COUNTY OF YOLO

HEALTH AND HUMAN SERVICES AGENCY

POLICIES AND PROCEDURES

SECTION 5, CHAPTER 11, POLICY 020

MONITORING VITAL SIGNS

A. PURPOSE: To obtain relevant physical information for assisting medical personnel in the medical assessment of clients being seen in a Yolo County Health and Human Services Agency (HHSA) outpatient or mental health urgent care clinic; and to provide guidelines for monitoring vital signs and parameters requiring urgent or emergent follow-up.

B. FORMS REQUIRED/ATTACHMENTS: N/A

C. DEFINITIONS:

Vital Signs: clinical measurements that indicate the state of a client's vital body functions, and may include height, weight, temperature, respiration rate, pulse rate, and blood pressure.

D. POLICY: All clients being seen by a prescriber (MD, DO, NP, PA) in HHSA behavioral health or mental health urgent care clinics will have their vital signs monitored and recorded in their medical record, with verbal consent, at every client encounter, as possible. HHSA recognizes the following licensed health care professionals authorized to obtain vital signs: physician; nurse practitioner (NP); physician assistant (PA); registered nurse (RN); licensed vocational nurse (LVN); licensed psychiatric technician (LPT); and medical assistant (MA). Unlicensed staff may not present as a nurse or attempt to interpret any vital signs. Unlicensed staff may be trained by licensed medical staff, with HHSA Medical Director authorization, to assist in obtaining vital signs. Unlicensed staff will be unable to interpret vital signs, but once trained and having passed written and skills tests, will be able to obtain vital signs and report to medical staff. If Finger Stick Blood Glucose (FSBG) is necessary to check, it will only be performed by licensed medical or nursing staff.

E. PROCEDURE

1. Vital Sign Measurements

a. Height

i. Height may be provided by client report or as listed on his/her ID/Driver's License.

ii. Height may also be measured by using a stadiometer, if available, or other medical equipment in the clinic used for measuring height.

b. Weight

i. Utilize the clinic's electronic or analog scale for measuring weight.

c. Temperature

i. Utilize the clinic's available thermometer type for measuring temperature, which may include digital thermometers, electronic ear thermometers, or temporal thermometers.

ii. Average body temperature is considered to be 98.6°F (37°C).

- For adults, normal temperature range is 97°F – 99°F (36.1°C – 37.2°C)
- For children, normal temperature range is 97.9°F – 100.4°F (36.6°C – 38°C)

iii. Tympanic temperature is usually 0.5°F (0.3°C) to 1°F (0.6°C) higher than oral temperature, while axillary and temporal temperatures are usually 0.5°F (0.3°C) to 1°F (0.6°C) lower than oral temperature.

iv. Any temperature above 100.4°F (38°C) is considered a fever and medical staff should be notified.

v. Any client with a temperature of 103°F (39.4°C) or higher, or below 97°F (36.1°C), require physician notification and referral of client to primary care physician or emergency care.

d. Respiration Rate

i. Respiration rate is counted using the second hand of a watch or clock and counting the number of times the client inhales (chest rises) over a 15-second period, multiplying by four (4), and recording the one-minute rate.

ii. Respirations should be even and unlabored. If uneven or labored, count respirations for a full one minute.

iii. Any client with uneven, labored, difficult breathing, and respiration rates above or below the following parameters require physician notification and referral of client to primary care physician or emergency care.

AGE	MIN. RESPIRATORY RATE	MAX. RESPIRATORY RATE
Infant (<1 year)	30	60
Toddler (1-2 years)	24	40
Preschool (3-5 years)	22	34
School-age (6-11 years)	18	30
Adolescent/Adult (12+ years)	12	20

e. Pulse Rate

i. Pulse rate is most often counted using the radial pulse.

ii. Locate the pulse on the thumb side of the wrist with the tips of your three fingers (index, second, and third fingers). Do not use your thumb since it contains a pulse that may be confused with the client's pulse.

iii. When the pulse is felt, apply slight pressure. Using the second hand of a watch or clock, count the number of beats (pulses) felt over a 30-second period. Multiple the 30-second rate by two (2) to obtain the one-minute rate.

iv. Pulses should be regular. If irregular, count pulse rate for a full one minute.

v. Any client with an irregular or weak pulse, and pulse rates above or below the following parameters require physician notification. Referral of client to primary care physician or emergency care is required for pulse over 120 beats per minute, if still elevated after a re-check.

