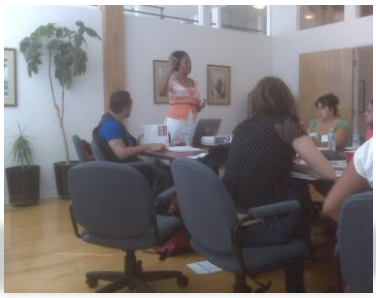
RUSH CENTER FOR
Urban Health Equity

Community Health Worker Training Manual PEDIATRIC OBESITY



SECTION 3: PEDIATRIC OBESITY
(Supplement to self-management core training)

We could find no pediatric obesity CHW curriculums and therefore created our own. The area of pediatric obesity is broad. We chose to focus on several key areas: physical activity, portion control (using the My Plate concept), sugar sweetened beverages, and screen time. We also include a module for the co-morbid condition of asthma and obesity. This module is optional but we do recommend discussion of the obesity recommendations in the context of co-existing medication conditions. The obesity curriculum requires a solid foundation in nutrition and health. In our center, this portion of the training was delivered by a pediatrician but that level of clinical expertise is not necessary. A nutritionist, nurse, or other educator familiar with nutrition and health could also deliver the curriculum.

Remember:

- Integrate self-management skills into each lesson.
- Self-management skills and content delivery require practice. Make sure that at the end of each day, trainees make a change plan for themselves using the self-management skills to address their own challenges. This plan may or may not involve the disease-specific content area.
- Be sure to review the change plans and disease-specific content areas when sessions resume.

Obesity Topic	Time Needed
Obesity Overview	2 hours
Physical Activity	1 hour 30 minutes
Food Groups	1 hour
Portions	2 hours 15 minutes
Beverages	2 hours 30 minutes
Screen Time	1 hour 15 minutes
Other Topics	1 hour
Asthma and Obesity	1 hour 45 minutes

Lesson #1: Obesity Overview

Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Increase general knowledge of the effect of excess weight on the body.
2. Understand the importance of BMI and how/why it is used by physicians.
3. Dispel common myths about food, weight and physical exercise.
4. Successfully apply concepts and knowledge to real world situations.

Estimated Time Required

2 hours

Documents

1. PRE Knowledge /Competency Assessment
2. Obesity presentation (likely power point)
    a. Obesity and overweight prevalence over time nationally and locally
    b. Race, sex, age differences
    c. How is obesity determined? Using BMI. BMI = kg/m2, overweight is BMI ≥ 85% and <95%, obese is BMI ≥ 95%, adjust for sex and age
    d. Health consequences (complications) of obesity
        a. For children: High blood pressure and high cholesterol which are risk factors for heart disease; increased risk of impaired glucose tolerance, insulin resistance and type 2 diabetes; breathing problems, such as sleep apnea, and asthma; joint problems and musculoskeletal discomfort; fatty liver disease, gallstones, and gastro-esophageal reflux (heartburn); social and psychological problems, such as discrimination and poor self-esteem
        b. For adults: Obese children are more likely to become obese adults; adult obesity is associated with many serious health conditions including heart disease, diabetes, and some cancers; if children are

overweight, obesity in adulthood is likely to be more severe

3. CDC growth charts for boys and girls
4. Body image diagrams, Stevens J, et al. Weight-related attitudes and behaviors in fourth grade American Indian children. Obes Res. 1999 Jan;7(1):34-42.
5. We referred to materials on the 54321 go! Campaign produced by the Consortium to Lower Obesity in Chicago Children (www.clocc.org)
6. We created worksheets that discussion facts and myths about food, exercise, and weight
7. POST Knowledge /Competency Assessment

Materials

Large flip chart and/or whiteboard

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre=assessment
2	Definition of Obesity	Brainstorm, Facilitator Presentation 	30 minutes	Obesity presentation, BMI growth charts
3	Causes of Obesity	Brainstorm, Facilitator Presentation 	20 minutes	
4	Health Consequences of Obesity	Brainstorm, Facilitator Presentation, Discussion 	10 minutes	Obesity presentation, large flip chart and/or whiteboard
5	Solutions	Brainstorm, Discussion 	20 minutes	54321 go! worksheet, Myths & Facts worksheet, large flip chart and/or whiteboard
6	Role Play	Role Play 	20 minutes	
7	Review of Main Messages	Review 	10 minutes	
8	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge /Competency Assessment

   Distribute, complete, and collect Pre-Assessment

2. Definition of Obesity

   Brainstorm "What is obesity?"

