Codebook RP2:

* CD4+ cell count:
  + Indicator: CD4+ cell count
  + Definition: The number of CD4+ T cells in a person's blood, measured in cells/mm3.
  + Calculation: Blood sample is taken and CD4+ T cell count is measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The CD4+ cell count may not accurately reflect the actual number of CD4+ T cells in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The CD4+ cell count is an important indicator of a person's immune system function. A low CD4+ cell count indicates that the person has a weakened immune system and is at risk of opportunistic infections.
* Viral load:
  + Indicator: Viral load
  + Definition: The amount of virus in a person's blood, measured in copies/mL.
  + Calculation: Blood sample is taken and viral load is measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The viral load may not accurately reflect the actual amount of virus in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The viral load is an important indicator of the effectiveness of antiretroviral therapy (ART) in a person with HIV. A high viral load indicates that the person is not responding well to ART and may need to switch to a different treatment regimen.
* Antiretroviral therapy adherence:
  + Indicator: Antiretroviral therapy adherence
  + Definition: The proportion of people with HIV who are taking their ART as prescribed.
  + Calculation: (Number of people with HIV who are taking their ART as prescribed / Total number of people with HIV) x 100
  + Data Source: Self-reported data on ART adherence
  + Limitations: The ART adherence may be over-reported if people do not accurately report their adherence to their treatment regimen.
  + Notes: Adherence to ART is essential for the effective management of HIV. The WHO recommends that people with HIV take their ART as prescribed to maintain viral suppression and prevent the development of drug resistance. A high ART adherence indicates that people are receiving the support and information they need to successfully manage their HIV.
* Body mass index:
  + Indicator: Body mass index (BMI)
  + Definition: A measure of a person's body weight in relation to their height, calculated as weight (kg) / height (m)^2.
  + Calculation: Weight and height are measured and BMI is calculated using the formula above.
  + Data Source: Self-reported data on weight and height
  + Limitations: The BMI may not accurately reflect a person's body weight and composition due to variations in the accuracy of the self-reported data.
  + Notes: The BMI is a commonly used indicator of a person's risk of obesity-related health problems. A high BMI indicates that a person is at increased risk of developing conditions such as diabetes, heart disease, and certain cancers.
* Blood pressure:
  + Indicator: Blood pressure
  + Definition: The force of blood against the walls of the arteries, measured in mmHg.
  + Calculation: Blood pressure is measured using a blood pressure cuff.
  + Data Source: Blood pressure readings
  + Limitations: The blood pressure may not accurately reflect the actual
* Glucose levels:
  + Indicator: Glucose levels
  + Definition: The concentration of glucose in a person's blood, measured in mg/dL.
  + Calculation: Blood sample is taken and glucose levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The glucose levels may not accurately reflect the actual concentration of glucose in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: Glucose levels are an important indicator of a person's risk of developing diabetes. A high glucose level indicates that a person is at increased risk of developing diabetes or may already have the condition.
* Cholesterol levels:
  + Indicator: Cholesterol levels
  + Definition: The concentration of cholesterol in a person's blood, measured in mg/dL.
  + Calculation: Blood sample is taken and cholesterol levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The cholesterol levels may not accurately reflect the actual concentration of cholesterol in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: Cholesterol levels are an important indicator of a person's risk of developing heart disease. A high cholesterol level indicates that a person is at increased risk of developing heart disease or may already have the condition.
* Kidney function:
  + Indicator: Kidney function
  + Definition: The ability of the kidneys to filter waste products from the blood and excrete them in the urine, measured in mL/min.
  + Calculation: Kidney function is measured using a laboratory test called the estimated glomerular filtration rate (eGFR).
  + Data Source: Laboratory test results
  + Limitations: The eGFR may not accurately reflect the actual function of the kidneys due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: Kidney function is an important indicator of a person's overall health. A decline in kidney function can lead to a buildup of waste products in the blood and other health problems. Regular monitoring of kidney function is recommended to detect and manage kidney disease.
* Liver function:
  + Indicator: Liver function
  + Definition: The ability of the liver to perform its various functions, including the production of bile, the metabolism of carbohydrates and fats, and the detoxification of toxic substances.
  + Calculation: Liver function is measured using a panel of laboratory tests that evaluate different aspects of liver function.
  + Data Source: Laboratory test results
  + Limitations: The liver function tests may not accurately reflect the actual function of the liver due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: Liver function is an important indicator of a person's overall health. A decline in liver function can lead to a variety of health problems, including liver disease. Regular monitoring of liver function is recommended to detect and manage liver

Systolic blood pressure:

* Indicator: Systolic blood pressure
* Definition: The maximum pressure in the arteries during a heartbeat, measured in mmHg.
* Calculation: Blood pressure is measured using a blood pressure cuff. The systolic blood pressure is the first (higher) number in a blood pressure reading.
* Data Source: Blood pressure readings
* Limitations: The systolic blood pressure may not accurately reflect the actual pressure in the arteries due to variations in the accuracy of the blood pressure measurement.
* Notes: The systolic blood pressure is an important indicator of a person's risk of developing heart disease. A high systolic blood pressure indicates that a person is at increased risk of developing heart disease or may already have the condition.

