

The Construction of The Vitals Buddy

The Vitals Buddy is an interactive tool designed for health care professionals to quickly document notes with Human Vital functions for patients in the healthcare environment. It was designed for Microsoft Excel and is compatible with Google Sheets.

The healthcare professional can make notes on a patient's current functions, reducing memory recall, and or, lost of paper documentation. For the novice professional, there are prompts to assist with interpreting the collected data. Documenting trends in patient performance becomes easier to visualize.

Worksheet Examples:

Room #: The Room # identifies the source of information. It cannot be "0."

Alertness: Denotes the Alertness level of the patient. The date and time of this entry allows the clinician to document when changes occur.

The patient can be documented as:

- a. A – Alert
- b. V - Responds to Verbal Stimulus
- c. P - Responds to Pain
- d. U – Unresponsive

Although one may omit the alertness assessment – one MUST select a Room # before continuing with further entries. This organizes future entries for the following worksheets.

Vitals:

Entries for Vitals are compared to normative data within The Vitals Buddy. Vitals include Temperature, Pulse, Respiration, Blood Pressure, and O₂.¹

Examples --

Temperature	Pulse	Respiration	Blood Pressure		O ₂	
			Systolic	Diastolic		
97.8 – 99.1	60 – 100 bpm	12 – 18 bpm	90 - 120	60 - 80	95 % - 100 %	Normal
			90/60	120/80	91 % - 95 %	Concerning
					86 % - 91 %	Reduced Levels
					< 86 %	Severe Hypoxia

Normal Body Temperature Chart (normative data within The Vitals Buddy):

Type of reading	0 – 2 years	3 – 10 years	11 – 65 years	Over 65 years
Oral	95.9 – 99.5°F (35.5 – 37.5°C)	95.9 – 99.5°F (35.5 – 37.5°C)	97.6 – 99.6°F (36.4 – 37.6°C)	96.4 – 98.5°F (35.8 -36.9°C)
Rectal	97.9 – 100.4°F (36.6 – 38°C)	97.9 – 100.4°F (36.6 – 38°C)	98.6 – 100.6°F (37.0 – 38.1°C)	97.1 – 99.2°F (36.2 – 37.3°C)
Armpit	94.5 – 99.1°F (34.7 – 37.3°C)	96.6 – 98.0°F (35.9 – 36.7°C)	95.3 – 98.4°F (35.2 – 36.9°C)	96.0 – 97.4°F (35.6 – 36.3°C)
Ear	97.5 – 100.4°F (36.4 – 38°C)	97.0 – 100.0°F (36.1 – 37.8°C)	96.6 – 99.7°F (35.9 – 37.6°C)	96.4 – 99.4°F (35.8 – 37.5°C)
Skin ²	92.3 to 98.4°F (33.5 to 36.9°C)	92.3 to 98.4°F (33.5 to 36.9°C)	92.3 to 98.4°F (33.5 to 36.9°C)	92.3 to 98.4°F (33.5 to 36.9°C)

* Fahrenheit scale can be changed to Celsius from the “Norm Temp” worksheet (which is hidden). There is a drop-down box to select values in Celsius. There is also a drop-down box for normal temperature values for 1. Over 60 years (default); 2. 18 to 60 years; 3. 1-17 years; and 4. 0 months to 12 months. (These data values can be edited for your clinical environment).

Blood Pressure Measurement Ranges³

Blood Pressure Category	SYSTOLIC mm Hg (upper number)	and / or	DIASTOLIC mm Hg (lower number)
NORMAL	Less than 120	and	LESS THAN 180
ELEVATED	120 - 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 or HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Pain:

Patient is asked to make pain level judgments on a continuum from 0 to 10. The number 0 reflecting “no pain” and 10 “severe” pain. The judgements are further categorized as Mild, Moderate and Severe.⁴

Height / Weight:

Body Mass Index (or BMI) is calculated when the patient’s height (in inches) and weight (in pounds) are inserted in The Vitals Buddy. BMI is a metric used to define anthropometric height/weight characteristics in adults and classifying them into groups.⁵ These classification groups generally reflect an individual’s “fatness.”

The Vitals Buddy provides results as either (1) Underweight [< 18.5], (2) Normal weight (or Healthy Weight) [$18.5 - 24.9$], (3) Overweight [$25 - 29.9$], and (4) Obesity [30 or $>$].

Food Intake:

Food Point System

The Food Point System was designed to allow different Food Items a specific point allotment (e.g., 20 points for toast).⁶ The total allotment of points for a given meal reflected their performance during the meal. Using the Vitals Buddy, the user can select the percentage of the food item consumed and the points received for that item are calculated. Once completed, the points accrued for the meal is totaled and provided a judgement of “Good,” “Fair,” or “Poor.”