   Generate definitions

   Presentation: CDC growth charts, BMI definition and ranges, obesity prevalence. Body image diagrams can be very useful here as many people do not recognize (or agree with) clinical definitions of obesity. For urban minority children, the diagrams in the following article are useful: Stevens J, et al. Weight-related attitudes and behaviors in fourth grade American Indian children. Obes Res. 1999 Jan;7(1):34-42.

3. Causes of Obesity

   Brainstorm "What causes obesity?"

   Presentation: Describe the multi-factorial causes of obesity.

4. Health Consequences of Obesity

   Brainstorm, "Why do we care about obesity?" The answer is because obesity has serious health consequences. List them.

   Presentation: Describe the multi-factorial causes of obesity (individual and societal)

   Group discussion: "How do we describe the health consequences of obesity to others?"
   - "How do we raise awareness of health consequences?"
   - "What are myths related to health consequences?"

5. Solutions

   Brainstorm, "What are some things people can do to avoid these complications?" (from previous discussion) Generate list of all possible solutions.

6. Role Play

Work in pairs

Provide different scenarios

In pairs, practice teaching causes and consequences of obesity.

When groups have had adequate time, reconvene full group to discuss techniques and observations

7. Review of Main Messages

Review major themes and takeaway points (causes and consequences of obesity)

Check for understanding

Answer any questions

8. POST Knowledge/Competency Assessment

Distribute and have trainees complete

Review and collect

Lesson #2: Physical Activity

Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Understand the importance of physical activity in a healthy lifestyle.
2. Know the recommended daily amount of physical activity for children and adults.
3. Identify ways to increase physical activity with or without “exercising”.
4. Successfully apply concepts and knowledge to real world situations.

Estimated Time Required

1 hour 30 minutes

Documents

1. PRE Knowledge /Competency Assessment
2. We made a handout that listed different kinds of physical activity
3. POST Knowledge /Competency Assessment

Materials

Large flip chart and/or whiteboard
Pedometers for each trainee

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre-assessment
2	General physical activity discussion	Brainstorm, Facilitator Presentation 	10 minutes	Physical Activity Made Easy handout
3	Group Activity	Activity 	35 minutes	Pedometers
4	Local Resources	Brainstorm 	10 minutes	Large flip chart and/or whiteboard
5	Self-Management Concepts	Brainstorm 	15 minutes	
6	Review of Main Messages	Review 	10 minutes	
7	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge/Competency Assessment

   Distribute, complete, and collect pre-assessment

2. Physical activity

   Brainstorm type of physical activity. Facilitator add terms sedentary, light, moderate, vigorous. Discuss occupational exercise. Playing.

   Brainstorm benefits of exercise (cardiovascular disease, diabetes, mental health). Facilitator to provide some details on physiology of exercise.

   Current exercise recommendations: For adults, 10,000 steps per day. For children, 60 minutes of moderate/vigorous activity per day. Discuss intensity of exercise compared to length and how that impacts health benefits.

   Brainstorm barriers to achieving current exercise recommendations.

3. Group Activity

   We gave each trainee a pedometer and helped them to set them up. Then we went on a 20 minute walk around the neighborhood.

   Discuss the amount of steps we just accumulated. Was this easy, hard, pleasant, stressful? Discuss how people now feel about how many steps they could get in a day?

4. Local Resources

   We had the group brainstorm a list of local organizations and places that people can go to receive opportunities for physical activity or assistance related to physical activity.

5. Self-Management Concepts

   Think about barriers and to recommendations. Brainstorm ways that self-management concepts could be used to overcome these barriers and achieve the recommendations.

   Homework for the day is to set a goal for how many steps they want to achieve and keep the pedometer on. This needs to be addressed again the next time the group convenes. Ask if they reached their

goals and if so, how did it feel? How did they do it? If not, why do they think it didn't work? What can they change to be more successful next time?

6. Review of Main Messages

Review major themes and takeaway points (causes and consequences of obesity)

Check for understanding

Answer any questions

7. POST Knowledge/Competency Assessment

Distribute and have trainees complete

Review and collect

Lesson #3: Food Groups

Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Distinguish between the different food groups
2. Explain the USDA's nutrition guidelines

Estimated Time Required

1 hour

Documents

1. PRE Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.
2. Pictures of USDA divided plate and pyramid
3. POST Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.

Materials

Large flip chart and/or whiteboard

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre-assessment
2	Food Groups	Brainstorm, Facilitator Presentation 	45 minutes	Large flip chart and/or whiteboard, USDA pictures
3	Review of Main Messages	Review 	5 minutes	
4	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge/Competency Assessment
   Distribute, complete, and collect pre-assessment

2. Food Groups

   List categories and provide examples: starchy grains, proteins, fruits, vegetables, fats, dairy

   Explain carbohydrates (This project was not focused on diabetes and covered a lot of material so a detailed discussion of carbohydrates was not provided. Trainees were told examples of some kinds of foods that were carbohydrates.)

