actions/Solutions

Common Priorities (Top 4 per Category)	Memphis	Dallas	Philadelphia	Chicago	Iowa
How can families improve nutrition in children aged 0–5 y ? *n*	238	226	85	135	42
1. Families need to provide healthy snacks and meals, %	28	31	42	38	10
2. Families need to create and reinforce good eating behaviors, %	15	16	25	26	29
3. Pregnant women need to learn about and practice good nutrition, %	14	10	13	10	14
4. Parents need to serve as positive role models in their own eating behaviors and choices, %	11	10	10	7	17
How can families improve physical activity in children aged 0–5 y? *n*	174	156	51	91	35
1. Families need to provide children with opportunities for physical activity, %	37	56	75	65	57
2. Families need to engage in fun physical activities together, %	44	35	43	29	34
3. Parents need to limit television and computer time, %	20	10	12	9	20
4. Parents need to serve as positive role models by being physically active themselves, %	9	7	12	5	14
How can families improve nutrition in children aged 6–11 y ? *n*	269	254	51	127	50
1. Families need to provide healthy snacks and meals, %	42	35	32	29	36
2. Meal planning, shopping, and eating should be family activities, %	18	13	22	11	30
3. Parents need to prohibit or restrict unhealthy foods, %	17	13	16	24	16
4. Families need to enforce good eating behavior patterns, %	18	14	12	16	22
How can families improve physical activity in children aged 6–11 y? *n*	200	210	47	94	49
1. Families need to promote and engage in physical activities as a family, %	33	35	61	50	49
2. Families need to involve and support children in organized physical activity (eg, sports, dance, swimming, and after-school programs), %	15	15	15	26	10
3. Families need to encourage children to be physically active on their own, %	11	9	6	16	12
4. Parents need to create and/or provide children with opportunities for physical activity, %	13	10	13	12	16
How can families improve nutrition in children aged 12–19 y? *n*	169	145	62	113	55
1. Parents need to plan for and provide healthy snacks and meals, %	49	53	27	50	38
2. Meal planning, shopping, preparation, and eating should be shared family activities that reinforce good nutritional choices, %	26	23	21	20	49
3. Parents need to educate their children about nutrition and how to prepare nutritious food, %	12	18	15	22	13
4. Families need to create and reinforce healthy eating habits, %	17	18	9	9	20
How can families improve physical activity in children aged 12–19 y? *n*	153	127	54	64	55
1. Promote and engage in physical activities as a family, including active games, exercise, and chores, %	48	28	74	55	44
2. Encourage children to engage in physical activities on their own, %	14	17	15	28	13
3. Encourage and support children's participation in organized programs that involve physical activity, %	22	12	17	19	9
4. Limit the time that children spend watching television, at the computer, playing video games, etc, %	12	9	11	17	15

Shown are the percentages of participants who selected the action.

to the audience at the beginning of the meeting. At the end, there was a consistent and substantial increase in the number of respondents who stated that they were more optimistic that there would be positive change in their community as a result of the meeting. When asked to rate the overall quality of the meetings, >92% at all sites graded the meeting as either "good" or "excellent."

DISCUSSION

Citizens' Perception of the Childhood Obesity Crisis

Several important general insights emerged from this effort that should not be lost in the mass of data that were accumulated. First, through their responses participants indicated that they clearly understand that America's youth are at serious risk from poor nutrition and insufficient physical activity. Second, their responses maintained a positive tone, avoiding a simplistic focus on outside sources as the cause of the childhood weight crisis. Third, their recommendations indicated that they understood that solutions need to focus on the family and elements of the community in which they reside (ie, solutions rest largely with the family with support from the community to act successfully). Fourth, consistent with the previous point, they did not perceive that a universal approach conceived and implemented by government or some other larger element(s) of society was critical to reversal of this crisis. They recognized, however, that there were steps that could be taken at national or regional levels to facilitate the success of family and community efforts. Fifth, by their responses to the queries regarding families with children 0 to 5 years old, they acknowledged the long-term importance of the earliest years in the life of a child, including pregnancy and infancy, in developing habits that promote healthy weight.

