Annie App

Explanation of Readings and Alerts

The Department of Veterans Affairs' (VA) Annie mobile application is a Short Message Service (SMS) text messaging capability that promotes self-care for Veterans enrolled in VA health care. Patients using Annie receive automated prompts to track and monitor their own health and motivational/ educational messages. Annie also sends VA messages from the patient's local VA medical center. **NOTE:** Annie is for patient self-care and not for direct texting between Veterans and staff.

Annie allows clinicians to use and create care protocols that allow patients to easily submit their health readings back to Annie. Messages and patients' data is stored in the Annie system where clinicians can view texts and readings as needed.

For full details on how to use Annie, please visit mobile.va.gov/app/annie-app-clinicians.

Graphics and information below explain the following:

- Valid Reading Boundaries
- Reading Levels That Trigger Alerts to Patients
- Setting Alert Messages to Patients
- Additional Annie Alerts
- Creating Service and Reminder Messages to Patients
- Keywords Needed for Readings

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Valid Reading Boundaries

Lowest Valid Reading – Lowest reading that is possible for Annie to accept.

Highest Valid Reading – Highest reading that is possible for Annie to accept.

Message for Valid Reading – Message to patient when reading does not trigger any Alert Message.

Reading Levels That Trigger Alerts to Patients

Critical Low Level Alert – Reading to trigger a Critical Low Level Alert Message to patient. Valid readings at or below this range are considered to be very low.

Critical High Level Alert – Reading to trigger a Critical High Level Alert Message to patient. Valid readings at or above this range are considered to be very high.

Low Level Alert – Reading to trigger a Low Level Alert Message to patient. Valid readings at or below this range are considered to be low.

High Level Alert – Reading to trigger a High Level Alert Message to patient. Valid readings at or above this range are considered to be high.

> **Examples:**
>
> **Patient sends systolic 200** – Annie takes reading, sends Critical High Level Alert Message.
>
> **Patient sends systolic 275** – Annie send text that this is not a valid reading, asks for a repeat reading (Valid reading must be between 70 and 270).

Readings/Alerts Settings

Measurement *
Blood Pressure

Keywords *
BP, BLOOD

Reading Parameter One: Systolic (mmHg)

Note: Messages defined in Reading Parameter One will be sent to the Veteran.

Lowest Valid Reading *
70

Highest Valid Reading *
270

Message for Valid Reading *
I've got it. Thanks for sending your blood pressure reading. Annie

94 characters remaining

Set Critical Low & High Level Alert

Critical Low Level Alert
80

Critical High Level Alert
180

Message for Critical Low Level Alert
Your BP is very low. The top number is 80 or less, or the bottom number is 50 or less. Please contact your health care team about your BP. Thanks, Annie

8 characters remaining

Message for Critical High Level Alert
Your BP is very high. The top number is 180 or more, or bottom number is 120 or more. Please contact your health care team about your BP. Thanks, Annie

9 characters remaining

Set Low & High Level Alert

Low Level Alert
90

High Level Alert
140

Message for Low Level Alert
Your BP is low. The top is 90 or less, or the bottom is 60 or less. If it does not improve or you are not feeling well, notify your health care team. Annie

5 characters remaining

Message for High Level Alert
Your BP is high. Normal is usually less than 140 over less than 90. If your BP does not improve for 1 to 2 weeks, make sure your healthcare team knows. Annie

3 characters remaining

Setting Alert Messages to Patients

- If patients send multiple readings that trigger a Patient Alert Message, Annie repeatedly sends the same message. The exception is when a Repetitive Values alert is invoked (discussed below).

- Alert levels should be clinically relevant, so that Annie messages accurately inform patients about their readings.

- Regarding a Blood Pressure reading, there is only one message available to use with both the Systolic and Diastolic parameters. Messages should reference both parameters. This applies to the Critical High Level, Critical Low Level, High Level, and Low Level alerts (see below).

Example Alert Messages to Patients Using the Blood Pressure Area:

Critical Low Level Alert

"Your BP is very low. The top number is 80 or less, or the bottom number is 50 or less. Please contact your health care team about your BP. Thanks, Annie"
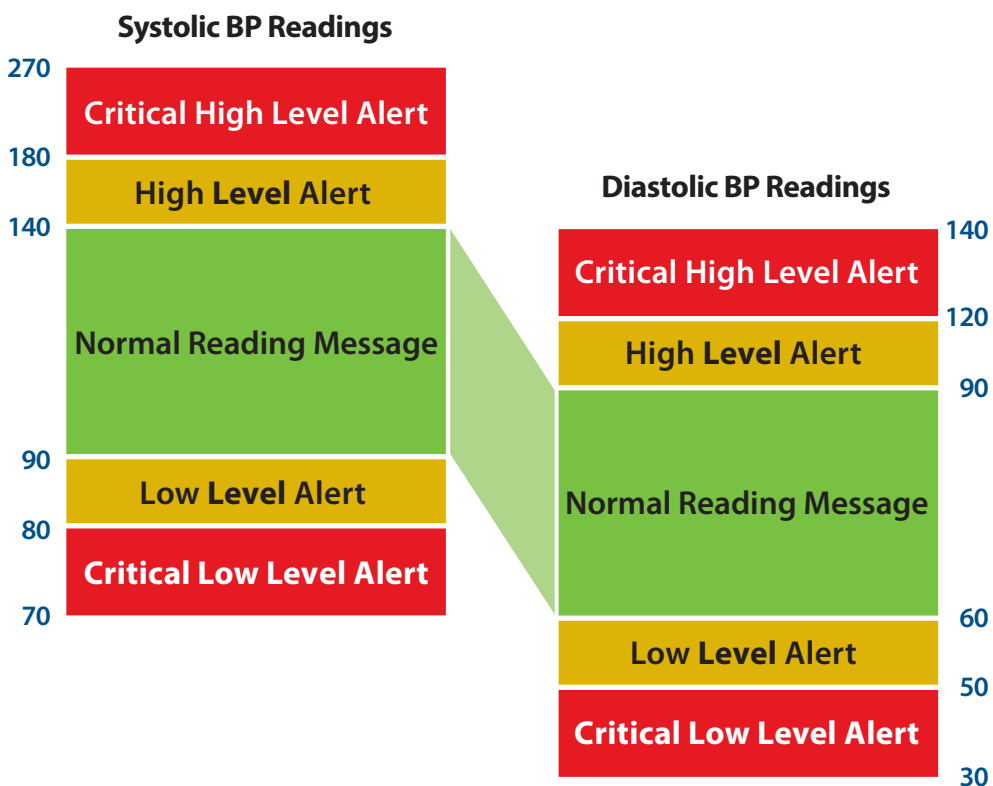
Critical High Level Alert