AGE	AVERAGE RATE (BEATS PER MINUTE)
Infant (<1 year)	80-160
Toddler (1-2 years)	80-130
Preschool (3-5 years)	80-120
School-age/Adolescent (6-15 years)	70-100
Adult (18+ years)	60-100

f. Blood Pressure

i. Blood pressure is measured using an electronic blood pressure machine or manually using a sphygmomanometer and stethoscope.

ii. For electronic blood pressure machines, follow manufacturer's recommended procedure for using the device. If blood pressure is above or below the parameters listed below, it should be manually re-checked.

iii. For manual blood pressure, wrap the appropriate-size cuff around the arm so that the index line is positioned above the brachial artery (2 cm above the antecubital area). Place the stethoscope bell over the brachial artery below the edge of the cuff. Inflate the cuff enough to temporarily stop the flow of blood through the artery and then slowly deflate the cuff while listening with stethoscope:

- The first beat you hear represents systolic pressure (upper measurement)
- The last beat you hear represents diastolic pressure (lower measurement)

iv. Blood pressure should be within the normal range for both systolic and diastolic readings. Any blood pressure readings above or below the following parameters

require physician notification and may require referral of client to primary care physician or emergency care. Client will be referred to PCP for Hypertension Stage 2 or Stage 2, and to the emergency room for Hypertensive Crisis.

Blood Pressure Category	Systolic (mm Hg)		Diastolic (mm Hg)
Normal	Less than 120	and	Less than 80
Elevated	120-129	and	Less than 80
Hypertension Stage 1	130-139	or	80-90
Hypertension Stage 2	140 or higher	or	90 or higher
Hypertensive Crisis	Higher than 180	and/or	Higher than 120

v. Common causes of abnormal blood pressure readings may include, but are not limited to: wrong size cuff; incorrectly wrapped cuff; incorrect positioning of arm; not using same arm for all readings; not having the gauge at eye level; and deflating the cuff too slowly.

vi. Avoid measuring blood pressure using an arm that is paralyzed, injured, swollen, or has an A/V shunt used for dialysis.

g. Oxygen Saturation (Pulse Oximetry)*

*not regularly checked in outpatient mental health clinic, unless indicated

i. Normal oxygen saturation is considered to be 95-100%.

For clients with COPD or other lung diseases, it is not uncommon for oxygen saturation to be 88-92%, but should be referred to the physician for follow-up.

ii. Ensure that the digit being used is free of nail polish and is not cold, which may interfere with results. Avoid taking a blood pressure at the same time, if using the same arm, or the pulse oximeter may not detect a reading.

iii. To apply the pulse oximeter, open it and gently allow it to close on the selected digit. Allow the oximeter to obtain a reading (expressed as a percentage).

iv. Oxygen saturation should be in the normal range. Any oxygen saturation percentage below the parameters listed above require physician notification and may require referral of client to primary care physician or emergency care.

h. Finger Stick Blood Glucose (FSBG)*

*not regularly checked in outpatient mental health clinic, unless indicated

i. FSBG is conducted by pricking a finger with a lancet to obtain a small quantity (usually a drop or two) of capillary blood to test blood glucose with a glucometer.

ii. If FSBG is to be performed, utilize the clinic's available glucometer for testing blood glucose, and follow the manufacturer's recommended procedure for using the device.

iii. It is recommended to prick the sides of the finger, since there are fewer nerve endings here than at the finger tips. The third and fourth fingers of the non-dominant hand are recommended to use for blood glucose tests.

iv. Avoid using fingers that are cold, swollen, scarred, cyanotic, or covered with a rash or hives.

v. After fingertip is cleansed with an alcohol swab, be sure to wipe dry with clean gauze or let air dry, as alcohol can falsely elevate or lower blood glucose results.

vi. Wipe away the first drop of blood, as it often contains excess tissue fluid. Avoid squeezing or "milking" the finger, since this may result in hemolysis or increase tissue fluid in the blood and cause inaccurate results.

vii. Blood glucose levels should be within the recommended range. Blood glucose levels above or below the following parameters require physician notification and may require referral of client to primary care physician or emergency care.

Person Type	Fasting	2 hours after meals
Normal Person w/o Diabetes	70-99 mg/dl	Less than 140 mg/dl
Person w/ Diabetes (ADA)	80-130 mg/dl	Less than 180 mg/dl

2. Vital Signs Documentation

a. The outpatient mental health clinic aims to obtain height, weight, temperature, respirations, pulse, and blood pressure, on all verbally consenting clients when they present to see a prescriber.

b. FSBG and Oxygen Saturation may be obtained on clients with a history of, or current, diabetes or known lung disease who present for an appointment with a prescriber or as requested by prescriber. FSBG may only be taken by licensed medical or nursing staff.

c. Document all vital signs results in Avatar under the "Vitals Entry" form.

d. Communicate any abnormal or critical values to the prescriber immediately.

3. Training for Unlicensed Staff

a. Licensed medical staff will provide written training information.

b. Licensed medical staff will provide instruction and demonstration of each vital sign.

c. Licensed medical staff will test proficiency with:

   i. Written test, scoring 80% or higher

   ii. Return demonstration of skills

d. Licensed medical staff will document proficiency and maintain in the staff's personnel record, the training provided and the written and return demonstration test results.

