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SAMPLE TRAINING DIAGNOSIS PLAN

Practical Preparation of Waterless Alcohol Hand Rub, Sharps Containers and Personal Protective Equipment (PPE) From Locally Available Supplies In Addis Ababa, Ethiopia

1. BACKGROUND (FROM ASSIGNMENT 1)

Hospital and Community Setting: Employees are working in a medium size government hospital located in the center of the capital city Addis Ababa, Ethiopia. The majority of the patients served in the hospital are homeless or impoverished inner city clientele with high rates of HIV, STIs and TB as well as other infectious diseases. Around 275-300 patients are seen in the hospital every day, and there are 175 beds. The hospital has a limited budget dictated by the regional health bureau, and often lacks basic items such as gloves and syringes. There is a very poor drainage system in the hospital, with non-functioning sinks and toilets in patient and doctor areas with no running water and sporadic electricity.

Training Issue: Nosocomial infection rates are very high, and patients often have to extend their stay due to hospital acquired infections. This is costly for the patient with purchasing meds and hospital costs. It is also harmful to the health of all patients, in particular for those immunocompromised. Among the healthcare workers, there is no standardized hand washing practice, compounded by the non-functioning plumbing system of the hospital. In addition, there is a very high rate of needles pricks in healthcare workers from used patient needles. The cleaning staff are regularly out of work due to sickness, and rarely use protective equipment while working in the wards.

Participants: Proposed 25 trainees for the first round; The Training organizer (head of Infection Prevention Committee) shall discuss with the Medical Director regarding the recruitment and selection of the participants from the hospital. A formal request for training participation will be sent.

- 6 **Nurses** (1 from each major department of the of the hospital – Obstetrics, Gynecology, Surgery, Internal medicine, Pediatrics, and outpatient departments) - Educational level: Diploma or Degree in nursing; majority are women. They spend a significant time with patients, and are susceptible to needle pricks and causing nosocomial infections.
- 10 **Health Assistants** (Nurse Assistant level – From each of the departments listed above) - Educational level: high school; mixed gender. The health assistants have the most contact with the patient, are susceptible to needle pricks and can also easily cause nosocomial infections such as with catheters, or without hand washing. They could be in charge of preparing the handrub for nurses and doctors, in addition preparing sharps containers and PPE.
- 2 **Central Supply workers** – Educational level: University degree. They manage purchasing the supplies in the hospital. They can be an integral part in collecting

materials from the hospital and transforming them into sharps containers and PPE. Also, lobbying for the purchase of glycerine and alcohol for the handrub.

- 1 **Sanitarian (Environmental Health specialist)** – Educational level: University degree. This person is in charge of the overall waste management and infection control of the hospital. They can manage and supervise the sharps disposal and use of PPE in the cleaning staff.
- 4 **Cleaners:** Educational level: basic reading and writing skills. They currently are responsible for collecting sharps and dealing with medical waste. They will also help in preparation of PPE.
- 1 **Administrator** – Educational level: University degree. This person is in charge of making financial and administrative decisions of the hospital through communication with the Medical Director regarding budget, procurement etc.
- 1 **Regional Health Bureau Representative** – This person will be critical to the sustainability of the initiative and can influence other government hospitals in the country to start creating these materials.

2. RATIONALE AND OVERVIEW

Training Needs Diagnosis Goal: To determine the current attitudes, knowledge and practice of hand washing and use of personal protective equipment among health staff, as well as the commitment of the decision makers of the hospital to Infection Prevention. To assess the availability of supplies to be used for PPE and hand rub preparation. To assess the amount of knowledge retained by potential trainees, who, in the past, have received some sort of IP knowledge update.

Instrument Design: Several instruments were used in this needs assessment:

- Questionnaire for health workers trained in IP in all target departments on retained knowledge of basic infection prevention practices
- List of questions for the health workers; questions for medical director and administrative manager; and questions for the group analysis with the Infection Prevention Committee (IPC).
- Checklist of materials needed for preparing alcohol hand rub and PPE from locally made supplies

Information Collection Procedures: The Medical Director of the hospital was consulted and gave approval for the assessment. The IPC was also consulted and a member co-led the assessment to ensure ownership of the findings. The IPC formed the basis of a Training Committee as its members represented different types of staff and departments. Additional people were co-opted to round out representation. The instruments were developed with the IPC. Members of the committee divided the tasks to shorten time of collection and work-load burden.

