

# Hydration Assessment

It is often relatively easy to demonstrate that a patient is currently dehydrated or hydrated. However, it is often difficult to declare with objective evidence that while the patient is dehydrated today, he/she was not dehydrated at their last healthcare encounter.

The **Hydration Assessment** tool is designed to enable you to objectively establish the patient's state of hydration and to document that in an objective, supportable way. This tool is particularly important to use in the Nursing Home setting as the patient's state of hydration is an important aspect of long-term residential care and is often the focus of malpractice actions.

## The Hydration Assessment Template can be launched from:

- AAA Home

The screenshot shows the SETMA Patient Data Master interface. At the top left is the logo for Southeast Texas Medical Associates, L.L.P. The patient information section includes fields for Patient (RichmondPROI), Ztest, Sex (M), Age (35), and DOB (05/23/1974). Below this are fields for Home Phone, Work Phone, and Patient's Code Status. A navigation bar contains various links, with 'Hydration I' highlighted in a red box. Other links include 'Preventing Diabetes I', 'Preventing Hypertension I', 'Medical Home Coordination Needs Attention!!', 'Master GP I', 'Nursing Home I', 'Ophthalmology', 'Pediatrics', 'Physical Therapy', 'Podiatry', 'Rheumatology', 'Daily Progress', 'Admission Orders I', 'Discharge I', 'Insulin Infusion', 'Colorectal Surgery', 'Pain Management I', 'Exercise I', 'CHF Exercise I', 'Diabetic Exercise I', 'Drug Interactions I', 'Smoking Cessation I', 'Nutrition I', 'Guidelines I', 'Lab Future I', and 'Lab Results I'. The 'Disease Management' section includes links for 'Acute Coronary Syn I', 'Angina I', 'Asthma', 'CHF I', 'Diabetes I', 'Headaches', 'Hypertension I', 'Lipids I', 'Cardiometabolic Risk Syndrome I', 'Weight Management I', 'Renal Failure', and 'Diabetes Edu'. The 'Pending Referrals I' section contains a table with one entry: Status: Completed, Priority: Routine, Referral: Test, Referring Provider: Abbas. The 'Archived Referrals - Do not use for new referrals' section contains a table with one entry: Status: In Progress, Priority: (blank), Referral: (blank), Referring Provider: James L. Holly MD. On the right side, there is a 'Chart Note' section with buttons for 'Return Info', 'Return Doc', 'Email', 'Telephone', 'Records Request', and 'Transfer of Care Doc'. At the bottom left, there are buttons for 'Rx Sheet - Active', 'Rx Sheet - New', 'Rx Sheet - Complete', and 'Home Health'.

- SETMA Navigation Bar on Patient Data Master
- SETMA Navigation Bar on Nursing Home Templates
- Acute Renal Template in the Renal Failure Suite of Templates

The Hydration Assessment Templates will guide you in objectively documenting the following:

- Increased Risk of Dehydration
- Physical Evidence of Dehydration
- Metabolic and Chemical Analysis of Hydration

The contents of the Hydration Assessment Tool

The Hydration template is organized into a top section, a middle section and a bottom section. At the top of the Hydration template, there is a function whereby you can document where the tool was used: clinic, nursing home, hospital, hospital discharge.

The top section of the template is organized into three columns:

**Column 1:**

Increased Risk of Dehydration

This provides opportunity for demonstrating that the patient has conditions which place him/her at higher risk of dehydration. These are:

- Recent Infection
- Febrile
- Recent Weight Loss
- Impaction
- Decreased Appetite
- Change in Mental Status
- Paralysis
- Inability to Feed Self
- Diabetes Mellitus
- Hypoalbuminemia
- Age over 60
- Nursing Home Resident
- Nausea
- Nausea with vomiting
- Diarrhea
- Unable to turn and position

Some of these risk factors will be auto checked, as some of the elements of hydration risk are captured elsewhere in the medical record. For instance, the patient's temperature is captured automatically, as is whether the patient has Diabetes Mellitus or not, as is the patient's age, as is whether the patient is a Nursing Home Resident.

