PD/Hearth Programs: Essential Elements

There are several elements that are essential to the implementation of an effective PD/Hearth program. Experience repeatedly shows these elements cannot be adapted, modified, or skipped altogether without seriously diminishing the effectiveness of the program.

1. Each and every community conducts a Positive Deviance Inquiry using community members and staff. The Positive Deviance Inquiry (PDI) is a learning opportunity for the community, not just fact-finding for the project staff. It is meant to provide an opportunity for community members (e.g., Hearth volunteers, health staff, community leaders) to "discover" that very poor families have certain good practices, which enable them to prevent malnutrition, and these practices can be done by any family with similarly scarce resources. In order for *every* community to take ownership, the discovery process must take place in *every* community. Just as adult learning theory dictates the need to discover by doing, so do communities need their own PDI to discover their PD practices. Many programs have tried to save time by extrapolating the PDI results from one community to another, thus losing the process of the community's discovery from the PDI. If there are no poor families with well-nourished children in a particular community, the PDI may need to look at families with only mildly malnourished children. Alternatively, if the community can identify a nearby community with the same culture, socioeconomic conditions and, perhaps, blood relationships, the volunteers can be taken there to identify positive deviant families with whom to conduct the PDI. Since family coping may change with the seasons, it may be necessary to repeat the PDI during different seasons of the year.

The PDI, as described in the PD/Hearth Guide, consists of both questioning the family members and making careful observations of the situation. The lists of questions given are best used as discussion guides, rather than interviews. With sufficient practice, the PDI team may not need to take them along, but rather, just take some notes during the visit. A second or third person from the PDI team can concentrate on observing actual practices related to child care, hygiene and sanitation, food preparation, as well as what foods and materials are available in the home. Programs need to allow sufficient time to prepare for and conduct PDI visits to obtain the most useful information.

2. Utilize community women volunteers to conduct the Hearth sessions and the follow-up home visits. Mothers will learn best with a peer, with whom they feel comfortable and who understands local customs and conditions. The volunteer can be any woman in the community with a good reputation, credibility, healthy children (can be grown up), and a willingness to take on the necessary responsibilities.

Note: Positive deviant mothers are not necessarily the Hearth volunteers. The PDI derives a composite of PD practices from multiple PD families; it is extremely rare that one mother would model all the PD practices. (We are not looking for PD persons, but rather PD practices.) In many cultures, identifying individuals or families as models or "better" will result in social rejection by their peers.

3. Prior to the Hearth sessions, de-worm all children, update immunizations, and provide needed micronutrients. Children are more assured of quick recuperation when these important health interventions are taken care of prior to the Hearth session. Families should be referred for these services to the local health facility with whom the program is collaborating. These activities are kept separate from the Hearth session so that families don't attribute the child's nutritional status improvement to these rather than to the food and feeding practices. During the Hearth session and follow-up home visits, families will be encouraged to continue to access these and other preventive health services including growth monitoring and to use insecticide-treated mosquito nets (ITNs), where needed. In areas of high malaria prevalence, children may need diagnosis and treatment before attending the Hearth sessions. During the PDI, if it is evident that very poor families are using ITNs, it will be useful to discuss how they afford them in order to share that information with the Hearth participants.

4. Use growth monitoring to identify newly malnourished children and monitor nutritional status of participants who have graduated from the Hearth. A growth monitoring program may not exist in the community when PD/Hearth is initiated, but should be instituted in time to begin monitoring the children who complete the Hearth session as well as all other children in the community. The growth monitoring program must include good nutrition counseling and explanations of the child's growth for the caregivers.

5. Ensure that caregivers bring a daily contribution of food and/or materials to the Hearth sessions. One of the fundamentals of PD/Hearth is that families learn they really can afford to feed their children nutritious food. Obtaining and bringing the foods is practice to reinforce that idea. In addition, requiring contributions makes the program non-paternalistic while also making it possible for a community to implement without outside material support.

6. Design Hearth session menus based on locally available and affordable foods. Participating families must be able to replicate meals in their own homes with limited resources. This is the only way they will be able to sustain the improved nutritional status of their children and prevent future malnutrition in the family. The affordability of foods is verified through the PDI, which investigate the foods that are used by the poor families with well-nourished children, and the market survey, which investigates the costs and nutritional content of foods available in the market.

