Case Study – United States

Within the US, many research studies have sought to document the level of breastfeeding training provided at US medical schools. These studies used indirect measures, such as provider self-reporting, to assess adequacy and coverage of breastfeeding training. A detailed description of each study is provided below to provide an overall view of the literature available and in the event that countries would like to replicate these kinds of studies to assess the quality and coverage of breastfeeding and IYCF training within the pre-service programs available both publicly and privately.

1. A seminal study by Freed et al. is frequently cited and set the context of deficits in breastfeeding knowledge among family medicine, pediatric, and obstetrics/gynecology residents and practitioners in the U.S. as a major obstacle to the initiation and continuation of breastfeeding

**Subject and Methods:**
Subjects were chosen from the specialties most likely to be involved with breast-feeding mothers—pediatrics, obstetrics/gynecology, and family medicine. A national random sample of 610 pediatricians, 645 obstetricians/gynecologists, and 665 family physicians, board certified within the last 3 to 5 years, was obtained from the American Board of Medical Specialties. Additionally, national random samples of residents (999 pediatric, 1017 obstetric/gynecologic, and 1099 family medicine) were obtained from their respective specialty societies making a total of 3115 residents and 1920 practicing physicians surveyed. Resident samples were evenly divided between subjects in their first and last year of residency training.

Six separate, four-page questionnaires were constructed for use in the study, one for residents and one for practicing physicians of each specialty. Each instrument contained a core set of questions to assess basic breast-feeding knowledge, attitudes, training, and experience of that group. These questions were uniformly designed to facilitate cross-comparisons among specialties. Wording of core questions was identical in each questionnaire with the exception of the specialty identification; for example, use of the word "pediatrician" or "family physician".

Each questionnaire was designed to take no more than 15 minutes to complete and they were pretested by a mix of practicing physicians and residents from each specialty.

**Questions:**
- Counseled expectant mother regarding infant feeding choice (at least five times during residency)
- Taught new mother breast-feeding techniques (at least five times during residency)
- Counseled mother about breast-feeding problems (at least five times during residency)
- Taught breast-feeding mother how to use breast pump (at least five times during residency)
- Physician-Perceived Adequacy of Breastfeeding Training
• Is it the role of your specialty to recommend breastfeeding to expectant mothers?
• Is physician counseling effective in promoting breastfeeding?
• How confident are you in your breastfeeding counseling ability?
• Are you effective in your breastfeeding counseling?
• Knowledge of the Health Benefits of Breastfeeding. Agree/Disagree with the following statements:
  o Exclusive breastfeeding through first 4 months is the most beneficial form of nutrition
  o Breastfeeding decreases incidence of otitis media
  o Breastfeeding decreases incidence of gastroenteritis
  o Exclusive breastfeeding through first 4 months is the most beneficial form of nutrition
  o Breastfeeding decreases incidence of otitis media
  o Breastfeeding decreases incidence of gastroenteritis
• Type of breastfeeding training received, e.g. didactic/clinical/hand-on
• How would you treat the following issues:
  o Mastitis
  o Low milk supply
  o Jaundiced infant
  o Breast abscess
  o Teething
• Personal experience (self or spouse) with breastfeeding

Data Analysis:
Data were analyzed in several phases:
• All questionnaires were examined for the frequency distribution of all items. Items using a 5-point Likert scale were collapsed to reflect the direction of response (e.g., positive or negative attitude). Analysis of missing data established that no consistent pattern or bias was posed by nonresponse to individual questions.
• Analysis was performed to determine the significance of the association of each response variable reflecting breast-feeding knowledge, attitudes, and experience with the demographic variables obtained in the study (e.g. specialty, year of training, gender, and previous personal or spousal breastfeeding experience).
• Likert scales (1 to 5) were used for attitudinal questions to allow for varying degrees of agreement or disagreement as well as a neutral choice.
• For clinical questions, choices for treatment followed a clinical vignette about common lactation problems; correct answers were verified by information in published breastfeeding texts and reference guides.

Results:
68% response rate. All groups demonstrated significant deficits in knowledge of breast-feeding benefits and clinical management.
Conclusion:
The results of this study demonstrate the inadequacy of breast-feeding education within US residency training programs in pediatrics, family medicine, and obstetrics/gynecology. The deficiencies in knowledge and experience highlighted in this study are evidence that most physicians are ill-prepared to provide effective counseling and support for breastfeeding mothers and their infants. The greatest predictor of physician self-confidence was previous personal or spousal breast-feeding experience.