Information Processing and Analysis: The findings were reviewed by the Medical Director, head of the IPC and the trainers. The information is under analysis with the IPC.

3. TRAINING DIAGNOSIS PLAN

Audience	Information Needed	Information Collection Method	Role of Potential Trainees
Potential trainees in each profession	Current attitude and practice regarding hand washing and use of PPE. To collect concerns, questions and ideas about these issues and the upcoming training (i.e., what do participants feel they need to learn)	Interviews using a questionnaire geared towards each profession	Training Committee involved in questionnaire design and reviews for content validity
Potential Trainees in each profession	The current knowledge level of the previously trained staff on basic IP practices	Questionnaire	As above
Medical Director and Administrative Manager	To assess the commitment of both to providing extra supplies, support and incentives for the new IP campaign	Interview with prewritten questions	Training Committee helps pose questions for management
Infection Prevention Committee (IPC)	To determine what the current action plan for the committee is, to identify necessary trainings. To involve the committee in the assessment and training for ownership.	Preliminary Group Discussion Analysis	Training Committee meets with IPC
Infection Prevention Committee	To review past activities of the IP committee and review future plans, problem solving techniques, etc.	Review meeting minutes of IP committee	Training Committee discusses critical incidents reported in minutes
Central Supply Staff	To assess the availability of materials to make PPE, hand rub, and sharps containers.	Observation and interview using a checklist of necessary vs. actual	Training Committee discusses results of observations (Note observations by co-workers may be awkward, hence trainers observe)

Audience	Information Needed	Information Collection Method	Role of Potential Trainees
Health Staff in all targeted wards	To observe the current practice of hand washing and disposal of sharps and use of PPE. To assess the current attitude regarding job tasks and interaction with patients.	Observation	As above
Records Department	To find if records on Healthcare worker needle sticks are available and documented	Reviewing Employee Health Records	Training Committee participation depends on confidentiality issues; trainers may summarize relevant issues to present to Training Committee
Records Department	To analyze the absenteeism of health workers due to illness, see if there is correlation with profession	Reviewing Employee absenteeism records	As above
Records Department	To assess whether records of nosocomial infections are present, or records of outbreaks of infections in wards	Reviewing patient records, and hospital records about nosocomial infections, review of hospital based surveys and studies on nosocomial infections.	Training Committee members who have permission to access files and records may summarize these for the group after observing appropriate confidentiality

4. FINDINGS AND PRIORITIES

Key Findings:

- There is no formal needle stick reporting system, but heard from word of mouth that surgery is more of a problem than others.
- There are no records or surveys of patient hospital acquired infections
- Alcohol is readily available, but glycerin must be purchased for the hand rub. Most supplies for making PPE will have to be purchased outside the hospital. Sharps containers can be found in the hospital.
- The Medical Director, Admin manager and Central supply staff are enthusiastic about IP and are ready to contribute to the sustainability of the program through purchasing, allocating budget (small but something), and incentives for healthcare workers for the future. Glycerin can only be bought limitedly, so need for improving access to water for staff other than doctors.
- The IP committee was planning on having a refresher course for its staff on IP, but was unsure of how to increase hand washing, proper disposal of sharps and where to acquire

PPE. IP committee also wants to use the training opportunity to get feedback from staff about the trainings and what they see best for the future (create evaluation forms and suggestion forms, involve staff more in IP committee meetings)

- Cleaners are frequently out sick, more than any other profession
- Staff has a relatively low retention of the basic Infection Prevention practices, and need a brief knowledge update. They also requested that they want a mechanism to provide input for future IP activities, such as a suggestion box.
- Staff are enthusiastic about their work, and are ready to learn, improve and be creative. There is strong leadership in the hospital, and there are motivational signs around the hospital promoting infection prevention. There is a strong desire to improve IP practices in the hospital as this hospital is a model site for IP. They have ideas about fixing jugs with taps in each room due to no running water.

Priority Training Needs:

- Brief IP knowledge update needed for staff (At beginning of the course)
- Need to train staff how to document needle-sticks and nosocomial documentation/reporting while a formal system is put into place.
- Different needs for different professions, suggestion to break up training in afternoon into profession groups to learn what is most relevant to their work. These sessions to be taught by the IP committee staff for ownership.
- Creation of water jugs with taps to be included as part of the training (in addition to hand rub)