

## Purpose of Guide

The following is a Guide to help you prepare for your volunteer Dental/Medical mission trip. It is targeted to the dentist going on his or her first trip.

In addition to suggestions of how to set up your clinic, you will find supply/equipment lists in an Excel format that **you can modify to reflect your practice style and the supplies available to you.**

The appendix expands on many of the topics in the Guide and gives links to web sites you can access for more information.

We want to help you. If after looking through the above you feel you would like to talk to a dentist who has been to an area similar to where you are going, please call the BMDF office.

We solicit comments as to how we can make this site more useful.

# A GUIDE FOR PREPARING FOR A VOLUNTEER DENTAL/MEDICAL MISSION

As soon as you accept the Lord's call to go on a dental/medical mission trip, begin to prepare yourself spiritually. There are 30-day prayer calendars available for different areas/people groups that can be used. For many mission trips, the team leader will provide specific prayer calendars for your team. The most important thing is to give your efforts and the mission to the Lord and listen for His guidance through your prayers and the study of His word. Be prayed up and cleansed up before you go! Make sure the people in your home church are praying for you as you prepare to go on mission, and **specifically** while you **are away**.

As soon as possible before you plan to leave, begin learning all that you can about the culture of the people group with whom you will be ministering. If possible, learn some commonly used phrases in the language of the people. What we normally do in the USA might be offensive in other cultures, such as hand gestures which have different meanings in different countries. In some cultures patients want to bury their extracted teeth, etc. God has chosen you to work with these people and you are embarking on an unforgettable, life-changing experience. The more sensitive you are to the people and their culture, the greater your opportunity to be a strong witness while on mission!

Resources available:

- \* Your state Baptist Convention
- \* IMB
- \* Yahoo, Google, etc searches
- \* Spiritual Preparation adapted from material by Rob Sugg (see Appendix)

## LICENSE TO PRACTICE

Ask your contact in the destination country the following questions:

1. Do you need permission of the local health department or local dentists to practice?
2. Will you be working with another licensed local healthcare professional?
3. Can you get a letter of invitation from a local official asking you to come "share information, new techniques, and to bring necessary supplies to do so?" (This helps as you go through customs on arrival at your destination.)
4. Do you need to keep medical/dental records to turn into the local health department? *(In some cases the local health department may take credit for the patients you see for reporting purposes.)*
5. Do you need to keep contact records for a local congregation to use for follow up contacts?

You may need copies of the following licenses:

- State Dental Board License (Diploma)
- Dental License re-registration
- Dental School Diploma
- Copy of control substance registration
- Any other official looking paper you think is relevant relating to your qualifications.

**Tip- If the licenses are scanned into your computer they can be easily e-mailed to your contact.**

Sometimes the copies need to be certified and sent in advance to the health officials. In any event it is good to have an extra copy of your licenses packed with your supplies.

## KNOW YOUR LOCATION

- Will you be in a clinic, a hospital, a school, a church, or outside on the dirt under a cashew nut tree?



- Will you be at the same location each day?
  - If so will it be safe to leave your set-up/supplies over night?
  - If working at multiple locations, what is the schedule and expected travel time each day?
- Is there electricity?
  - If so is it 120v@60 hertz or 240v @ 50 hertz
    - You can step down the voltage with a step down transformer but you cannot change the frequency. This may be important if you have a compressor or suction built to run in the USA.

## TEAM ORGANIZATION

- Will you be the only dentist?
- Will there be nurses or a physician who can help you if you have an emergency?
- How will the patients be screened before they enter surgery?
- Will you need an interpreter?
- Who will assist you (your interpreter can make a good assistant since they can communicate easily with the patients)?
- Who will clean your instruments and administer medications?
- What procedures will be used to see patients: a prescheduled list or first come first serve, handing out numbers in line...?

## WITNESSING STATION

If the **goal of the medical mission is to share the Gospel**, then the most important station is a place for the local church pastor/lay people to share in the patient's language the plan of salvation with follow up by the local church or missionary after the dentist is gone. The patient flow and waiting areas should be set up to make sure everyone treated goes through this station.



## KNOW WHAT YOU ARE EXPECTED TO DO

- What type of dental treatment is expected of you: hygiene, restorative, or just extractions?
- What dental care is normally available to the people you are going to see?