Reference:

2. In anticipation of the federally funded Best Start Breastfeeding Promotion Campaign, the American Academy of Pediatrics conducted this survey of its members to identify their educational needs regarding breastfeeding in order to best design appropriate education programs. A questionnaire was sent to 1602 active Fellows of the American Academy of Pediatrics.

The authors concluded that pediatricians have significant educational needs in the area of breastfeeding management. A majority those surveyed believe that breastfeeding and formula-feeding are equally acceptable methods for feeding infants and the results indicate that breastfeeding attitudes and management issues have not changed substantially from earlier studies. Of concern is that pediatricians now are likely to recommend semi-solid foods, iron, and vitamins before 5 months of age, and to recommend supplementary feedings and pacifiers in the first few days after delivery. As with earlier surveys, pediatricians with any personal experience were more informed and confident in their management abilities.

Reference:

3. A study by Eden et al. was designed to determine the level and quality of breastfeeding education of pediatric residents. US Accreditation Council for Graduate Medical Education (ACGME) accredited pediatric residencies were surveyed on their subjective (and anonymous) opinions of their programs.

Methods:
A short questionnaire was sent to the program directors of all 209 ACGME-accredited pediatric residency programs in the United States and Puerto Rico. The program directors were asked to evaluate the level and quality of their breastfeeding education residency programs:
“Do you think the current levels of breast-feeding education for pediatric residents is (circle one): (1) adequate, (2) in need of improvement, (3) inadequate?”
“How do you rate the quality of breastfeeding education for pediatric residents in your
Results:
There was a 54% response rate (112 of 209 programs). The results seem to demonstrate that many responding pediatric program directors perceived the current level of their breastfeeding education programs to be either in need of improvement or inadequate, and many rated the quality of their programs as poor.

This study did not identify size, affiliation, geographic location with any of the programs and had only just over half of those surveyed respond. Similar studies may want to try to improve response rates and include further demographic information.

Reference:

4. Feldman-Winter and colleagues conducted a survey to compare pediatricians on their breastfeeding knowledge, attitudes, and practices to the results with those of the seminal 1995 study (Freed, G. L., Clark, S. J., Sorenson, J., Lohr, J. A., Cefalo, R., & Curtis, P). The influence of personal breastfeeding experience on opinions and management of breastfeeding was also examined.

Background:
Since the 1995 study, a large body of research has provided further evidence of the health benefits related to breastfeeding. During this intervening period, overall breastfeeding rates in the United States rose from 59% in 1995 to 74% in 2004 at delivery and from 22% in 1995 to 42% in 2004 at six months, however, few US mothers follow recommendations to exclusively breastfeed.

Prior to this study, initiatives from the American Academy of Pediatrics (AAP) and the Health Resources and Services Administration, Maternal and Child Health Bureau, had a central goal to increase the knowledge, attitudes, and practices of physicians to promote and manage breastfeeding, as well as introducing breastfeeding education and training into pediatric, obstetrics and gynecology, and family medicine residency programs.

Subjects and Methods:
This study is based on data gathered using the AAP Periodic Survey of Fellows. Since 1987, the Periodic Survey of Fellows has been conducted 3 or 4 times annually on current topics in pediatrics. Each survey is sent to a unique random sample of non-retired members of the AAP (those selected to participate in a Periodic Survey of Fellows are not selected again for at least 4 years). In 2004, the AAP had about 60000 members, representing an estimated 80% of US board-certified pediatricians.
Both the Periodic Survey of Fellows conducted in 2004 and in 1995 were 8-page, self-administered, forced choice questionnaires developed by the AAP Department of Research working with the leadership team of the AAP Section on Breastfeeding. This 2004 survey was mailed to 1640 members, and 5 follow-up mailings were sent to non-respondents. A total of 875 questionnaires were received, for a response rate of 53.4%.