   Brainstorm and Discussion: "Why do we need each of these different types of foods? What is the importance of balance?"
   - Carbohydrates - Give the body energy but too much turns to fat.
   - Protein - Builds bones and muscle and fills you up so you aren't as hungry (have to watch fat levels with protein)
   - Vegetables - Provide key vitamins and minerals that help the body to work and make skin, hair nice etc.
   - Fats – Frying is not good, using low fat meats (ground turkey et al), etc.

   USDA recommendations: Used to use the pyramid (show pictures), now using plate (show example). Discuss why plate is better than the pyramid, and uses of plate (don't need to count for whole day which people are bad at, make every meal perfect).

3. Review of Main Messages

   Review major themes and takeaway points (different food categories)

   Check for understanding

   Answer any questions

4. POST Knowledge/Competency Assessment

   Distribute and have trainees complete

   Review and collect

Lesson #4: Portions

Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Understand the difference between portion-size and serving-size.
2. Develop a system for identifying appropriate portions for children and adults.
3. Identify various types and ways to implement portion control using self-management concepts.
4. Understand the importance of the divided plate.
5. Develop healthier versions of traditional recipes.
6. Successfully apply concepts and knowledge to real world situations.

Estimated Required

2 hours 15 minutes

Documents

1. PRE Knowledge /Competency Assessment
2. We made a worksheet with food swapping recommendations
3. POST Knowledge /Competency Assessment

Materials

Large flip chart and/or whiteboard
We created our own portion plates and provided each trainee with one
Food models

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre-assessment
2	Definition of portions	Facilitator Presentation, Discussion 	20 minutes	Food models, portion plates
3	Group Activity	Activity, Discussion 	50 minutes	Food models, portion plates
4	Group Activity	Brainstorm, Activity 	30 minutes	Food Swapping worksheet, large flip chart and/or whiteboard
5	Self-Management and Food Groups	Brainstorm, Discussion 	15 minutes	
6	Review of Main Messages	Review 	10 minutes	
7	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge/Competency Assessment

   Distribute, complete, and collect pre-assessment

2. Definition of Portions

   Ask group “What is a normal serving size?”

   Show recommended portion sizes for a variety of common foods using measuring cups and food models

   Discuss child verses adult portions (formal recommendations for child portion sizes are not easy to find but put the emphasis on smaller plates, smaller portions)

   Demonstrate how to determine portion or servings from food labels

3. Activity 1

   Organize into pairs. Give each pair a set of fake food. Instruct them to make a “perfect plate” using the USDA recommendations. Then discuss in the larger group.

4. Activity 2

   Brainstorm “What are some food substitutions or preparation tricks that can make food healthier?” List on board.

   Recipe redo: Ask trainees for a favorite recipe. Write it on one side of the board. Then go through it item by item and discuss any possible substitutions to make the recipe more healthy. (Examples: bake instead of fry, use whole grains, increase vegetables, can substitute some vegetables for potatoes such as cauliflower, canola or olive oil, substitute fruit for butter or oils, low fat cheese, turkey meat instead of beef)

5. Self-Management Concepts

Brainstorm ways that self-management concepts could be used to encourage proper portions and healthier food choices.

6. Review of Main Messages

Review major themes and takeaway points (portions important, perfect plate, food substitutions)

Check for understanding

Answer any questions

7. POST Knowledge/Competency Assessment

Distribute and have trainees complete

Review and collect

Lesson #5: Beverages

Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Understand the effect of beverages on the body.
2. Identify the sugar content in popular beverages.
3. Develop list of healthier alternatives to sugary beverages.
4. Successfully apply concepts and knowledge to real world situations.

Estimated Time Required

2 hours 30 minutes

Documents

1. PRE Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.
2. Beverage consumption trends (power point or handout)
3. Reading labels handout
    a. We made a handout with a picture of a bag of chips and the label on the bag. We pointed out serving size, servings per container, calories, fat, sugar
4. POST Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.

Materials

- For sugar exercise: Gather empty (or full) beverage containers in different sizes. We recommend Coke or Pepsi, orange Fanta, ice tea, Sprite, orange juice, Capri sun, Gatorade. Get different sizes, some 12 ounce, some of the larger 24-30 ounce containers. You also need a bag of sugar, a teaspoon, box of small plastic spoons, plastic beverage cups (clear best). Calculators can be helpful.
- We purchased milk models from HealthEdCo that show amount of fat in each type of milk.