## CLINIC SET-UP

- Consider where your patients will wait to be seen and where they will wait for anesthetic to work.
- Consider the light source in placing your chair.
  - If you will be outside, consider where the sun is and how will it move during the day. *It gets very hot in direct sunlight during the afternoon.*



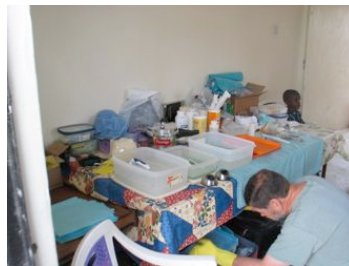
You will need:

1. a table for clean instruments and supplies
2. a table for cleaning instruments
3. a dental chair or gurney
4. 4 to 5 oilcloth table cloths
5. large black trash bags
6. duct tape
7. a place to store your extra supplies



**CLEANING OF INSTRUMENTS AND DISINFECTION \*** (more detailed discussion on this topic on another page)

- Take at least three containers (with tops, in case you are outside to keep out blowing leaves, bugs, etc)
- Playtex type rubber kitchen gloves to clean instruments and protect hands.
- A brush to clean dirty instruments and kitchen tongs to transfer instruments between containers.
- 2 or 3 Bath towels to lay wet instruments on to dry and/or to cover instruments if needed.



**Container One: Cleaning**

Water + 1 capful of Clorox + dishwashing detergent

**Container Two: Disinfection**

**Cidex Plus™ 28 Day Solution + Kitchen timer:** Instruments must remain submerged in the Cidex for at **least 20 minutes for high level disinfection**. (For sterilization instruments must remain in Cidex Plus for 10 hours.) High level disinfection kills everything but spores.

**Container Three: Rinse**

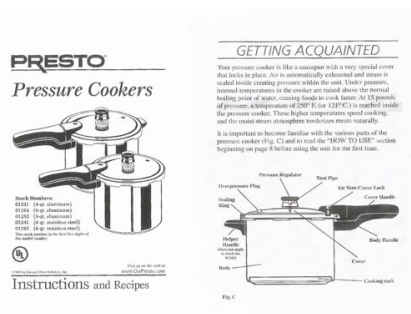
Rinse water with 1 capful of Clorox (local drinking water is acceptable because the patients are used to drinking it.)

**STERILIZATION OF INSTRUMENTS**

During lunch and overnight you will need to sterilize your instruments.

A **4-Quart pressure** cooker is adequate.

- Instruments are placed on the bottom with 2 – 3 inches of water and placed over any available heat source (Be aware of the plastic handles with an open fire).
- After the pressure regulator starts to jiggle, the heat is turned down and maintained for a minimum of 20 minutes (at sea level).
- Remove from the heat and allow pot to cool before opening the pressure cooker.



If you are unable to steam sterilize the instruments then leave them submerged in the **Cidex Plus™ 28 Day Solution** over night or for a minimum of 10 hours.



## WASTE DISPOSAL

- For sharps, use an empty water or soda bottle.
- You need one or two disposable garbage bags per day for clinic waste.
  - (with the top duct taped open for easy access)
  - (Try to have these burned at the end of the day so children will not play with bloody gauze, etc)
- Spit bucket, box, etc. A cardboard box lined with a garbage bag with a shovel of dirt works well. ***If nothing is available people will spit on the floor where you stand.***

## CLINIC PROCEDURE for extractions

1. The new patient is asked what their problem is. If it is tooth pain, ask them to put their finger on the tooth.
2. Their **name** is recorded on a paper towel or an instrument tray with paper tray cover along with which **teeth** you are taking out. To help verify patients, *you may want to also write male or female or some other identifying feature for the patient.*
3. The patient is injected and the paper towel with mirror, syringe, and used aesthetic carpules are placed aside and the patient is asked to wait for the anesthetic to take effect. *After the injection you may want to give the patient a pain medication or an antibiotic. You will need to bring small paper cups to do this.*
4. After numbing four to six patients, then go back to the first and begin the extractions until finished with the last patient numbed. Then start over with the next group.
5. After the extractions each patient gets a packet of pain medication (usually 12 400 mg of Ibuprofen) and maybe a packet of antibiotics (12 PenVK 500mg). What is given varies according to what is done. Not every patient receives antibiotics. There are usually a few difficult cases that I try to supplement the Ibuprofen with a narcotic such as Vicodin 5 mg. ***You need to make sure you have permission to have narcotics in some third world countries.*** You should not need to have more than 30-50 Vicodin on a trip.
6. After the extraction in addition to pain meds, the patient is given extra gauze, post op instructions (preferably given both orally and written), a toothbrush, toothpaste, sticker, and a Gospel tract. If treating children, a small toy might be given for being cooperative and/or as a distraction for the child during the procedure.