Survey Questions:

- Pediatricians’ breastfeeding recommendations (as per the AAP Policy):
  - Feeding during the first month: Formula feeding exclusively, Breastfeeding exclusively, Breastfeeding with formula supplementation, or No recommendation
  - Initial hospital orders recommend supplemental breastfeeding: Offer water or glucose water before initiating breastfeeding, Offer water, glucose water, or formula after each nursing, or Offer no water, glucose water, or formula,
  - Nighttime feedings in hospital: Keep the infant in the mother’s room throughout, Let nurses give nighttime feedings by bottle, or Keep infant in nursery, bring to mother for feedings,
  - First postnatal office visit scheduled within 5 days after birth - % of Breastfed infants and % of Formula-fed infants
  - Introduction of supplements and vitamins in exclusively breastfed infants before 5 months of age – Do you routinely recommend: Semisolid foods, Iron, Multi-vitamins, Vitamin D, Fluoride

- Breastfeeding Counseling and Management practices (disaggregated into those with and those without personal experience of breastfeeding):
  - Confident or very confident
  - Adequately addressed mother’s concerns about breastfeeding more or equal to five times in the last year
  - Managed breastfeeding problems
  - Observed breastfeeding
  - Counseled an expectant or new mother about infant feeding choices
  - Taught a new mother breastfeeding techniques
  - Counseled mothers about breastfeeding problems
  - Asked a breastfeeding mother whether she is using herbal agents
  - Considered cultural beliefs before observing breastfeeding
  - Taught a new mother how to use a breast pump
  - Answered telephone inquiries about breastfeeding,
  - Deferred breastfeeding questions to office staff members or other health care professionals.

- Reasons Why Pediatricians Recommend That Mothers of Full-term Infants Not Breastfeed or Discontinue Breastfeeding:
  - Mother is HIV infected or drug abuser
  - Medications taken by mother may be harmful to infant
  - Mother opposes breastfeeding
• Mother has infected nipples
• Mother is too young or immature
• Mother’s milk supply seems inadequate
• Inconvenience or time demands of breastfeeding
• Infant has slow weight gain
• Healthy infant with jaundice
• Mother has cracked nipples
• **Opinions on issues about breastfeeding benefits and promotion:**
  o “Almost any mother can be successful at breastfeeding if she keeps trying.”
  o “Breastfeeding and formula feeding are equally acceptable methods for feeding infants.”
  o “Benefits of breastfeeding outweigh the difficulties or inconvenience mothers may encounter.”
  o “In the long run, formula-fed babies are just as healthy as breastfed babies.”
  o “Advice from family and friends is the most important influence in the decision to breastfeed.”
  o “Pediatricians have little influence on whether mothers initiate breastfeeding.”
• **Education and Training:**
  o Received education about the management of breastfeeding while in medical school or during residency
  o Attended continuing education programs or grand rounds on breastfeeding topics.
  o Read articles about the management of breastfeeding
  o Interested in receiving more education focused on the management of breastfeeding
  o Knowledge of how their staff members were trained in breastfeeding management.
  o Participated in training their staff.
• **Hospital breastfeeding policies - Compliance with “Ten Steps to Successful Breastfeeding”**
  o Maintain written hospital policy that is available to all staff
  o Train all health care staff to follow policy
  o Inform all pregnant women about breastfeeding so they can make an informed decision,
  o % of parents seen in prenatal visits
  o Breastfeed within 1 hour of delivery
  o Demonstrate proper breastfeeding technique to mothers
  o Give nothing but breast milk unless medically indicated
  o Rooming-in 24 hours a day
  o Unrestricted breastfeeding
  o No pacifiers in hospital
  o Establish support groups for parents within the community
• **Demographic data:**
- Age;
- Sex;
- Ethnicity;
- Resident training status;
- Practice location (urban inner city, urban not inner city, suburban, or rural);
- Practice setting (solo or 2-person practice, group practice, or staff model health maintenance organization, and hospital or clinic practice or medical school);
- Number of patients birth to 2 years;
- Time spent in general pediatrics (less than 50% of time spent in a subspecialty area); and
- Geographic region (classifications used by the National Center for Health Statistics)

- Personal questions - number of children and personal experience (self or spouse) with breastfeeding

Breastfeeding counseling, recommendations, and opinion questions were directed only to respondents who indicated they provided primary care to children from birth to 2 years:

These questions were also asked on the 1995 survey, enabling trends in these areas to be examined however, the 2004 survey included additional questions related to cultural beliefs, diet, and use of herbal agents.

