FERNALD MEDICAL MONITORING PROGRAM
EXAMINATION PROTOCOL

PURPOSE

To describe the standard operating procedures and activities involved in the physical examination and testing of FMMP participants.

GENERAL INFORMATION

- Informed consent must be obtained prior to the examination and testing.
- Participant signs a release to send examination results to their physician(s).
- Review questionnaire before examination for completeness.
- On initial exam the RN or medical assistant reviews & completes the family history form with the participant.
- Write ID code, date age and dob on exam form and check list before starting examination.

SPECIMEN COLLECTION (BLOOD AND URINE)

Step 1: RN or medical assistant (certified in phlebotomy) escorts participant to the phlebotomy area.
Step 2: Notes fasting status on check list and lab requisition (instructed to fast 10 hours prior to arrival)
Step 3: Prepares equipment for blood draw. With gloves, prepares puncture site with antiseptic prep, and Uses a vacutainer tube or syringe to draw blood from vein.
Step 4: Draw 2 serum separator tubes (one for analysis and one for storage-centrifuge at 2000 rpm for 10 minutes). Draw 3 purple top tubes (one for analysis (CBC), one for plasma and DNA storage, and one for lipid profile- carefully mix at the time of collection).
Step 5: Apply pressure to stop bleeding and place a dressing over puncture area.
Step 6: Ask participant to void into urine collection container (*see Urine collection protocol*)
Step 7: Have participant return to lobby to eat before proceeding further with the examination.
Step 8: Process bio samples for transportation to laboratory.
Step 9: Initial check list and note status of sample collection

WEIGHT AND HEIGHT MEASUREMENTS

Step 1: A mechanical Beam Scale is used. The scale is cleaned daily with antiseptic solution.
Step 2: RN or medical assistant escorts the participant to the scale. Before the participant steps on the scale the height measuring arm should be lifted to the horizontal position and raised well above apparent height. Move the balancing masses to zero when the scale platform is empty. If the scale is balanced, the lever will be in the horizontal position. This will be indicated by the arrow indicator being in line with the horizontal mark on the right side of the column head. It may be necessary to turn the zero-setting screw to the right or left until the scale balances.
Step 3: Have the participant remove shoes, heavy clothes or other heavy items.
Step 4: Place a protective cover on platform of scale if barefoot
Step 5: Ask the participant to:
- Step on scale
- Put arms down to the side
- Look straight ahead
- Stay very still

Step 6: Move the balancing masses along the calibrated lever arm to return to the horizontal position. The larger balancing mass should be moved first and then the smaller one for finer adjustment. The total reading of the two balancing masses will give the final weight of the participant.
Step 7: Record and initial measurement in lbs to nearest ½ lb on the exam form and check list.
Step 8: Carefully lower the measuring arm, while keeping it horizontal, until it rests gently upon the top of the participant's head. The rear end of the measuring arm is tapered to point at the reading on the height rods.
Step 9: Record and initial the height in inches to the nearest ½ inch on the exam form and check list.

VISION SCREENING

Step 1: A Snellen chart is placed on wall and a line marked on the floor identifying 20 feet of clear space.
Step 2: Note the date of participant's last eye exam on exam form
Step3: Visual acuity is noted as corrected or not corrected on exam form.
Step 4: Participant stands on the marked 20 ft line and:

- Covers the right eye with an eye cover and read aloud every letter on the chart. If they miss Only one letter, they continue reading the next line. The last line the participant reads accurately on the exam form is recorded on the exam form by the RN or medical assistant.
- Cover the left eye with an eye cover and the participant read aloud every letter in the chart. If they miss only one letter, they continue to the next line. The last line the participant reads accurately is recorded on the exam form by the RN or medical assistant.