7. The pain and antibiotic packets can be pre-packaged before going on mission. Use pre-printed Avery labels or labels with pictures using the language of the country on coin envelopes. Or use small plastic bags and label with a Sharpie pen directly on the bag.

### HOW MANY PATIENTS?

A general dentist using the above protocol, **doing only extractions**, will probably see one patient every 10 to 15 minutes or 4 patients per hour. Considering down time for travel, clinic setup / breakdown time and a lunch break you will most likely see between 130 to 150 patients in a five day week.

Based on 150 patients the following will be needed:

- 200 to 300 needles
- 600 carpules of anesthetic
- 800 gloves (6 boxes) you should change gloves frequently!
- 200 gloves (2 boxes) for your assistant.
- 2000 Pen VK 500mg
- 2000 Ibuprofen 400 mg
- 10 sleeves of 2X2s

## OTHER TOPICS AND INSIGHTS

### Gloves:

- Change gloves often since it is reported that as many as 1/3 of the population may be HIV+.
  - You may want to double glove at times.
  - If you do, Latex is better than vinyl. When I double glove, *I frequently only change the outer glove between patients.*
- Weight of gloves
  - **Vinyl is lighter and occupies 25% less space**
  - 4 boxes of large latex gloves weights 8 lb and occupies 12"x9.5"x5" or 570 cubic inches.
  - 4boxes of large vinyl gloves weighs 4.4 lb and occupies 9"x9.5"x5" or 427 cubic inches

### Equipment:

- Depends on where you will work and how much weight you can carry to the clinic site and if you have access to electricity.
- Do not forget about the noise some equipment makes. Some of the small units with compressors and suctions included get very loud after 7 hours. It is a good idea to have the noisy compressor and suction located away from the treatment area.
- Suction: **For extractions 2X2's alone work surprisingly well.**
- If you have access to electricity consider:
  - a :Portable Evacuation System 11 lb \$645.00 by Asepito or a
  - Drive Medical 18600 Heavy Duty Suction Machine 12 lb ~\$160.00 or
  - Modifying a Small Wet/Dry Shop VAC ~ \$40 or less.

## DISINFECTATION/STERILIZATION

**Factors that determine whether to sterilize or use hi-level disinfection are among the following:**

1. How many sets of instruments do you have to work with?
2. How many people do you need to see?
3. How long does the sterilization process take from start to finish?
4. How long does the hi-level disinfection process take from start to finish?
5. The reliability and understanding of the people doing the sterilizing i.e. **there can be no short cuts on the necessary times.**

The online document **FDA-Cleared Sterilants and High Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices - March 2009** ([http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/ReprocessingofSingle-UseDevices/UCM133514?sms\\_ss=email&at\\_xt=4d9652dc70e0e0fe%2C0](http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/ReprocessingofSingle-UseDevices/UCM133514?sms_ss=email&at_xt=4d9652dc70e0e0fe%2C0)) gives a list of Sterilants and High Level Disinfectants. **Note that all glutaraldehydes are not the same and Clorox is not on the list as a Sterilant.**

### Steam sterilization:

- Temperature should be 250 F and the pressure should be (15 lbs/in<sup>2</sup>);
- 20 minutes for unwrapped items;
- 30minutes for wrapped items.
- Or at a higher temperature of 270 F at a pressure of 30 lbs/in ; 15 minutes.
- **REMEMBER:** Exposure time begins only after the sterilizer has reached the target temperature.

## EMERGENCY MEDICATIONS

*The following list is a suggested list:*

### **Diazepam 5mg/mL- Seizures**

1 ml or 1cc per min IV or IM until  
Seizures are controlled  
Up to 10 doses of 5mg/ml

### **Nitrostat 0.4 mg) Angina-Chest Pain**

1 tab under tongue every 5 min  
Use up to 3 tablets

### **Atropine 0.4 mg/mL Bradycardia**

.5mg or 1 mL every 5 min IV or IM  
Use up to 3.0 mg or 6 doses

### **Ammonia Ampules--Syncope**

### **Epinephrine (1mg/mL) 1:1000**

#### **Cardiac Arrest**

1 mg or 1cc every 3 to 5 min  
Use every 3 to 5 min

### **Diphenhydramine 50mg/mL Benadryl**

**Allergic reactions** (use Epinephrine if Acute Rx)  
25 to 50 mg IM or IV

### **Asthma Mist Epinephrin .22 mg**

Use 1 inhalation, if no relief  
Wait 1 min and use again  
Do not use again for 3 hrs.