Reference:

5. Feldman-Winter and colleagues designed another study to evaluate whether a breastfeeding-specific residency curriculum improved physician knowledge, practice patterns, and confidence in providing breastfeeding care and if implementing this curriculum increased breastfeeding rates. This was one of the first studies to evaluate the effectiveness of a standardized breastfeeding curriculum and the results demonstrated that such a curriculum can improve breastfeeding knowledge, practices, and confidence in managing breastfeeding.

Subjects and Methods:
417 residents enrolled in a controlled trial of this curriculum: Six intervention residency programs implemented the curriculum and seven control programs did not. Residents completed tests before and after implementation and breastfeeding rates were obtained from randomly selected medical charts in the hospitals and clinics at which residents trained.

Survey Monkey (www.surveymonkey.com) was used to facilitate the pre and post testing. The tests were adapted from the Academy of Breastfeeding Medicine “What Every Physician Needs to Know About Breastfeeding” course and the American Academy of Pediatrics Periodic Survey. (see separate references)
Curriculum development:
The American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists, American Academy of Family Physicians, and Association of Pediatric Program Directors developed a new breast feeding curriculum incorporating two previously studied models, inclusion of a field-trip and the second edition of the Wellstart Lactation Management Self-study Modules. The curriculum contains seven sections: advocacy, community outreach and coordination of care, anatomy and physiology, basic skills, peripartum support, ambulatory management, and cultural competency. For each category, Goals, Learner Objectives, Suggested Activities, Clinical Correlations, and Evaluation Strategies are specified. The authors structured the curriculum according to the Accreditation Council of Graduate Medical Education Core Competencies (www.acgme.org/outcome/comp/compMin.asp). The full curriculum and related materials are available online (www.aap.org/breastfeeding/curriculum) and in a separate reference.

In order to implement the curriculum, two faculty members from each implementation site participated in a 2-day training program at the AAP.

Resident training:
- Self-study materials on anatomy and physiology and basic skills.
- Faculty-led discussion questions, didactic lectures and skills workshops.
- Peripartum breastfeeding support during the newborn-nursery rotation - residents required to assist three new mothers with breastfeeding, with at least one encounter (live/role-play) observed and scored by faculty.
- Community outreach - usually a field trip to or presentation from local breastfeeding support groups.
- Faculty taught breastfeeding advocacy through the WHO/UNICEF’s Ten Steps to Successful Breastfeeding and comparing this with their hospital’s current policy.
- Clinical case scenarios in a small-group setting - ambulatory management through discussion and hands-on practice during continuity clinic.
- Cultural competency cases.

Breastfeeding Data:
Each site collected rates of breastfeeding at study initiation and six months later by randomly selecting 100 medical records at specific intervals.
Baseline breastfeeding rates - selecting newborn and residency continuity-clinic medical records over a three-month interval.
Post-intervention rates - from charts dated after completion of the curriculum and after residents completed their post-tests.
Categories: exclusive breastfeeding, nonexclusive breastfeeding (breastfeeding plus feeding of formula or other foods and/or fluids), and exclusive formula feeding.
Results
A total of 417 residents were enrolled: 157 residents completed pre-tests but not post-tests; 260 residents completed both.

Residents at the intervention sites had significant (twice as much) improvement in knowledge, practice pattern (PP), and confidence, most strikingly in the obstetrics/gynecology and family medicine residents, as compared to the control group. Improvements in knowledge occurred irrespective of the size of the residency program, suggesting that programs of all sizes can benefit from these materials. Residents at the intervention sites indicated a change in their practices i.e., they were more likely to perform bedside assessment of breastfeeding, counsel mothers about breastfeeding issues, or teach breastfeeding techniques than they were before implementing the curriculum. These residents also had improvements in their perceived confidence, possibly as a result of both increased knowledge and more frequent opportunities to assist mother-infant breastfeeding dyads.

Knowledge, PP, and confidence were examined according to gender within the intervention group who completed the study and despite baseline and post-test differences in PP, mean improvements did not differ between genders.

Trained faculty and residents served as champions and catalysts for change by disseminating new information to their colleagues, resulting in improved policies and practices that supported increased breastfeeding.

Breastfeeding was more likely to be initiated and continued at intervention sites after curriculum implementation (See Table 7).

The curriculum had the most significant effect on increasing exclusive breastfeeding at intervention sites. At the control sites, 6-month-old infants were half as likely to be exclusively breastfeeding after the intervention period.