HEARING SCREENING

Step 1: Audiometer and sound proof room is prepared for participant. Participant data is entered into the audiometric computer and previous hearing tests are retrieved for comparison. The audiometer is calibrated daily and preventative maintenance is completed on a planned scheduled basis.
Step 2: The participant is escorted into the sound proof booth and given instructions on the testing procedure. Instructed to press button when sound is heard
Step 3: The ear phones are placed on the participants head and checked for fit.
Step 4: The testing is started and the participant is monitored for responses.
Step 5: The audiogram is printed and placed in participant's chart for physician review.
Step 6: The results of the audiogram are written on the exam form and initialed as completed on the check list.

PREPARATION FOR PHYSICAL EXAMINATION

Step 1: Participant is escorted to an examining room
Step 2: Privacy is given while the participant removes their clothing and puts on a hospital gown.

BP &PULSE MEASUREMENTS

Step 1: Exam rooms are equipped with wall mounted mercury sphygmomanometer. Pediatric, small adult, regular, and large cuffs are available. Cuffs and tubing are checked daily. Hospital maintenance check BP equipment on a routine schedule.
Step 2: RN or Medical Assistant chooses appropriate size cuff and takes BP & Pulse with participant sitting on exam table after having time to relax.
Step 3: BP measurement and cuff size (R or L arm) is recorded on exam form, pulse is recorded on exam form (rate, regular, or irregular).
Step 4: Systolic BP above 140 and Diastolic BP above 90 are repeated before participant completes the examination.
Step 5: Repeat BP's are recorded on the exam form and check list.

WAIST CIRCUMFERENCE MEASUREMENT

Step: 1: RN or medical assistant asks participant to stand straight and keep heals
Step: 2: Have participant stand straight and bend to side to determine natural waist.
Step: 3: Hold paper measuring tape around abdomen above hipbone. (should not exert pressure on skin).
Step: 4: The tape should be parallel to the floor, participant should stand relaxed, exhale and measure.
Step: 5: Record the waist measurement on exam form in inches and discard the tape measure.

EKG

Step: 1: EKGs are done on participants age 45 or over or with a history of cardiac disease
Step: 2: All initial EKG's are done in the Hospital EKG lab and read by the staff Cardiologist.
Step: 3: EKG's on return visits are done in the FMMP office exam room by the RN or medical assistant with EKG training.
Step: 4: The FMMP has an EKG machine, which is check daily and has scheduled maintenance.
Step: 5: The return EKG is read by the FMMP examining physician with the previous EKG for comparison.

Step: 6: If requested by the examining FMMP physician the EKG could be sent to the Hospital Staff Cardiologist for reading.
Step: 7: The EKG is noted as done on the FMMP check list with initials.

FMMP PHYSICIANS

All FMMP examining physicians are board certified either in Internal Medicine, Emergency Medicine, Pediatrics, Family or Occupational Medicine. Physicians hired by the FMMP to perform physical examinations attended a Fernald Medical Monitoring Program Examining Physician Training Session. The goals of the physician examinations were to assess current health status, identify risk factors, provide health education and screening to participants at regular intervals, and document information for use in future epidemiologic studies.

PHYSICIAN'S HISTORY

Step: 1 On the initial examination the examining FMMP physician reviews with the participant:

- Ongoing Medical Problems
- Resolved Medical Problems with dates
- Medical/ Surgical Procedure History with dates
- Lifestyles
- Medications including OTC's
- Allergies
- Immunizations

Step: 2 Review of Systems on all exams by the examining physician:

- General (sleep, appetite, weight loss, fatigue, sweats, fever)
- Head & Neck (frequent headache, neck pain/stiffness, neck lumps/swelling)
- Eyes (Loss of vision, blurring/diplopia, pain, itch, watery)
- Ears (hearing loss, tinnitus, earaches, dizziness)
- Oral (tooth problems, ulcers/lumps, sore throat, hoarseness)
- Nose (rhinitis ("sinus"), epistaxis)
- Respiratory (SOB, cough, hemoptysis)
- Cardiovascular (palpitations, chest pain)
- GI (dysphagia, N/V, indigestion, abdominal pain, changed bowel habits, rectal bleeding)
- GU (frequency/urgency/dysuria, incontinence, hematuria, nocturia, hesitancy)
- Muscular/Skeletal (joint pain, joint swelling, edema)
- Skin (rash, lesions)
- Neurological (numbness/tingling, weakness, poor balance)
- Male (testicular lumps/ pain, penile discharge/ulcer, hernia)
- Female (menstrual problems, breast lumps, breast self examination, premenopausal, postmenopausal, last menstrual period, number of pregnancies, last pap smear, did mother take DES while pregnant.)