Heart rate:

* Indicator: Heart rate
* Definition: The number of times the heart beats per minute, measured in beats/min.
* Calculation: The heart rate is measured by counting the number of beats over a specific time period (usually one minute).
* Data Source: Heart rate readings
* Limitations: The heart rate may not accurately reflect the actual number of heartbeats per minute due to variations in the accuracy of the measurement.
* Notes: The heart rate is an important indicator of a person's overall health. A high heart rate may indicate that a person is experiencing stress or other health problems. A low heart rate may indicate that a person has a weak or damaged heart.
* Respiration rate:
* Indicator: Respiration rate
* Definition: The number of breaths a person takes per minute, measured in breaths/min.
* Calculation: The respiration rate is measured by counting the number of breaths over a specific time period (usually one minute).
* Data Source: Respiration rate readings
* Limitations: The respiration rate may not accurately reflect the actual number of breaths per minute due to variations in the accuracy of the measurement.
* Notes: The respiration rate is an important indicator of a person's overall health. A high respiration rate may indicate that a person is experiencing stress or other health problems. A low respiration rate may indicate that a person has a weakened respiratory system.

Oral temperature:

* Indicator: Oral temperature
* Definition: The temperature of a person's body, measured in degrees Celsius (°C).
* Calculation: The oral temperature is measured using a thermometer placed in the mouth.
* Data Source: Oral temperature readings
* Limitations: The oral temperature may not accurately reflect the actual temperature of the body due to variations in the accuracy of the measurement.
* Notes: The oral temperature is an important indicator of a person's overall health. A high oral temperature may indicate that a person has a fever and is experiencing an infection or other health problem. A low oral temperature may indicate that a person has a weakened immune system or other health problem.
* Creatinine clearance:
  + Indicator: Creatinine clearance
  + Definition: The rate at which the kidneys filter waste products from the blood, measured in mL/min.
  + Calculation: Creatinine clearance is calculated using a formula that takes into account the person's age, sex, weight, and serum creatinine level.
  + Data Source: Laboratory test results for serum creatinine and other relevant parameters
  + Limitations: The creatinine clearance may not accurately reflect the actual function of the kidneys due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The creatinine clearance is an important indicator of kidney function. A decline in creatinine clearance indicates that the kidneys are not functioning properly and may be damaged or diseased.
* Albumin:
  + Indicator: Albumin
  + Definition: A protein produced by the liver and found in the blood, measured in g/dL.
  + Calculation: Blood sample is taken and albumin levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The albumin levels may not accurately reflect the actual concentration of albumin in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The albumin level is an important indicator of liver function. A decline in albumin levels may indicate that the liver is not functioning properly and may be damaged or diseased.
* Alkaline phosphatase:
  + Indicator: Alkaline phosphatase (ALP)
  + Definition: An enzyme produced by the liver and other tissues and found in the blood, measured in IU/L.
  + Calculation: Blood sample is taken and ALP levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The ALP levels may not accurately reflect the actual concentration of ALP in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The ALP level is an
* Phosphate:
  + Indicator: Phosphate
  + Definition: An electrolyte found in the blood, measured in mg/dL.
  + Calculation: Blood sample is taken and phosphate levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The phosphate levels may not accurately reflect the actual concentration of phosphate in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The phosphate level is an important indicator of a person's overall health. A high phosphate level may indicate that a person has kidney disease or other health problems. A low phosphate level may indicate that a person has malnutrition or other health problems.
* ALT:
  + Indicator: Alanine transaminase (ALT)
  + Definition: An enzyme produced by the liver and found in the blood, measured in IU/L.
  + Calculation: Blood sample is taken and ALT levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The ALT levels may not accurately reflect the actual concentration of ALT in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The ALT level is an important indicator of liver function. A rise in ALT levels may