Family and Community Priorities

The summary tables (Tables 5–9) of the content analysis demonstrate where the priorities for families and communities lie. Perhaps obvious, but nevertheless important to note, the participants view the family's role as primary and see the school setting, where their children spend the majority of their out-of-home time, as the

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TABLE 7 Stakeholder Support of Family Actions

Common Priorities (Top 4 per Category)	Memphis	Dallas	Philadelphia	Chicago
How can educators/schools support family actions to improve childhood nutrition? *n*	200	97	56	119
1. Provide healthier choices in the meals and snacks available at school, %	38	38	52	29
2. Provide nutrition education to students, %	30	37	38	36
3. Promote good nutrition as a part of the school's culture, %	29	33	29	33
4. Partner with and involve parents, %	15	12	18	12
How can educators/schools support family actions to improve childhood physical activity? *n*	154	89	36	69
1. Incorporate and support physical activity during the school day, %	23	40	42	38
2. Promote physical activity and wellness as a school priority, %	23	33	42	41
3. Strengthen physical education programs in schools, %	40	38	19	22
4. Provide increased access to extracurricular programs that involve physical activity, including sports and recreational programs, %	14	28	33	16
How can community leaders/service providers support family actions to improve childhood nutrition? *n*	90	149	55	62
1. Educate and support efforts to educate the community about good nutrition, %	36	59	47	47
2. Increase the local community's access to good nutrition, %	32	17	32	29
3. Provide leadership and positive role models, %	4	13	13	32
4. Lobby/advocate with other stakeholders, %	14	15	9	15
How can community leaders/service providers support family actions to improve childhood physical activity? *n*	93	105	53	47
1. Expand and enhance community spaces and opportunities for physical activity, %	30	29	40	28
2. Provide free or low-cost sports and recreational programs for children and youth, %	28	33	26	26
3. Promote awareness of options and opportunities for physical activity, %	15	20	15	28
4. Provide leadership and organize the community to address the issue, %	20	6	17	30
How can businesses/the private sector support family actions to improve childhood nutrition? *n*	164	110	37	86
1. Businesses directly involved with the production and/or distribution of food should focus on providing healthy foods, %	32	24	35	32
2. Businesses should support programs/initiatives that address children's nutrition, %	15	30	28	33
3. Businesses should promote good nutrition among their employees, %	24	21	11	11
4. The advertising industry should promote good nutrition, %	14	18	20	13
How can businesses/the private sector support family actions to improve childhood physical activity? *n*	125	90	26	53
1. Support programs, initiatives, organizations, and facilities that support physical activity among children, %	29	44	54	51
2. Promote physical activity and wellness among employees, %	40	30	27	28
3. Promote physical activity through their products, services, and facilities, %	3	14	15	13
4. Businesses should promote physical activity and healthy living through the media, %	9	11	12	4
How can the health care community support family actions to improve childhood nutrition? *n*	161	149	26	73
1. Integrate nutrition into health care delivery and services, %	42	38	62	38
2. Provide nutritional education that is accessible to families, %	40	34	54	27
3. Promote good nutrition in the community, %	13	15	35	15
4. Insurers need to support good nutrition, %	8	5	27	6
How can the health care community support family actions to improve childhood physical activity? *n*	83	94	21	41
1. Integrate emphasis on wellness and physical activity into the delivery of health care, %	30	26	31	33
2. Provide accessible education on the importance of physical activity, %	23	34	24	36
3. Create, provide, and/or financially support more wellness programs, %	13	31	34	20
4. Promote availability and awareness of programs and facilities that support physical activity, %	12	13	14	16
How can legislators/policy-makers support family actions to improve childhood nutrition? *n*	110	53	28	79
1. Implement good nutrition and nutrition education in the schools, %	40	32	39	28
2. Pass legislation to provide families greater access to affordable healthy foods, %	33	26	21	42
3. Provide leadership on improving nutrition for children, %	20	25	43	32
4. Regulate unhealthy foods, %	9	8	4	15
How can legislators/policy-makers support family actions to improve childhood physical activity? *n*	91	34	22	57
1. Increase and improve access to community centers, parks, and other infrastructure supporting physical activity in the community, %	34	38	64	47
2. Support physical activity in the schools, %	46	32	36	30
3. Provide incentives for and otherwise support family physical activity, %	15	18	23	14
4. Provide leadership on the issue, %	5	6	0	14