### **Aspirin 81 mg Chest Pain**

Chew 3 and dissolve in mouth

## LIGHT SOURCE

- There is no better light than sunlight. So as much as possible, position your work area to utilize the sun. *Even if you are in the shade working with an electric light you may have trouble seeing when the sun does down.*
- A good headlight is a must.

Lights can be found at backpacking stores and other sources. *Try to test the light before you buy because what looks good on the package may not be the best dental light. I have used the MYO RXP Petzl (~\$100 ) headlamp on numerous trips. As a back up bring several flash lights and extra batteries.*



## PERSONAL SAFETY

### *HIV:*

- Always be aware that up to one third or more of the people you treat may be HIV+.
- When needed, change gloves often.
- I take a **HIV-1 Express Test System** kit so that if I am exposed to a patient's blood, I can obtain a blood sample to have it tested when I get back to the USA.
- I also have a Rx for Truvada to begin taking prophylactically until I get the test results from the **HIV-1 Express Test**. (See appendix)

### *Other:*

- Scabies and other communicable skin diseases may be more prevalent than in the USA so bring several a long sleeve disposable gowns for you and your assistant. (See appendix)
- Use a lot of hand sanitizer.

## DENTAL CHAIR

Easy access to the patient's head is essential if you are going to work long hours. Whether you are standing or sitting the patient's head needs to be at elbow level. Several things will work. If you can find something at your destination, it makes your air travel easier and cheaper.

1. A hospital gurney works well and is available in many locations. You can use a box of gloves under the patient's head or neck to position the head so you can see.
2. A small door or table can be elevated with bricks to the proper height.
3. Portable dental chairs can be purchased. (See appendix)
4. Beach chairs can be used but because of the width you will have to bend over more to access the teeth and will find you will get tired faster.
5. You can have a chair quickly made at the site before you arrive that will work as well as a purchased chair and will cost less than \$20. (See appendix).



## INSURANCE

Dental instruments are expensive to replace and suit cases can get lost during travel. Reasonable insurance for mission trips can be obtained from **Gallagher Charitable International Insurance Services**. This will cover a property loss if your instruments get lost or for a medical emergency if you get sick and need to be evacuated.

[http://www.aaintl.com/ser\\_emergency.cfm](http://www.aaintl.com/ser_emergency.cfm)

## PACKING

Currently, international travelers are limited to two 50 lb pieces of luggage. If you have connecting flights within some third world countries the luggage allowance may be reduced to 20 kg or 44 lb. Be sure to check with your travel agent. Weigh the suitcases before you get to the airport and make sure they are 1 to 2 lb under weight. A hand held scale (~ \$15.00) works well.



You will probably need two suitcases for dental supplies. This does not include a dental chair, compressor, or suction. You may need to get another team member to help carry some of your supplies.

Two goals of packing are **not to forget** anything and **to divide things** up so if a suitcase gets lost you have enough supplies to continue the mission.

A packing list to check items off is essential. Dentists have a lot of instruments. If you are taking instruments used daily in your practice, you may have to wait until the last day to pack them. (See appendix for a sample list you can modify)

Tip- Before you pack, lay out the instruments, and take a picture. When it comes time to pack you lay the instrument over its picture and it will be obvious if you have everything. This will also help if you need to file an insurance claim.



**Divide all** supplies (anesthetic, needles, Cidex, 2x2's, etc) into at least two groups. Each group goes into a separate suit case. A list of what is in each suitcase is good.

Try to get another team member to carry some of the heavier items such as Cidex (3 lb), pressure cooker (4 lb), anesthetic, latex gloves (2 lb per box), etc.

My surgery instruments usually weigh about 24 lb. I pack them in four medium sized discarded plastic Metamucil cans. These cans pack well and do not puncture easily. Each packed can weighs about 6 lb and I try limit each suitcase to one can. Each can will have a mix of upper and lower forceps, elevators, etc.



Double and triple name tag your suit cases in case one of the tags gets pulled off.

Tip-Take a pictures of the suitcases and have the pictures on your camera so that if a suitcase gets lost during transfers you can have a picture to show the people in “baggage claim” what they need to look for.

Inside your suitcase in a visible location, place a piece of paper with the name and address of where the suitcase is to be returned if it is lost. (See appendix)