F. REFERENCES:

American Diabetes Association (ADA), *Checking your blood glucose* (October 2018)

American Heart Association (AHA), *Guidelines for the detection, prevention, management and treatment of high blood pressure* (November 2017)

Approved by:

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7/31/19
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COUNTY OF YOLO

HEALTH AND HUMAN SERVICES AGENCY

POLICIES AND PROCEDURES

SECTION 5, CHAPTER 11, POLICY 020-A

VITAL SIGNS WRITTEN TEST AND SKILLS OBSERVATION

Name: _____ Date: _____ Score: _____

WRITTEN TEST

1. What is the average body temperature?
   a. 98.0°F
   b. 99.0°F
   c. 98.6°F
   d. 98.5°F

2. Any temperature above 100.4°F (38°C) is considered a fever.
   a. True
   b. False

3. What is the normal respiratory rate for an adolescent/adult (12+ years)?
   a. 20 to 30 breaths per minute
   b. 12 to 20 breaths per minute
   c. 8 to 16 breaths per minute
   d. None

4. Observe respirations for two minutes before documenting the results.
   a. True
   b. False

5. What is the average resting pulse rate of an adult?
   a. 60 to 100 beats per minute
   b. 80 to 120 beats per minute
   c. 40 to 90 beats per minute
   d. Depends on what the client was doing prior to taking pulse

6. When palpating a radial pulse, always use your thumb.
   a. True
   b. False

7. An irregular pulse must be counted for one minute.
   a. True
   b. False

8. When measuring blood pressure, the systolic measurement is the first sound heard.
   a. True
   b. False

9. It is acceptable to use an adult blood pressure cuff on a child if it is wrapped securely.
   a. True
   b. False

10. When taking a manual blood pressure, where is the bell of the stethoscope placed on the arm?
    a. Over the radial artery about 2 cm below the antecubital space
    b. Over the brachial artery about 2 cm above the antecubital space
    c. Over the femoral artery about 2 cm below the antecubital space
    d. Over the blood pressure cuff

11. What is a normal oxygen saturation percentage?
    a. 98%
    b. 100%
    c. 92%
    d. 96%

12. A pulse oximeter should be applied to warm, clean finger clear of any nail polish.
    a. True
    b. False

13. You have taken a client's vital signs as part of the initial medical screening and obtained the following results: Temperature – 99.2°F; Respirations – 26; Pulse – 115; Blood Pressure 130/90. What would you do next?
    a. Document the vitals in the medical record
    b. Immediately notify the prescriber/physician
    c. Send the client to the emergency room
    d. a and b

VITAL SIGNS SKILLS OBSERVATION

Instructions: Measure and record height, weight, temperature, respiration rate, pulse rate, and pulse oximetry, if oximeter is available, on five (5) individuals in the presence of a physician, nurse practitioner, physician assistant, registered nurse, licensed vocational nurse, or licensed psychiatric technician.

	Height	Weight	Temp.	Resp.	Pulse	Pulse Ox	BP	Verified by
1								
2								
3								
4								
5								

Prepared By: Quality Management
Effective: 12/05/2018
Last Revision: 07/29/2019
HHSA PP 5-11-020-A

COUNTY OF YOLO

HEALTH AND HUMAN SERVICES AGENCY

POLICIES AND PROCEDURES

SECTION 5, CHAPTER 11, POLICY 020-B

VITAL SIGNS WRITTEN TEST ANSWER SHEET

WRITTEN TEST

1. What is the average body temperature?
   a. 98.0°F
   b. 99.0°F
   c. 98.6°F
   d. 98.5°F

2. Any temperature above 100.4°F (38°C) is considered a fever.
   a. True
   b. False

3. What is the normal respiratory rate for an adolescent/adult (12+ years)?
   a. 20 to 30 breaths per minute
   b. 12 to 20 breaths per minute
   c. 8 to 16 breaths per minute
   d. None

4. Observe respirations for two minutes before documenting the results.
   a. True
   b. False

5. What is the average resting pulse rate of an adult?
   a. 60 to 100 beats per minute
   b. 80 to 120 beats per minute
   c. 40 to 90 beats per minute
   d. Depends on what the client was doing prior to taking pulse

6. When palpating a radial pulse, always use your thumb.
   a. True
   b. False

7. An irregular pulse must be counted for one minute.
   a. True
   b. False

8. When measuring blood pressure, the systolic measurement is the first sound heard.
   a. True
   b. False

9. It is acceptable to use an adult blood pressure cuff on a child if it is wrapped securely.
   a. True
   b. False

10. When taking a manual blood pressure, where is the bell of the stethoscope placed on the arm?
    a. Over the radial artery about 2 cm below the antecubital space
    b. Over the brachial artery about 2 cm above the antecubital space
    c. Over the femoral artery about 2 cm below the antecubital space
    d. Over the blood pressure cuff

11. What is a normal oxygen saturation percentage?
    a. 98%
    b. 92%
    c. 100%
    d. a and c

12. A pulse oximeter should be applied to warm, clean finger clear of any nail polish.
    a. True
    b. False

13. You have taken a client's vital signs as part of the initial medical screening and obtained the following results: Temperature – 99.2°F; Respirations – 26; Pulse – 115; Blood Pressure 130/90. What would you do next?
    a. Document the vitals in the medical record
    b. Immediately notify the prescriber/physician
    c. Send the client to the emergency room
    d. a and b