"Your BP is very high. The top number is 180 or more, or bottom number is 120 or more. Please contact your health care team about your BP. Thanks, Annie"

Low Level Alert

"Your BP is low. The top is 90 or less, or the bottom is 60 or less. If it does not improve or you are not feeling well, notify your health care team. Annie"

High Level Alert

"Your BP is high. Normal is usually less than 140 over less than 90. If your BP does not improve for 1 to 2 weeks, make sure your healthcare team knows. Annie"

Systolic BP Readings

270	Critical High Level Alert
180	High Level Alert
140	
	Normal Reading Message
90	
	Low Level Alert
80	
	Critical Low Level Alert
70	

Diastolic BP Readings

140	Critical High Level Alert
120	High Level Alert
90	
	Normal Reading Message
60	
	Low Level Alert
50	
	Critical Low Level Alert
30	

Readings sent by patients falling outside these ranges are **not valid** and not accepted by Annie. Valid readings are set in the Protocol. In this example, Annie will reject Systolic readings greater than 270 or less than 70.

Additional Annie Alerts

Decreasing and Increasing Values Alert - For Decreasing and Increasing Values Alerts, type in the amount of decrease or increase over a period of time (days, weeks or months). If the specified decrease/increase within the specified time occurs, a designated message will be sent out. E.g., Blood Pressure increasing 20 points in 2 days will result in a designated significant alert sent.

Repetitive Values Alert - A Repetitive Values Alert is invoked when a high alert or low alert occurs a specified number of times within a designated time period. To use a Repetitive Values Alert, specify the alert type (high alert/low alert), the count/number of occurrences of that alert and the number of days over which, if the specified alert type and occurrences are reached, the designated message will be sent out. E.g., If a patient invokes a high alert 3 times in 10 days, then the Repetitive Values Alert message will fire.

Additional items to note:

1. Because readings do NOT trigger alerts to a VA clinician or health care team, make sure all patient-facing alerts are clinically relevant and that the alert messages you create are easily understandable to your patient. Please ensure your patient understands that alerts will not trigger care team action and knows what to do if a reading invokes an alert.

2. Increasing Values Alerts, Decreasing Values Alerts, and Repetitive Values Alerts are each regarded as significant alerts and should have meaningful notifications to patients. To avoid confusion to the patient, these alerts should be used sparingly within a protocol and only when clinically meaningful.

3. Processing of Alerts:

   - Annie first determines whether or not a Critical High Level or Critical Low Level alert is triggered.

   - If a value surpasses a Critical High Level or Critical Low Level Alert threshold, then that alert will fire without further determination of whether other alerts should fire (e.g., Increasing and Decreasing Values Alerts, Repetitive Values Alerts).

   - Next, Annie checks to determine if a response triggers an Increasing Values Alert or a Decreasing Values Alert. If so, then that alert will fire without further evaluation of whether other alerts fire.

   - Next, Annie checks to determine if a High Level Alert or Low Level Alert is triggered and whether a Repetitive Values Alert should be invoked. If a Repetitive Values Alert is invoked, then only that alert will be sent to the patient. Otherwise, the triggered High Level Alert or Low Level Alert is sent to the patient.

   - The baselines, timing, and value of Increasing, Decreasing and Repetitive Values Alerts will be reset whenever one of these alerts fires, as well as when a Critical High Level or Critical Low Level Alert fires.

   - When the baseline is reset, the value will be that of the last reading that was received by Annie.

   - If no alerts are invoked, then a Valid Message is sent to the patient.

Creating Service and Reminder Messages to Patients

Service Messages are requests from Annie that prompt a patient to send a reading.

- Readings from a patient must include a Keyword, which is an abbreviation of the reading (see below).
- Service Messages should always include the Keyword that is needed in the patient's response.

Example: "Hi, this is Annie. Please send your blood pressure to me in the following format: BP 120 80."

Reminder Messages are sent when a patient doesn't provide a reading in response to a Service Message.

- Reminder Messages should also include the Keyword that is needed in the patient's response.
- Reminders are not required but strongly recommended to prompt patients to submit data and receive responses.

Example: "Hi it's Annie again. I haven't received your BP reading yet. Please send me your reading in the following format: BP 120 80."

Keywords Needed for Readings (They are not case-sensitive)	
Blood Pressure	**BP** or **BLOOD**
Pulse Oximetry (SpO2)	**OX** or **OXYGEN**
Blood Glucose	**BG, GLUCOSE** or **SUGAR**
Glucose Before Eating	**BGB** or **BEFORE**
Glucose After Eating	**BGA** or **AFTER**
Weight	**WE** or **WEIGHT**
Caloric Intake	**CAL** or **CALORIES**
Amount of Exercise	**EXERCISE**
Temperature	**TEMP**
Pulse	**PULSE**