Reference:

6. In their paper, Bunik et al. document the “field trip model” approach to teaching resident doctors about breastfeeding. As residency programs continue to struggle with the balance of cost-effective education and service requirements, the Children’s Hospital Oakland developed and evaluated this “hands-on” model in which residents are rotated through range of community-based sites for breastfeeding education. This may provide useful ideas for countries where pre-service programs lack a hand-on aspect and they wish to have a low-cost method of introducing it.
Generally, the urban hospitals where most residents train have low breastfeeding initiation rates and because of this, many residents have minimal exposure to breastfeeding issues. The impact of this means residents are ill-equipped to inform and support new mothers. The field trip approach is considered an effective model for a number of reasons, ranging from its low cost to its positive impact on fostering relationships with local community organizations, particularly La Leche League International (LLLI).

In this study, the field trip model of breastfeeding instruction was evaluated as a model for breastfeeding curricula with regard to 4 specific objectives: knowledge about breastfeeding, attitude toward breastfeeding, experience with breastfeeding, and resident self-reported satisfaction.

The four field trip sites are as follows:

Site 1: Introduction at Children’s Hospital referral clinic. At this site, residents were introduced to the study and asked to complete the pretest breastfeeding questionnaire. They were then shown a video on latch and positioning, and observed a breastfeeding in-house or clinic consult. The aim of this site was to give residents a clinical view of breastfeeding and to lay the framework of visualizing latch and positioning for the other 3 rotations.

Site 2: At-home La Leche League meeting. La Leche League International is a mother-to-mother support organization offering information and encouragement, primarily through peer support. The LLLI Series Meetings are informal discussion groups held in the homes of members or in other locations. At this site, residents were exposed to breastfeeding mothers’ issues and experiences firsthand. They had the opportunity to observe older babies and toddlers nursing as well as to hear common questions about the introduction of solids, weaning, sleep behaviors, and so forth. The aim of this site was to allow the residents an appreciation of new motherhood from a breastfeeding mother’s perspective and thus the value of support for the breastfeeding mother. By listening and observing mothers at the LLLI meetings, it was hoped that this site would add a subjective component for the residents: an understanding about mother-infant bonding and the strong investment on the part of the nursing mother.

Site 3: Postpartum rounds. Residents participated in postpartum rounds with a lactation consultant for approximately 9 to 10 mother-infant dyads at a large community hospital that had daily lactation consultation available for all mothers after delivery. The aim of this site was to afford residents the opportunity to observe many cases of latching on in the early newborn period. Visualization of a good latch is a cornerstone to considering the need for evaluation and referral for intervention.

Site 4: Kaiser lactation consultant clinic. This program was established in 1998 and includes routine aftercare, early discharge follow-up with nurse home visits, outpatient consultations, breast pump rental, and weekly support groups for breastfeeding mothers. The lactation consultant clinic was created for mothers who have difficulty with breastfeeding and is conducted based on the Kaiser Breastfeeding Model. Residents observed 2 to 3 problem cases
and were instructed in the practical devices of breastfeeding such as the nipple shield and the nursing supplementer as well as how to set up a breast pump.

The field trip model proved to be an effective curriculum, both in terms of increased experience and attitudes towards breastfeeding, compared with a control group. In addition, the curriculum was rated highly by training residents.

Reference:

7. The goals of a study by Osband et al. were to investigate breastfeeding training offered during 3-year U.S. pediatric residency programs and to describe residency programs’ policies and services for residents who breastfeed. Guidelines by the Residency Review Committee for Pediatrics of the Accreditation Council of Graduate Medical Education (ACGME) suggest that residents have at least 1 month of training in the care of newborns.

The goals of this study were as follows:
1) to describe the amount and settings of breastfeeding education offered by the pediatric residency programs; and
2) to describe pediatric residency programs’ policies and practices in supporting breastfeeding among its residents.

**Subjects and Methods:**
This is a cross-sectional study using a Web-based survey of pediatric program directors regarding breast feeding education and support services for residents. All program directors who were members of the Association of Pediatric Program Directors (APPD) list serve on July 1, 2006, were eligible to participate in this study. The APPD is an organization of pediatric program directors, department chairs, associate directors, and coordinators of pediatric residency programs.