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre-assessment
2	Beverage Lecture	Facilitator Presentation 	25 minutes	Consumption trends
3	Group Exercise	Large Group Activity 	60 minutes	Sugar exercise
4	Beverages Discussion	Brainstorm, Facilitator Presentation 	15 minutes	Milk fat models
5	Self-Management Concepts	Brainstorm 	5 minutes	
6	Role Play	Role Play 	25 minutes	
7	Review of Main Messages	Review 	10 minutes	
8	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge/Competency Assessment

   Distribute, complete, and collect pre-assessment

2. Beverage lecture

   Review types of beverages: Water, milk, soda, juice, energy drinks, sports drinks, coffee, tea

   Recommendations: NO juice. 2-3 cups/day of lowfat milk. The rest water.

   Show trends over time in beverage consumption. Point out the drop in price for soda, the widespread availability of soda and sugar drinks, and the increased overall consumption of sugar drinks compared to several decades ago. Explain the huge impact this has on weight – show data linking sugar beverage consumption with obesity.

3. Sugar Exercise

   Everyone gets a cup filled with sugar, an empty cup, and a spoon. Take the first soda bottle and hand it to a trainee. Ask them how many grams of sugar are in the bottle. If they don't know where to find that information, show them on the label. Then show the rest of the class. 4 g sugar equals 1 teaspoon of real sugar. So if the label says 24g sugar, have the class do 24/4 = 6 tsp sugar. Have them measure out 6 spoons of sugar and put into the empty cup. Now look at the serving size. Many of the sodas have more than one serving and report the sugar for only one serving. If the label says 24 g sugar per serving and the bottle has 2 servings, we assume most people will drink the whole bottle so we need to add another 6 spoons of sugar to our cup. Now look at how much sugar is in that cup. Have the group discuss. Are they surprised? Repeat for each of the beverages.

   It is important to include a clear beverage like Sprite and a sports drink like Gatorade because people assume these don't have much sugar but they do. Also orange juice or apple juice really shock people so it is important to include one or both of those.

   Do not pre-measure out the sugar and just show people – they need to self-discover by calculating and measuring themselves.

4. Beverages Discussion

Brainstorm healthy beverage replacements (water, low calorie drinks like diet soda or crystal light, lowfat milk)

It is important to define “lowfat” milk. People generally think 2% is lowfat and it is better than whole milk but it still has a high fat content, much more than most people realize. We used milk models for HealthEdCo that demonstrate the amount of fat in the different milks and this is a useful tool for teaching this concept. We encourage everyone to move towards skim milk.

5. Self-Management Concepts

Brainstorm ways that self-management concepts could be used to encourage proper portions and healthier food choices.

6. Role Play

Work in pairs

Provide different scenarios

In pairs, practice having families self-discover and change beverage practices

When groups have had adequate time, reconvene full group to discuss techniques and observations

7. Review of Main Messages

Review major themes and takeaway points (recommend no drinks with sugar)

Check for understanding

Answer any questions

8. POST Knowledge/Competency Assessment

Distribute and have trainees complete

Review and collect

Lesson #6: Screen Time

Lesson Objectives

By the end of this lesson, trainees will be able to:

1. Understand the impact of “screen time” (television, movies, video games) on eating and lifestyle.
2. Understand the relationship between screen time, asthma and obesity.
3. Identify ways that screen time can have a positive impact on eating and lifestyle.
4. Successfully apply concepts and knowledge to real world situations.

Estimated Time Required

1 hour 15 minutes

Documents

1. PRE Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.
2. Television statistics (power point or handout), Neilsen data are a good place to start.
3. POST Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.

Materials

None

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre-assessment
2	Screen Time Discussion	Facilitator Presentation, Discussion 	15 minutes	Television statistics
3	Screen Time and Asthma/Obesity	Brainstorm, Discussion 	10 minutes	
4	Self-Management Concepts	Brainstorm 	10 minutes	
5	Role Play	Role Play, Discussion 	25 minutes	
6	Review of Main Messages	Review 	5 minutes	
7	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge/Competency Assessment

   Distribute, complete, and collect pre-assessment

2. Screen Time Discussion

   Types of screen time: television, video games, computer, tablet, telephone games

   How much screen time do children average? Present data on averages for children and teens.

   Recommendations: 2 hours or less of screen time in a day. Many parents say the television is on but the children aren't watching it, they are playing. We say that if the television is on in the same room as the child, it counts as screen time.