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* Creatinine clearance:
  + Indicator: Creatinine clearance
  + Definition: The rate at which the kidneys filter waste products from the blood, measured in mL/min.
  + Calculation: Creatinine clearance is calculated using a formula that takes into account the person's age, sex, weight, and serum creatinine level.
  + Data Source: Laboratory test results for serum creatinine and other relevant parameters
  + Limitations: The creatinine clearance may not accurately reflect the actual function of the kidneys due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The creatinine clearance is an important indicator of kidney function. A decline in creatinine clearance indicates that the kidneys are not functioning properly and may be damaged or diseased.
* Albumin:
  + Indicator: Albumin
  + Definition: A protein produced by the liver and found in the blood, measured in g/dL.
  + Calculation: Blood sample is taken and albumin levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The albumin levels may not accurately reflect the actual concentration of albumin in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The albumin level is an important indicator of liver function. A decline in albumin levels may indicate that the liver is not functioning properly and may be damaged or diseased.
* Alkaline phosphatase:
  + Indicator: Alkaline phosphatase (ALP)
  + Definition: An enzyme produced by the liver and other tissues and found in the blood, measured in IU/L.
  + Calculation: Blood sample is taken and ALP levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The ALP levels may not accurately reflect the actual concentration of ALP in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The ALP level is an
* Phosphate:
  + Indicator: Phosphate
  + Definition: An electrolyte found in the blood, measured in mg/dL.
  + Calculation: Blood sample is taken and phosphate levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The phosphate levels may not accurately reflect the actual concentration of phosphate in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The phosphate level is an important indicator of a person's overall health. A high phosphate level may indicate that a person has kidney disease or other health problems. A low phosphate level may indicate that a person has malnutrition or other health problems.
* ALT:
  + Indicator: Alanine transaminase (ALT)
  + Definition: An enzyme produced by the liver and found in the blood, measured in IU/L.
  + Calculation: Blood sample is taken and ALT levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The ALT levels may not accurately reflect the actual concentration of ALT in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The ALT level is an important indicator of liver function. A rise in ALT levels may
* Anion gap:
  + Indicator: Anion gap
  + Definition: The difference between the concentration of certain negatively charged ions (anions) and the concentration of certain positively charged ions (cations) in the blood, measured in mEq/L.
  + Calculation: The anion gap is calculated using a formula that takes into account the person's serum levels of sodium, chloride, and bicarbonate.
  + Data Source: Laboratory test results for serum electrolytes
  + Limitations: The anion gap may not accurately reflect the actual concentration of ions in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The anion gap is an important indicator of acid-base balance in the blood. A high anion gap may indicate that a person has metabolic acidosis, a condition in which the blood becomes too acidic.
* AST:
  + Indicator: Aspartate transaminase (AST)
  + Definition: An enzyme produced by the liver and other tissues and found in the blood, measured in IU/L.
  + Calculation: Blood sample is taken and AST levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The AST levels may not accurately reflect the actual concentration of AST in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The AST level is an important indicator of liver function. A rise in AST levels may indicate that the liver is damaged or diseased.
* Urea nitrogen:
  + Indicator: Urea nitrogen (BUN)
  + Definition: A waste product produced by the liver and excreted by the kidneys, measured in mg/dL.
  + Calculation: Blood sample is taken and urea nitrogen levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The urea nitrogen levels may not accurately reflect the actual concentration of urea nitrogen in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The urea nitrogen level is an important indicator of kidney function. A rise in urea nitrogen levels may indicate that the kidneys are not functioning properly and may be damaged or diseased.
* Calcium:
  + Indicator: Calcium
  + Definition: An electrolyte found in the blood, measured in mg/dL.
  + Calculation: Blood sample is taken and calcium levels are measured using a laboratory test.
  + Data Source: Laboratory test results
  + Limitations: The calcium levels may not accurately reflect the actual concentration of calcium in the blood due to variations in the quality of the blood sample and the accuracy of the laboratory test.
  + Notes: The calcium level is an important indicator of a person's overall health. A high calcium level may indicate that a person has hypercalcemia, a condition in which the blood becomes too alkaline. A low calcium level may indicate that a person has hypocalcemia, a condition in which the blood becomes too acidic.Top of Form

Normal Ranges

* CD4+ cell count: Normal range: 500-1,500 cells/mm3
* Viral load: Normal range: undetectable
* Antiretroviral therapy adherence: Normal range: 90-100%
* Body mass index: Normal range: 18.5-24.9
* Blood pressure: Normal range: less than 120/80 mmHg
* Glucose levels: Normal range: 70-100 mg/dL
* Cholesterol levels: Normal range: less than 200 mg/dL
* Kidney function: Normal range: 90 mL/min or higher
* Liver function: Normal range: varies depending on the specific liver function test
* Systolic blood pressure: Normal range: less than 120 mmHg
* Heart rate: Normal range: 60-100 beats/min
* Respiration rate: Normal range: 12-20 breaths/min
* Oral temperature: Normal range: 36.5-37.5°C
* Creatinine clearance: Normal range: 90 mL/min or higher
* Albumin: Normal range: 3.5-5.0 g/dL
* Alkaline phosphatase: Normal range: 44-147 IU/L
* Phosphate: Normal range: 2.5-4.5 mg/dL
* ALT: Normal range: 10-40 IU/L
* Anion gap: Normal range: 8-16 mEq/L
* AST: Normal range: 10-40 IU/L
* Urea nitrogen: Normal range: 7-20 mg/dL
* Calcium: Normal range: 8.5-10.5 mg/dL