Shown are the percentages of participants who selected the action.

secondary area for improvement. Two core issues run through the characterization of the barriers and solutions for the family to improve both the nutrition and physical activity of their children. One issue is time. Time pressures dominated the participants' characterization of the family's inability to ensure healthy eating and physical activity. The second issue is access, specifically access to effective nutrition information/education, affordable, nutritious food, and a built environment that promotes families' efforts to be physically active.

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TABLE 8 National Actions

Common Priorities (Top 4 per Category)	Memphis	Dallas	Philadelphia	Chicago	Iowa
How can educators/schools improve childhood nutrition and increase physical activity at the national level? *n*	—	—	67	108	46
1. Create policies, mandates, or guidelines to improve nutrition and increase physical activity through the schools, %	—	—	22	32	43
2. Provide financial and other resources to support wellness programs in the schools, %	—	—	18	18	30
3. Deliver programs in the schools that support wellness, %	—	—	27	12	11
4. Create and implement a national campaign, %	—	—	12	6	7
How can educators/schools improve childhood nutrition at the national level? *n*	65	26	—	—	—
1. Ensure good nutrition in the schools, %	35	46	—	—	—
2. Ensure that nutrition education is provided through the schools, %	17	5	—	—	—
3. Provide leadership on the issue, %	13	18	—	—	—
4. Create national campaigns focused on good nutrition, %	9	5	—	—	—
How can educators/schools increase childhood physical activity at the national level? *n*	52	25	—	—	—
1. Support and enhance physical education and physical activity in schools, %	48	48	—	—	—
2. Mandate physical education in the schools, %	21	56	—	—	—
3. Provide leadership on the issue, %	10	12	—	—	—
4. Create national campaigns to promote physical activity, %	10	0	—	—	—
How can community leaders/service providers improve childhood nutrition and increase physical activity at the national level? *n*	—	—	54	58	35
1. Provide financial and other resources to support wellness in the community, %	—	—	26	31	40
2. Create and implement educational campaigns, %	—	—	28	34	9
3. Adopt policies, regulations, and/or mandates to improve nutrition and increase physical activity in the community, %	—	—	7	12	26
4. Sponsor and/or deliver programs that support wellness, %	—	—	19	9	14
How can community leaders/service providers improve childhood nutrition at the national level? *n*	55	75	—	—	—
1. Sponsor/create campaigns to inform the public about nutrition, %	25	33	—	—	—
2. Create and implement policies and regulations, %	25	11	—	—	—
3. Provide nutrition education to families, %	25	5	—	—	—
4. Provide money and resources to local communities to address the issue, %	7	16	—	—	—
How can community leaders/service providers increase childhood physical activity at the national level? *n*	31	47	—	—	—
1. Sponsor/create campaigns to promote physical activity, %	39	17	—	—	—
2. Provide money, resources, and infrastructure to local communities to promote physical activity, %	16	15	—	—	—
3. Implement policies and regulations that promote physical activity, %	19	13	—	—	—
4. Educate the public about physical activity, %	16	4	—	—	—
How can businesses/the private sector improve childhood nutrition and increase physical activity at the national level? *n*	—	—	76	76	19
1. Promote wellness through the products and services produced, delivered, and marketed to the public, %	—	—	45	44	32
2. Businesses should advocate and lobby for wellness with the government, %	—	—	7	7	16
3. Support programs, initiatives, organizations, and community facilities that promote wellness, %	—	—	18	17	21
4. Expand health insurance coverage and use it to promote wellness, %	—	—	5	4	5
How can the business/private sector improve childhood nutrition at the national level? *n*	87	71	—	—	—
1. Businesses that produce and/or distribute food should focus on providing quality healthy foods at affordable prices to all communities, %	25	18	—	—	—
2. Businesses should inform and educate consumers about nutrition, %	10	21	—	—	—
3. Businesses should support programs and initiatives that address the nutrition of children, %	18	13	—	—	—
4. Businesses should promote good nutrition among their employees, %	17	10	—	—	—
How can businesses/the private sector increase childhood physical activity at the national level? *n*	67	34	—	—	—
1. Support programs, initiatives, organizations, and community facilities that support physical activity among children, %	36	35	—	—	—
2. Promote physical activity and healthy living through the media, %	22	9	—	—	—
3. Promote physical activity and wellness among employees, %	25	15	—	—	—
4. Promote physical activity for children and families through their products, services, and business facilities, %	6	15	—	—	—
How can the health care community improve childhood nutrition and increase physical activity at the national level? *n*	—	—	32	56	50
1. Inform and educate the public about wellness, %	—	—	31	32	24
2. Provide leadership and advocacy, %	—	—	44	21	12
3. Emphasize wellness and prevention in delivery of health services, %	—	—	22	13	16
4. Provide money and other resources to support wellness efforts in the community, %	—	—	14	7	4
How can the health care community improve childhood nutrition at the national level? *n*	94	58	—	—	—
1. Give information on nutrition and/or healthy lifestyles to the public, %	38	55	—	—	—
2. Provide leadership and advocacy, %	14	9	—	—	—
3. Integrate nutrition and other prevention strategies into the health care delivery system, %	3	3	—	—	—
4. Provide resources and support to the community to address the issue, %	9	9	—	—	—

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TABLE 8 Continued

Common Priorities (Top 4 per Category)	Memphis	Dallas	Philadelphia	Chicago	Iowa
How can the health care community increase physical activity at the national level? *n*	51	34	—	—	—
1. Provide accessible education on the importance of physical activity, %	29	32	—	—	—
2. Create, offer, and/or financially support programs that involve physical activity and wellness, %	18	29	—	—	—
3. Lobby and advocate to promote physical activity and wellness, %	16	3	—	—	—
4. Provide research and expertise, %	0	3	—	—	—
How can legislators/policy-makers improve childhood nutrition and increase physical activity at the national level? *n*	—	—	35	67	33
1. Increase public's access to good nutrition and physical fitness through funding, tax incentives, and legislative action, %	—	—	23	27	24
2. Ensure that schools provide students with good nutrition, adequate physical activity, and wellness education, %	—	—	23	33	6
3. Take action to inform and educate the public, %	—	—	20	19	9
4. Reform the health care system to increase access and support wellness, %	—	—	20	6	12
How can legislators/policy-makers improve childhood nutrition at the national level? *n*	69	41	—	—	—
1. Ensure that the public receives education about nutrition, %	29	46	—	—	—
2. Make healthy, nutritious food accessible to the public, %	30	27	—	—	—
3. Provide leadership on the issue, %	9	12	—	—	—
4. Create partnerships with other stakeholders to improve nutrition, %	13	7	—	—	—
How can legislators/policy-makers increase physical activity at the national level? *n*	43	13	—	—	—
1. Mandate or support physical activity in the schools, %	26	46	—	—	—
2. Inform and educate the public about physical activity through the media and national campaigns, %	26	15	—	—	—
3. Increase and improve access to community centers, parks, and other infrastructure supporting physical activity in the community, %	12	31	—	—	—
4. Promote physical activity for all of the public through fiscal incentives, tax breaks, and other policy means, %	14	15	—	—	—

Shown are the percentages of participants who selected the action.

TABLE 9 Creating Partnerships

Common Priorities	Memphis ($N = 411$)	Dallas ($N = 296$)	Philadelphia ($N = 96$)	Chicago ($N = 193$)
1. Partner to operate after-school programs, summer camps, sports programs, and other activities that increase physical activity and/or improve nutrition for children	13	13	26	19
2. Partner to provide education on nutrition, physical activity, and other aspects of wellness to children through the schools	15	20	17	9
3. Partner to provide the physical infrastructure, safety, and other necessities for children and families to increase their physical activity in the community	17	10	13	3
4. Partner in sponsoring special events in the community that promote good nutrition and/or physical fitness	11	6	8	11
5. Partner to provide education on nutrition, activity, and wellness to parents and the community	6	6	7	6
6. Partner to increase families' access to healthy foods	5	6	3	5
7. Partner to increase physical education programs and physical activity in the schools	8	3	2	4
8. Form coalitions to exchange ideas and plan initiatives	0	2	5	8
9. Promote wellness in general	5	6	2	1
10. Partner to provide better nutrition to children in the school setting	5	2	2	4
11. Partner to provide preventive health screenings and follow-up for families	6	4	0	2
12. Partner to create community campaigns to promote increased physical activity and/or improved nutrition for everyone	5	2	2	3
13. Partner to create national campaigns to promote physical activity and/or improved nutrition	2	2	1	3
14. Collaborate to advocate/lobby for change	1	2	0	1
15. Collaborate to conduct research to identify effective solutions	1	1	0	2
16. Promote wellness for adults	0	1	2	1
17. Partner to reduce access to unhealthy foods in schools and the community	1	0	2	0
18. Partner to give parents the time and resources to provide improved nutrition and increased physical activity to their children	1	0	0	1

Much of what families expect from stakeholders appropriately reflects their recognition that they need to be more vigilant of what they eat and in what setting. The repeated concern about access to nutritional education throughout all years of a family's life connected with the recognition that they need to shop together and prepare together for their meals is a logical flow of priorities. Likewise, there is the common recognition that families

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TABLE 10 Participant Evaluation of the Town Meetings

	Memphis, %	Dallas, %	Philadelphia, %	Chicago, %	Iowa, %
Excellent	71	67	48	64	55
Good	23	30	36	28	36
Fair	2	4	8	5	8
Poor	2	0	1	0	1
Very poor	3	0	6	3	1

need to be more physically active with both the educational and work settings supporting that effort. They want the built environment to enable safe family physical activity and the work and school settings to supplement the family's physical activities.

The participants' input consistently reinforced the notion that the family unit is at the center of improving both nutrition and physical activity in children. This finding validates the proposition that a greater effort to support the family in its challenge to improve childhood weight should be at the core of any community-based strategy. Recognition of family and community as the core of all efforts to reverse the excess weight trends in the nation's youth was emphasized in the recent Institute of Medicine's report on the prevention of childhood obesity.[11] The SAY program survey, 2003–2004, documented that the family was not typically engaged in interventions directed at either nutrition and/or physical activity in the community.[4] The critical importance of correcting that deficiency in the future is highlighted by the concern expressed by town-meeting participants 3 years later.

The "Wisdom of Crowds"

As noted at the outset, experts from a wide range of professional backgrounds and perspectives have attempted to address both the causes and corrections for overweight children. The collective views of these authorities have prompted the initiation of well-intentioned programs to reverse the increasing trend in childhood overweight. The scope, structure, and questionable efficacy of these efforts were documented in the summary report of the SAY 2004 survey.[4] As that document suggested, the country's effort was largely driven by the media coverage of experts and expert groups. They were not grounded on the perspective of the community or family. In fact, the programs rarely involved the family unit or promoted structural changes in the family environment that might have an impact on nutrition or physical activity, and rarely were their outcomes or efficacy documented.

Table 11 highlights several areas in which the approaches to reversing childhood overweight differ between individuals at the grassroots level and experts at a national level. These are based, in part, on the priorities the participants identified for national actions compared with recommended actions of many reports from professional organizations. The comparison is also predicated on the tone and content of the priorities for family and the stakeholder actions the participants identified.

TABLE 11 Differing Priorities: Individuals Versus Experts

Citizen Focus	Expert Focus
Family	Policy
Preschool-aged children	School-aged children
Nutrition education	Advertising bans
Food availability	Taxing foods
Built environment	Television and computer time
Routine activities	Physical activity
Positive emphasis	Negative tone

Feasibility of the Town-Meeting Process

Our town-meeting experience as described here demonstrates the feasibility of this process. With the assistance of AmericaSpeaks and local host organizations, SAY successfully recruited a large number of participants at multiple venues, sustained their commitment to a day-long interactive meeting, and acquired data that could be analyzed to provide critical, consistent input from the general population. Although covered in greater detail in "Methods," it is beyond the scope of this article to provide extensive details of executing such a series of national town meetings.

Given the open-ended nature of the questions posed, it might have been anticipated that the differing demographics of the 5 sites would not have yielded consistency in responses as to the perceived priorities for action within families and communities. However, the consistency across the range of questions and sites is evident in the statistical analysis. Critical to that success was the application of relatively new technology, which permitted each participant to vote on the priorities for action that the table discussions generated. Future endeavors to use citizen engagement in resolving this public health crisis should benefit even more from advances in communication technology.

This experience of the SAY town-meeting process offers a compelling argument for the use of available technology to convene citizens in live, virtual (online), or a combination of the 2 formats to establish citizen-based priorities directed at solving national problems. Essential to our success for independently identifying grassroots' priorities, and future endeavors along these lines, was the commitment to and execution of an independent statistical analysis of the data generated from the town meetings. Only such a

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commitment will ensure that future public policy decision-making is based, at least equally, on verifiable citizens' priorities rather than solely on the opinions of the "experts," as has typically been the case.

The data that SAY acquired from citizens in 5 US communities provide clear evidence of what families and their communities consider necessary to reverse the increasing trend in overweight in America's youth. Fundamentally, the town-meeting process identified uniform targets on which local, state, and national leadership should focus. This process has identified a number of actions that town-meeting participants agreed were fundamental to developing lifelong, healthy nutrition and physical activity habits in our children and youth.

CONCLUSIONS

From this research effort it is clear that Americans understand the significance and critical nature of the childhood weight crisis, and across a wide range of demographic variables, they similarly perceive the barriers and solutions. Families are not seeking one-dimensional approaches or government solutions alone. They want help from community-based partnerships that integrate the health, education, environment, government, nonprofit, and business sectors to assist them in making healthier choices and creating healthier lifestyles. Fundamentally, on the basis of the statistical analysis, the results of our town-meeting process identified uniform targets on which community, regional, and national leadership should focus. For families, this process has identified a number of actions that a cross-section of Americans agreed were fundamental to developing lifelong, healthy nutrition and physical activity habits in our children and youth. Many of these actions could be implemented by families immediately through changes in behavior they can control. Thus, disseminating and reinforcing these principles to families is an essential next step. However, for families to implement many others, the identified barriers need to be addressed. Other elements of the community either locally and/or nationally need to take action to remove or lessen those barriers.

Even with the basic delineation of the barriers and solutions the town-meeting data provide, each community will need to determine for itself how best to address its individual priorities. To that end, in the article "Future Directions: A Community-Based Approach"[12] we offer a perspective on how best to build on the evidence this national town-meeting data has provided. In that article we outline steps intended to ensure that the basic priorities that the SAY town-meeting process identified are addressed at all levels of society. Failure to consider the "roadmap" these citizens have provided would be a lost opportunity for future well-intended efforts to reverse the crisis of excess weight in childhood.

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