7. The Hearth session menus must provide a special nutrient-dense meal sufficient to ensure rapid recuperation of the child. The daily menu including the snack must contain the listed amounts of calories, protein and micronutrients per child. These amounts are based on a formula, calculated on the supplementation necessary to rehabilitate a malnourished child. Required levels by age are listed in the guide. Consider the Hearth meal as "medicine;" this is the dosage prescribed. If the Hearth supplemental meal does not meet this minimum standard, then weight gains are compromised.

Calories	600-800 kcal
Protein	25-27g
Vitamin A	400-500 RE (RE=retinal equivalent)
Iron	10mg
Zinc	3-5 mg
Vitamin C	15-25mg

The meal is an extra supplement, not a meal substitute. The additional calories and protein are needed for "catch-up" growth of the child. Eventually, this "extra" energy and protein-rich meal will not be necessary when the child is no longer malnourished. However, to sustain the rehabilitation gains, regular family meals need to be more balanced and nutritious. The caregivers learn how to do this during the Hearth sessions.

8. Have caregivers present and actively involved every day of the Hearth session. Involvement promotes ownership and active learning and builds self-confidence. The most important idea is to repeatedly use the new practices. By learning and internalizing the new practices, not only will the improved nutritional status of the participating child be sustained at home but also, malnutrition will be prevented among future children. Attendance of caregivers at each day of the Hearth rotation is also necessary to achieve adequate weight gain.

9. Conduct the Hearth session for 10-12 days within a two-week period. Within 8-12 days of starting the Hearth rehabilitation (which provides the extra, nutrient-dense meal), mothers will see notable improvement in their child. They may need some guidance to recognize the changes in improved appetite and energy level, less irritability, level of alertness, etc. This recognition of the child's improvement serves as a major motivator in the caregiver's adoption of the new feeding, caring and health practices. If the child is not fed the special extra meal over sequential days, recovery will be so slow that the mother will not be rewarded and motivated by seeing the changes. There may be breaks of one or two days in the sequence of days for weekends, holidays, or market days *(e.g., 4 days + market day + 4 days + market day + 4 days)* with the family encouraged to prepare the special meal at home on the days off.

10. Include follow-up visits at home for two weeks after the Hearth session *(every 1-2 days)* to ensure the average of 21 days of practice needed to change a new behavior into a habit. The caregivers will need continued support to implement the new practices in their own homes. During home visits, the volunteers or staff can help them think of solutions to any difficulties they are encountering or respond to concerns about their child's progress.

11. Actively involve the community throughout the process. Community leaders and a village health committee can provide support in organizing the weighing of all children in the target age group, recruiting volunteers, conducting the PDI, contributing materials, utensils, and food for the sessions, assuring that eligible caregivers attend the Hearth session regularly, and encouraging other community members to support the families with malnourished children in adopting new practices. The community can participate in

monitoring program implementation and results. The higher the exposure of the Hearth, the greater the impact on the overall nutritional status of the community. It provides "living proof" of the effects of good nutritional inputs on malnourished children, which raises the consciousness of community members and empowers them to prevent malnutrition from within their own community.

12. Monitor and evaluate progress. At a minimum, programs should monitor attendance, entering and one-month weights, and the percent of children who graduate after one session or after two sessions. [Depending on community goals and national protocols, graduation may be determined as: 400g weight gain in one month; a decidedly upward growth trend on the growth curve during two months; moving up one level (i.e. from moderate to mild); or achieving normal weight-for-age.] Programs are encouraged to monitor the longer-term impact by measuring weight gain of participants two months and then six months or a year after graduation, and tracking growth of younger siblings. Programs may wish to develop other indicators to monitor the quality of implementation, community support, etc. Many examples of such indicators are given in the CORE PD/Hearth Guide.

13. If a child doesn't gain weight after two 10-12 day sessions, refer the child to a health facility to check for any underlying causes of illness such as tuberculosis, HIV/AIDS, or other infection. Some programs may opt to have all children checked for underlying illness prior to entering the Hearth to screen for diseases that can be treated first. If the child does not have an illness, families may need to be directed to other social services or to income generation programs.

The average number of sessions it takes to graduate a child varies between programs, but there should be a cap on the total number of sessions a caregiver can attend (i.e. two) as caregivers may start to become dependent on the Hearth and not be actually internalizing new behaviors. A sense of urgency to rehabilitate a malnourished child should be instilled and encouraged.

14. Limit the number of participants in each Hearth session. As with all educational programs, having a limited number of participants provides a "safe" environment in which rapport can be built and all caregivers have an equal opportunity to participate in all activities. Experience has shown that Hearth sessions are most successful when limited to ten caregivers, with six to eight being an ideal number.