1. How are points distributed with the Food Point System?

Breakfast

Food Item		Points		
Toast		20	Good =	75 – 100 points
Juice		20	Fair =	50 – 74 points
Milk		20	Poor	0 – 49 points
Eggs		20		
Cereal		20		
		100		

Lunch / Dinner

Food Item		Points		
Bread		10	Good =	75 – 100 points
Meat / Entrée		50	Fair =	50 – 74 points
Vegetable or Soup		20	Poor	0 – 49 points
Dessert		20		
		100		

2. How does one Record the points [All calculations are completed within The Vitals Buddy once the percentage of the Food Item is inserted]
- a. Select the percentage of the food item consumed.
 - b. The Vitals Buddy translates the percentage to points.
 - c. If the patient's intake is below 50 points for more than 3 meals in three days, report it to the Nurse and the Dietitian for evaluation.
 - d. Add the patient's name to the "Low Intake" (below 50 %) list. These patient's require additional observation and possible assistance during meals. The patient's names can be removed from this list if intake increases above 50 points for 3 meals.
 - e. Report to the Nurse and Dietitian if the patient remains on the Low Intake list for 3 days.
 - f. Report any concerns/problems related to the patient not receiving enough nutritional intake.

3. How to Calculate (All calculations completed within The Vitals Buddy)?
 - a. Coffee, water, tea and condiments equal no points.
 - b. Each food item served equals one point.
 - c. If the patient consumes all four items in the amount served, the patient consumes 100 % of the meal.
 - d. If the patient consumes two of the four food items served, then 50 % of the meal is consumed.
 - e. If partial amounts of an item is consumed, indicate percentage and the Vitals Buddy will calculate the point values.
 - f. Total the points consumed x 100.
 - g. Divide by the number of given for that meal to give the percentage of meal consumed.
4. Although details (# 3 above) are provided regarding calculations, all point calculations are made easy within The Vitals Buddy by selecting the percentage of the food item consumed. The Vitals Buddy translates the percentage into point values.

Percent Method

1. How To Calculate Food Intake Using The Percent Method?
 - a. Coffee, water, tea and condiments equal no points.
 - b. Breakfast, Lunch and Dinner
 - i. When the meal is complete, visually evaluate the tray.
 - ii. Estimate the percent of food eaten based on the amount of food remaining.
 - iii. Record in increments of 0 – 25 % – 50 % – 75 % – 100 %
2. How To Record (The Vitals Buddy provides a graphic visual of comparison across meals)
 - a. Record the percentage on the meal intake sheet.
 - b. If patient's intake is below 50 points for more than 3 meals in three days, report it to the Nurse and the Dietitian for evaluation.
 - c. Add the patient's name to the "Low Intake" (below 50 %) list. These patients require additional observation and possible assistance during meals. Patient's names are removed if intake increases above 50 points for 3 meals.
 - d. Report to the Nurse and Dietitian if the patient remains on the Low Intake list for 3 days.
 - e. Report any concerns/problems related to the patient not receiving enough nutrition intake.

Liquid Intake:

The Liquid intake worksheet allows the user to notate the liquids consumed, in ounces, for Breakfast, Lunch and Dinner (as well as snacks between meals). ⁷ Calculations are converted to Total ml and Rounded ml.

Bowel Elimination:

Bowels are noted for the number of movements, the appearance and how it was reported (e.g., Self Report, Visual Report, or Refusal).⁸

Condition of the Skin:

The Condition of the Skin can be documented for Temperature, Turgor (firmness), Color, Moisture level, and Skin Integrity.⁹

¹ Vital Signs (Body Temperature, Pulse Rate, Respiration Rate, Blood Pressure) - Health Encyclopedia - University of Rochester Medical Center. (n.d.). <https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=85&ContentID=P00866>

² Bierman, William 91936-04-04). "The Temperature of the Skin Surface," Journal of the American Medical Association. 106 (14): 1158.

³ The American Heart Association, 2023, Understanding Blood Pressure Readings, Healthy and Unhealthy Blood Pressure Ranges, <https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings>.

⁴ Assessing and Documenting Pain | ATrain Education. (n.d.). <https://www.atrainceu.com/content/10-assessing-and-documenting-pain>.

⁵ Calculate Your BMI – Standard BMI Calculator. (n.d.). https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm

⁶ Food Acceptance Methods of Measurement, Texas Health Care Association, <https://txhca.org/app/uploads/2014/10/mealcon2.pdf>.

⁷ Intake and Output Calculation NCLEX Review. (2018b, February 27). Registered Nurse RN. <https://www.registerednursern.com/intake-output-calculation-nclex-review/#:~:text=Many%20times%20test%20questions%20will%20give%20you%20the,line%20fluids%20%28TPN%2C%20lipids%2C%20blood%20products%2C%20medication%20infusion%29>

⁸ R. (2017, August 31). Bowel Elimination. RNpedia. <https://www.rnpedia.com/nursing-notes/fundamentals-in-nursing-notes/bowel-elimination/>

⁹ Zulkowski, K., 2023, Agency for Healthcare Research and Quality, Conducting a Comprehensive Skin Assessment, Pressure Ulcer Prevention, https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/pressure_ulcer_prevention/webinars/webinar4_pu_skinassesst_final.pdf.