   What about educational programs for children? Programs on PBS and other learning channels typically have a slower pace and an educational message than other cartoons or programs. This has been shown to have less harmful effects on child development than faster paced cartoons (ie. SpongeBob Squarepants). However, no tv is best for cognitive development. Also, commercials during children's programming are almost all geared towards unhealthy foods and should be avoided.

   Discuss what else children can do instead of television time? (Examples: games, reading, go outside, help with housework, cook meals, arts and crafts). Need to emphasize the importance of parent modeling – parents have to limit their own screen time as well.

3. Asthma and Obesity

   Brainstorm "What are the links between screen time, asthma, and obesity?" (Asthma may limit activity so they have more screen time which leads to more obesity. Obesity can limit activity so more screen time, more time indoors can lead to more trigger exposure and worsen asthma. People eat more when watching tv so more obesity. Obviously people are less active when watching tv so more obesity. Obesity worsens asthma.)

4. Self-Management Concepts

Brainstorm ways that self-management concepts could be used to encourage less screen time. (Pediatricians recommend no tv in bedroom. Limit video games to weekends. Work together to decide on favorite tv programs. No tv in eating areas.).

5. Role Play

Work in pairs

Provide different scenarios

In pairs, practice helping families reduce screen time.

When groups have had adequate time, reconvene full group to discuss techniques and observations.

6. Review of Main Messages

Review major themes and takeaway points (types of screen time, 2 hours or less per day)

Check for understanding

Answer any questions

7. POST Knowledge/Competency Assessment

Distribute and have trainees complete

Review and collect

Lesson #7: Other Topics

Our qualitative work suggested families experience challenges related to effective shopping (strategies for buying healthy foods and using their food stamps). We also heard a lot of feedback from families that they had difficulty controlling their children when it came to food. The children would eat everything in the house right after it was bought. Some families did not know how to restrict the food their children ate and others did not feel comfortable withholding food or saying no to a hungry child. We did not have any content around these subjects so we treated the trainees as a focus group to ask their opinions around the subjects. In one hour, they came up with the following recommendations:

- Know the tricks to effective shopping
  - Make shopping lists
  - Plan menus (specifically plan so the perishables do not spoil)
  - Do not go shopping hungry
  - Have a plan for controlling your children (involve them in the process by giving them responsibilities/jobs, reward them for good behavior, leave them home)
  - Coupons can cause you to buy things you do not need
- Find ways to supplement the family's food supply
  - Need lists of local food pantries
- Make sure family getting full food stamps benefits
- If children eat all the food too quickly, may not be able to bulk shop
- It is OK to set limits on what and when children can eat. This will be difficult in some cultural groups. Families need to be reminded of the higher caloric content of foods today and the long-term harm obesity can cause.
- Families may need help with parenting skills to control children's behavior.

Lesson #8: Asthma & Obesity (OPTIONAL)

Lesson Objectives

By the end of this lesson, the trainee will be able to:

1. Describe the bidirectional relationships between asthma and obesity.
2. Demonstrate incorporation of a self-management skill to an issue related to co-morbid condition in a role play.

Estimated Time Required

1 hour 45 minutes

Documents

1. PRE Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.
2. POST Knowledge /Competency Assessment
    a. We did not create a pre/post assessment for this module but we recommend future trainings create one.

Materials

Large flip chart and/or whiteboard

Lesson Overview

Activity	*Topic*	*Recommended Method(s)*	*Estimated Time*	*Documents/ Materials*
1	PRE Knowledge /Competency Assessment	Assessment 	5 minutes	Pre-assessment
2	Connections between Asthma & Obesity	Brainstorm, Discussion 	15 minutes	
3	Self-Management Concepts	Brainstorm 	15 minutes	
4	Role Play	Role Play, Discussion 	60 minutes	
5	Review of Main Messages	Review 	5 minutes	
6	POST Knowledge /Competency Assessment	Assessment 	5 minutes	Post-assessment

Content

1. PRE Knowledge /Competency Assessment

Distribute, complete, and collect Pre-Assessment

2. Connections

Brainstorm: "What are the possible connections between asthma and obesity?" List.

Ensure exercise limitations and medications are discussed

3. Self-Management Concepts

Brainstorm: "What are some ways to apply self-management concepts with regards to asthma and obesity?"

Discuss ways to apply self-management concepts

4. Role Play

Work in pairs

Provide different scenarios (see examples)

Practice teaching about ways to discuss the connection between asthma and obesity

When groups have had adequate time, reconvene full group to discuss techniques and observations

5. Review of Main Messages

Review major themes and takeaway points (how the diseases are connected)

Check for understanding

Answer any questions

6. POST Knowledge /Competency Assessment

Distribute and have trainees complete

Review and collect