PHYSICIAN PHYSICAL EXAMINATION

Step: 3 Comprehensive Physical Examination completed by the FMMP physician:

- General (frame size, development, nourishment, abnormal description)
- Skin (rash/lesion description, abnormal description)
- Eyes (extraocular movements and pupils, fundoscopic exam, abnormal description)
- Ears (external canals & tympanic membrane, abnormal description)
- Mouth & Throat (dental hygiene, oral cavity lesions or erythema, abnormal description)
- Nose/Sinus (septum and turbinates, abnormal description)
- Neck/Thyroid (thyroid size, carotid pulses-both sides, abnormal description)
- Lymph Nodes (neck, supraclavicular, axillary, inguinal, abnormal description)
- Chest (respirations, auscultation & percussion, abnormal description)
- Breast female (symmetrical, masses, discharge, abnormal description)
- Breast male (gynecomastia, nodules, abnormal description)

- Cardiovascular (jugular venous pressure, heave or thrill, heart size, S1, S2, click, murmur gallop, rub, abnormal description)
- Pheripheral Pulses (brachial, radial, femoral, dorsalis pedis, posterior tibial)
- Abdomen (bowel sounds, liver, spleen, masses, bruits, pain or tenderness on palpation, abnormal description)
- Pelvis and Groin (female) (hernia, external genitalia,) speculum exam (vagina & cervix) bimanual, rectal exam. abnormal description)
- Pelvis and Groin (males) (hernia, testicles, prostate exam, rectal exam abnormal description)
- Rectal exam stool testing male and female (stool from rectal exam tested for blood with a hemoccult testing card and solution)
- Extremities **(**ROM, edema, abnormal description)
- Neurological (gait, coordination, cranial nerve function, proximal and distal strength, touch sensation, mental status, reflexes (biceps, triceps, knee, ankle, abnormal description)
- Other (other physical finding are noted)

Step 4: Physician documents all exam findings, signs and dates the H & P form

PHYSICIAN'S HEALTH STATUS ASSESSMENT

Step 5: Physician Health Assessment (the examining physician based on data and examination rates the participants' function and will being in the areas below. 6 is "no problems" and 1 is "many problems")

- Physical Function
- Role function (Job, parent, etc.)
- Mental Health
- Energy/Pep
- Bodily Pain
- Overall assessment

PHYSICIAN INTERPRETATION AND RECOMMENDATIONS

Step: 6 Makes standard recommendations according to findings (stop smoking, diet, exercise, skin exams, etc)
Step: 7 Vision exam interpretation and recommendation
Step: 8 Hearing exam interpretation and recommendation
Step: 9 EKG interpretation and recommendation
Step: 10 Identifies any symptoms of concern and recommendations
Step: 11 Identifies any physical exam findings of concern and recommendations
Step: 12 Identifies any laboratory finding of concern and recommendations

ADDITIONAL TESTING PROCEDURES FOR FMMP PARTICIPANTS

- Mammography – if scheduled, participants are escorted to the Mercy Fairfield Hospital mammography department to have a screening mammogram done. The films are sent to the University of Cincinnati radiology department and read by a radiologist certified in mammography.
- Chest Xray- if scheduled, participants are escorted to the Mercy Fairfield Hospital radiology department to have a chest Xray done. The films are sent to the University of Cincinnati and read by the radiologist.
- PFT's (spirometry)-if scheduled, participants are escorted to the Mercy Fairfield Hospital pulmonary department for testing. The report is read by the hospital staff Pulmonary Specialist.
- EKG's- for initial EKG's the participants are escorted the hospital EKG department for testing and the EKG is read by the staff Cardiologist.