The survey had 16 questions covering:
- Descriptive information about each residency program, including Baby Friendly Hospital status;
- An estimate of the amount of breastfeeding education offered to residents in their programs as well as obstacles to providing such education;
- Approximate number of hours of breastfeeding education a typical resident graduating from that program received in educational settings, such as grand rounds and other types of lectures;
- An open-ended question allowed that directors to note other available settings within their program used for breastfeeding training; and
- Questions about breastfeeding support services and policies at all teaching hospitals associated with the residency program.
Data Analysis:
Summary statistics were first calculated for survey questions. Next, for each respondent, total hours of breastfeeding education across all settings were calculated and then differences between hours of breastfeeding education, availability of breastfeeding support services, program characteristics, and barriers cited were evaluated using the t test, Fisher exact test, and chi-square test.

Results:
Seventy percent of program directors (132 of 189) completed the survey, with 77.3% of respondents estimating the amount of breastfeeding education offered to their pediatric residents.

Please note, the appropriate number of hours that residency programs should offer in breastfeeding education was unknown at the time of this study, leaving investigators unable to draw conclusions about the adequacy of residency programs in this area of training. Countries may wish to define the parameters of what constitutes adequate training at the pre-service level prior to conducting a similar survey.

Reference:

8. Pound et al. document the systematic process of developing, implementing, and evaluating a national breastfeeding educational intervention for pre-service doctors in Canada. A 22-member team was established that included breastfeeding researchers, breastfeeding experts, postgraduate medical education leaders, medical education experts, medical residents, and breastfeeding mothers.

Methods:
The development process was informed by Kern’s systematic and iterative approach to curriculum development (Kern, D. E. (1998)).

Needs assessment surveys:
To establish the need for a national educational intervention, a needs assessment survey of both practicing physicians and medical residents in Canada to assess their breastfeeding knowledge, beliefs, and attitudes, as well as comfort and confidence in supporting breastfeeding mothers was conducted.
Identification of learning outcomes:

Through consultations with the 22-member team, possible learning outcomes that medical residents should be able to attain after completing a breastfeeding educational intervention were identified. To develop these outcomes, all team members were electronically asked the following open-ended question:

‘Upon completion of this resident breastfeeding educational intervention, residents should be able to ...’.

Two medical education experts conducted a content analysis of the responses to identify common learning outcomes. There was no limit on the number of learning outcomes each respondent could identify.

Team meeting to discuss implementation and evaluation:

An in-person, 2-day team meeting was held to discuss the following topics:
1) current breastfeeding education activities in various postgraduate programs;
2) results of the needs assessment surveys;
3) possible learning outcomes for the educational intervention; and
4) possible strategies for implementing and evaluating a national educational intervention.

To ensure that all team members were satisfied with progress, an exit questionnaire was also completed at the end of this meeting.

Results

Needs assessment surveys: the survey showed that for both practicing physicians and residents their breastfeeding knowledge, confidence, beliefs, and attitudes were suboptimal. Most of those surveyed felt their postgraduate education had not adequately prepared them to support breastfeeding mothers.

Identification of learning outcomes: five potential learning outcomes for a future educational intervention were identified. “Upon completion of this resident breastfeeding educational intervention, residents should be able to“:

1. Assess breastfeeding technique.
2. Assist mothers in achieving proper breastfeeding technique.
3. Explain common health problems that mothers experience during breastfeeding.
4. Summarize the benefits of breastfeeding for children and mothers.
5. Mobilize appropriate resources for breastfeeding mothers.

Evaluation:

Potential tools for assessing residents’ attainment of these learning outcomes include multiple choice questions, standardized questionnaires, objective structured clinical examinations
(OSCE), as well as chart reviews and audits to assess the documentation of breastfeeding discussions and reasons for artificial milk supplementation.

The team agreed that the use of a variety of assessment tools would allow for feedback from multiple stakeholders on the performance of residents. The need for mechanisms to assess the impact of the educational intervention on patients was highlighted and this could include surveying patients to assess their satisfaction with breastfeeding support, performing chart audits to determine appropriateness of indications for supplementation, tracking formula supplementation rates, as well as exclusive and partial breastfeeding rates.

Priority learning activities identified: interactive, hands-on learning and activities targeted to the specific needs of the trainees. The importance of a flexible, sustainable, and feasible intervention was emphasized to facilitate wide spread implementation.

References: