These materials are based on a multidisciplinary workshop developed for *The CDC Experience Applied Epidemiology Fellowship*, a one-year training program for medical students offered during 2004-2014. They have been adapted, with new content for broader use, by:

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Health and Well-Being for All website:  
[www.cdcfoundation.org/health-in-a-box](http://www.cdcfoundation.org/health-in-a-box)
This is a small group learning discussion that will explore many of the factors that can impact health. This module uses asthma as an example, but you could use the systematic process presented here to develop a variety of population-based approaches for improving other health outcomes.

Together we will discuss:

- Definitions and descriptions of social determinants of health
- Information related to how our homes, schools, neighborhoods, and jobs impact our health
- How you can play a role in improving health by addressing social determinants with a population-based approach

Take turns reading this guide. Don’t forget to include the headings and subheadings, as they help chart the path we’re following. When you see a red dot (●), this indicates a stop – to talk, discuss or complete an activity. Feel free to skip questions if your group has already addressed them during your discussions.

Take a moment to make a round of introductions, and share anything about yourself that is relevant to your interest in today’s learning experience. ●

Before we begin, let’s take a look at the visual. Have everyone stand up to observe the visual. Go around the table and have everyone describe what they see. ●

Discuss things that affect health you can’t see in this picture (e.g., mental health, health literacy, etc.). ●
1. Let’s begin by discussing different ways to describe and define social determinants of health. Have five people choose one each of the *Definitions and Descriptions of Social Determinants of Health cards* from the card deck. Each person should read the card aloud.

2. What definition or description resonated the most with you? Did the same definition or description resonate for everyone? Why or why not?

3. Can you think of an example of a personal, social, economic or environmental factor that has impacted a patient/client or family member of yours recently? Go around the table and have everyone share an example.

4. Look at the asthma story, *Difficulty Breathing*, summarized on the next page. Have someone in your group read this story aloud. Keep it in mind throughout the experience today, as we’ll reference it as an example of a health outcome impacted by social determinants.
Difficulty Breathing

Raeshawn is an 11-year-old African-American boy who experiences difficulty breathing during gym class at school. He’s had prior hospitalizations due to his asthma.

Background:

- He lives in a housing development with ongoing problems with roaches and rodents.
- He walks to school, which is near a major highway.
- His mother, a single mom, is a smoker and is working two jobs to support Raeshawn and his sisters.
- The family has no insurance, but is assisted by Medicaid.
- They have limited access to clinics that are an easy traveling distance, that accept Medicaid, and/or are still open, which leads to increased emergency room visits.
- Raeshawn’s father lost his job, disappeared and was recently arrested for drug abuse.
- His mom’s stress level is high as she’s concerned about her son’s health and providing for her kids.
- His grandmother lives with the family, cooking meals and helping the children with homework.
5. Let’s take a look at some interesting data on social determinants of which you might not be aware. Get the **Did You Know? cards** from your facilitator. Have someone in your group read these cards aloud.

**Examples of Social Determinants of Health (15-20 minutes)**

Did You Know?

**6 SUBWAY STOPS, WORLDS APART – NY NEIGHBORHOODS**

<table>
<thead>
<tr>
<th>Neighborhood</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murray Hill</td>
<td>85 years</td>
</tr>
<tr>
<td>East Harlem</td>
<td>76 years</td>
</tr>
</tbody>
</table>

**FOCUS ON AREAS OF GREATEST NEED**

- Your ZIP Code can be more important than your genetic code.
- Profound health disparities exist, depending on where you live.

**LESS EDUCATION IS LINKED TO PERCEPTIONS OF POOR HEALTH**

Across racial or ethnic groups, adults with less educational attainment are more likely to self-report that their health is "less than very good."

**NEIGHBORHOOD AND HOUSING CHARACTERISTICS RELATED TO SES**

- Compared to people with high socioeconomic status (SES), the poor are more likely to:
  - Consume polluted air and water
  - Reside in noisier, lower-quality and more crowded homes
  - Live in more dangerous neighborhoods with greater physical deterioration and poorer city services
  - Attend inferior schools and day care centers
  - Be impacted by social determinants related to stress, violence, family turmoil and racial segregation

**ADVERSE CHILDHOOD EXPERIENCES (ACE)**

- Early Life Events Can Damage Our Adult Health

**Change Process**

9. Now we’ll learn more about the six change process steps represented on the visual. It’s important to consider your role in leading a change effort as we learn about each step. All of us need to be able to take a leadership role to drive change if we want to make an impact.
Step 1: Seeing the Bigger Picture

Begin to see the interrelationships among parts of a whole.

10. Locate Raeshawn on the visual, the 11-year-old featured in the asthma story; he is being taken into an ambulance outside his home. Think again about the facts presented on the Did You Know? cards. As a group, consider issues that Raeshawn and his family might experience on a day-to-day basis:

- Personal factors
- Social factors
- Economic factors
- Environmental factors

11. Why do these factors impact the whole community?

12. Are the outcomes of these factors preventable? Why or why not?
**Determine and communicate the magnitude of the problem.**

13. Think again about the asthma story with Raeshawn. How is his asthma likely to be treated? ●
   How long do you anticipate the effects of this treatment will last? ●

14. Now get the **Know What Affects Health card** from your facilitator. Have someone in your group read the categories of modifiable* risk factors listed on the right. Then guess the impact of each of these categories on health by matching them with a given percentage (10%, 20%, 30% or 40%). You’ll see the correct answers on the reverse of the card. ●

![Know What Affects Health card](image)

- Physical environment
- Clinical care
- Socioeconomic factors
- Health behaviors

**Match these factors to their impact level:**

- 40%
- 20%
- 10%
- 30%

More information on reverse side

15. How do each of the modifiable* factors that affect health impact your ability to improve the health of your patients? ●

16. You have decided that you would like to DO something about the larger problem of asthma. In this phase of your path toward change, you need to describe the problem in your community. What are some important pieces of information in the asthma story that you should consider? ●

17. Where might you find this information/data? ●

18. Now that you’ve got the data, you’re ready to motivate others to help you. As a group, discuss why it’s important to have a community/region-wide agreement that the issue needs to be addressed and changes made. ●

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* Recall that risk factors are conditions that increase your risk of developing a disease. They are either modifiable, meaning measures can be taken to change them (e.g., diet, job, home), or non-modifiable, meaning they cannot be changed (e.g., genetics).
Harness the power of champions and recognize impacted groups, organizations and settings.

19. As you consider the asthma story, discuss who else would be invested enough to make a difference that would benefit a larger population, not just Raeshawn. Brainstorm a list of possible stakeholders.

20. Now have someone choose the Collaborate with Others card from the card deck and describe it to the group. Are there any stakeholders listed here that you didn’t consider in your brainstorm? Might they be relevant to this situation?

21. Is it possible that there will be some reluctant participants? If so, why?

22. How might you use the data you identified in Step 2 to transition them from reluctant to supportive or willing participants?

**Brainstorm Stakeholders List**

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________
23. This exercise is intended to allow you to see things from a different perspective. It simulates the coming together of a group of stakeholders who care about asthma in the community. The exercise, which should take about 20 minutes, is structured according to psychologist Bruce Tuckman’s “Forming, Storming, and Norming” model of team development. The last stage of the model, “Performing,” will come up in Step 5 when we “Act on What’s Important.”

1. Forming – Being positive and polite:
   - See the Others Who Care chart on the next two pages.
   - Have volunteers select a stakeholder role so that all roles are covered.
   - Quietly read and understand the stakeholder you are representing.
   - Go around the table and introduce your stakeholder, using information from the “PROFILE” and “HOPE TO ACHIEVE” columns.

2. Storming – Pushing boundaries and facing conflicts:
   - Pair up with another person.
   - Take about 10 minutes to discuss your roles and perspectives, especially the OBSTACLES FACED.
   - Look for possible points of agreement as well as sources of conflict between the two stakeholders you’re representing. (You may make some assumptions for the sake of the exercise.)

3. Norming – Resolving differences and appreciating strengths
   - Now, go around the table again and allow each person to describe their partner’s obstacles. Also note any points of agreement and sources of conflict that emerged from that paired discussion.
   - As a group, reconsider all the stakeholders’ goals and review their RESOURCES.
   - Brainstorm ideas about what this group of stakeholders could try to achieve together to combat asthma in the community.

24. What valuable insights were shared by your group when you discussed the roles of key stakeholders? What points of agreement did you find? ●

25. Now get the The 3 C’s card from the facilitator and have someone read it aloud. As a group, discuss why the 3 C’s will be critical for the alignment of the stakeholders represented in the role-play. ●

The 3 C’s

Components of successful team and external partner alignment

- **Contact**
  - Frequency is the key
- **Communication**
  - Clear, consistent communication of the mission and vision is essential
- **Connection**
  - Develop trusted relationships with individuals and partners by opening up and being your authentic self
# Others Who Care

<table>
<thead>
<tr>
<th>ROLE</th>
<th>PROFILE</th>
<th>AGENDA/HOPE TO ACHIEVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent</td>
<td>• Young single female</td>
<td>• Get help for her children</td>
</tr>
<tr>
<td></td>
<td>• Resides in inner-city public housing with three children</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Oldest son (age 11) has asthma; two young daughters (ages 5 and 2) showing symptoms also</td>
<td></td>
</tr>
<tr>
<td>Parent Representative</td>
<td>• Head of local Asthma Patients and Parents Support Group</td>
<td>• Advocate for marginalized families in the community who are struggling with asthma issues</td>
</tr>
<tr>
<td>Clinician</td>
<td>• Pediatrician working at a group practice in the community; also works two days a week at a nearby federally qualified health center</td>
<td>• Design/develop initiatives to help patients manage asthma symptoms and/or mitigate risk factors for the disease</td>
</tr>
<tr>
<td>Public Health Representative</td>
<td>• Epidemiologist with the County Health Department</td>
<td>• Outline a plan to address the high rates of childhood asthma in the community</td>
</tr>
<tr>
<td></td>
<td>• Convener of this stakeholder meeting</td>
<td>• Improve the county's profile on RWJF's County Health Rankings</td>
</tr>
<tr>
<td>School System Representative</td>
<td>• Nurse educator, director of the county’s school nursing program</td>
<td>• Generate a comprehensive plan to reduce high rates of school absenteeism due to asthma</td>
</tr>
<tr>
<td></td>
<td>• Asked by school superintendent to update the county’s asthma guidelines, which includes outlining its legal obligations related to asthma</td>
<td>• Create goodwill for the school system in the community</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Be perceived as a leader/career advancement</td>
</tr>
<tr>
<td>Hospital Administrator</td>
<td>• Assistant administrator of local hospital</td>
<td>• Tasked by hospital CEO to reduce the amount of nonreimbursable care provided for indigent and charity care</td>
</tr>
<tr>
<td></td>
<td>• Helps develop procedures for quality assurance, patient services, medical treatments, department activities and public relations outreach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Participates in fund-raising and community health planning</td>
<td></td>
</tr>
<tr>
<td>City Housing Authority Representative</td>
<td>• Responsible for planning, financing, constructing, purchasing, leasing and managing the county’s low-rent housing properties</td>
<td>• Unsure; asked by Board of Commissioners to represent the Housing Authority, due to possible liability regarding the condition of several units</td>
</tr>
<tr>
<td>ROLE</td>
<td>OBSTACLES FACED</td>
<td>RESOURCES TO OFFER</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Parent                      | • Lack of insurance to cover costs of doctor visits and medication  
   • Lack of access to nearby clinics that take Medicaid as payment  
   • Very high stress level from fear (children’s poor health, lack of neighborhood safety), from working at two low-paying jobs, and from a suboptimal living environment (mold, dysfunctional plumbing, and utilities that are often shut off due to non-payment) | • Personal experience based on her son’s asthma                                                                                                                                                                           |
| Parent Representative       | • Small group with limited reach and funding                                                                                                                                                                      |                                                                                                                                                                   |
| Clinician                   | • Young doctor with limited network in the community  
   • Limited free time                                                                                                                                                                                                  | • Enthusiasm and dedication  
   • Credibility  
   • Access to other pediatricians in his group practice as well as to asthma patients and families  
   • Extensive knowledge of the disease and how it impairs patients                                                                                                                                                   |
| Public Health Representative | • High work load with little time for an extra project                                                                                                                                                           | • Access and knowledge on environmental particulate data  
   • Extensive knowledge of the risk factors for the disease and the adverse effects it can have on the population  
   • Funding from a national grant to cover community intervention projects                                                                                                                                               |
| School System Representative | • Litigation is pending due to the death of a high school student who had an asthma attack while on school grounds                                                                                             | • 20 hours a week of time to dedicate  
   • Extensive personal network of clinicians, asthma patients and families, and educators  
   • Knowledge of barriers faced by asthma patients and families                                                                                                                                                        |
| Hospital Administrator      | • Balancing the need for positive public relations with the need to reduce costs for the hospital                                                                                                                 | • Leadership  
   • Access to patients and providers  
   • Asthma emergency room visit data                                                                                                                                                                                   |
| City Housing Authority      | • Responsible for maintaining the housing units in decent, safe and sanitary condition, but can’t make any major immediate changes because expenditures have already exceeded the yearly budget                                    | • Ability to make policy decisions  
   • Connections with local politicians                                                                                                                                                                                  |
Develop and document a future vision that’s desired and then implement your plan.

26. With “forming, storming, and norming,” out of the way in Step 4, it’s time for the new team to start “performing.” Given your points of agreement, choose an action this group would like to pursue together. If you’re stuck for ideas, consider such evidence-based interventions as:

- Asthma education programs (i.e., trigger avoidance)
- Home visits (i.e., dust and dander mitigation)
- Smoke-free policies for indoor areas
- Marketing campaigns aimed at increasing use of public transportation (to reduce pollution)

(For additional resources and interventions, see the Health and Well-Being for All website)

27. Get the Model for Improvement card from your facilitator, which will help as we think about our vision and plan. From the perspective of the stakeholder you represented in Step 4, discuss as a group the answers to the three questions written at the top of the card as you think about your vision and plan.

28. Now reference the Plan, Do, Study, Act portion of the card at the bottom of the Model for Improvement card. The Plan, Do, Study, Act (PDSA) Cycle is shorthand for testing a change in the real-world setting – by planning it, trying it, observing the results and acting on what is learned.

29. Let’s look at an example: Assume the stakeholders from Step 4: Walking a Mile in Someone Else’s Shoes decided to replicate an evidence-based asthma education program. Have someone select the PDSA Cycle Example card from the card deck and read it aloud.

30. Now come up with your own intervention idea based on your stakeholder analysis. Or, if your group prefers and/or you are short on time, choose instead to come up with the second iteration of the PDSA cycle about the asthma education program.
Step 6: Communicating Your Vision and Mission (<10 min)

Sell it, sell it, sell it.

31. Now we have a sense for how to create a sustainable plan and continuously improve upon the process. To ensure the success of the initiative, we’ll need to win people over and get the word out about the vision in multiple ways. Get the next four Tactics for Communicating cards from the card deck and read them aloud.

32. Considering the needs of your particular audience, choose one of the ideas listed on the Tactics for Communicating cards and apply it to the vision and mission related to the asthma example we’ve been discussing.

33. Why is it important to tailor your communication style, data and information for the particular person or group you’re addressing?

34. Now get the Barriers card from the card deck and read it aloud. Discuss how communicating your vision and mission effectively could help you overcome barriers and set your group on course for sustainable change.
35. As we come to the end of our change process path, reference the group of people at the top right of the visual and read aloud the statement found there. Reflect on its meaning as it relates to the asthma effort on which we’ve been focused.

36. Are your thoughts about “sustainable change” related to asthma any different as a result of today’s group discussion? If so, how?

37. Reflect on the six steps listed along the path of the visual. Take turns talking about the key take-aways you’ve learned as a result of this experience.

38. Now that we’ve provided a process for exploring population-based approaches for improving health outcomes, get the My Commitment card from your facilitator. Capture the changes you can make in your work that will demonstrate your commitment to your community’s health. Post this in your work area for daily reference.

39. Is anyone willing to share what you wrote on your My Commitment card?
“Health and Well-Being for All” originated with materials created for The CDC Experience Applied Epidemiology Fellowship for medical students, funded by Pfizer External Medical Affairs, Inc. through a grant to the CDC Foundation. The Meeting-in-a-Box was developed by ContXt Corp.