*Note:* It should always be remember that just because a person has risk factors for dehydration does not mean that they are dehydrated; it only means that they have an increased risk of becoming dehydrated.

Depending on the number of factors, and the particular risks factors which are present for dehydration, the patient will be designated as:

- Patient has a high risk for dehydration
- Patient has a severe risk for dehydration

The only risk factors which will by itself place a patient at "high risk for dehydration" is a temperature of 103 or above. If a patient has a temperature of 102 or less, an additional risk factor such as being on a diuretic is required before the patient is at a higher risk of becoming dehydrated. Typically, it will require four risk factors or more to make a patient at "severe risk for dehydration."

## Hydration Assessment

Setting  Clinic  Nursing Home  
 Hospital  Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics                      Pulse

/                        Lying

/                        Sitting

/                        Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

Patient has a high risk for dehydration.

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity <input type="text"/>	BUN <input type="text"/>	Calculate	Serum Osmolality <input type="text"/>
Glucose <input type="text"/>	Creatinine <input type="text"/>		Serum Osmolality <input type="text"/>
Sodium <input type="text"/>	BUN/Creat Ratio <input type="text"/>	Info	Anion Gap <input type="text"/>
Potassium <input type="text"/>	<input type="button" value="Check for New Labs"/>	Info	Osmolar Gap <input type="text"/>
Chloride <input type="text"/>	<input type="button" value="Laboratory Dates"/>		Est. Creat Clearance <input type="text"/>
HCO <sub>3</sub> <input type="text"/>			

**Hydration Status**

Good                       Marginal

Adequate                       Dehydrated

**Help Documents**

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## Column 2:

### Physical Evidence of Dehydration

**Skin Turgor** - there is a box to document the patient's skin turgor with a pick list of "fair," "good," and "tenting."

**Buccal Mucosa** - there is a box to document the patient's moisture content of the bucal mucosa with a pick list of: "moist," and "dry."

**Urine Output** - there is a box to check if the patient's urine volume is less than 30cc an hour.

**Orthostatics** - there are boxes to document the blood pressure and pulse for lying, sitting and standing. Beneath these boxes are two check boxes: one to document a drop of greater than 20 mm Hg and another to document a drop of less than 20 mm Hg.

**Hydration Assessment**

Setting     Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics                      Pulse

/                        Lying

/                        Sitting

/                        Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

**Home**

**Print**

**Help Documents**

Degree of Dehydration

Electrolytes and Osmolarity

Ethical Issues about Hydration

Factors Affecting Creat, BUN

Fluid Requirements

Osmolality Norms

Osmolality Theory

Renal Physiology and Hydration

Signs of Dehydration

Patient has a high risk for dehydration.

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity       BUN

Glucose                               Creatinine

Sodium                                 BUN/Creat Ratio

Potassium

Chloride

HCO<sub>3</sub>

Calculate

**Hydration Status**

    Good     Marginal  
 Adequate     Dehydrated   

### Column 3:

There are two buttons:

**Home** - a navigation button which carries you back to the AAA Home

**Print** - a button which generates a document for the Hydration Assessment which can be placed on the patient's hospital or nursing home record. The information on the Hydration Assessment Template automatically prints on the PDM chart note, on the Nursing Home chart note and on the discharge summary note.

**Help Documents** entitled:

- Degree of Dehydration
- Electrolytes and Osmolarity
- Ethical issues about Hydration
- Factors affecting Creatinine and BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration

- Signs of Dehydration

### Hydration Assessment

**Setting**     Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

 Recent Infection  
 [ ]  
 Febrile  
 Temp   
 Recent Weight Loss  
 Impaction  
 Decreased Appetite  
 Change in Mental Status  
 Paralysis  
 Inability to Feed Self  
 Diabetes Mellitus  
 On Diuretics  
 Hypoalbuminemia  
 Age over 60  
 Nursing Home Resident  
 Nausea  
 Nausea w/vomiting  
 Diarrhea  
 Unable to turn and position

**Physical Evidence of Dehydration**

 Skin Turgor   
 Buccal Mucosa   
 Urine Output < 30 cc/hr  
  

Orthostatics	Pulse	
<input type="text"/> / <input type="text"/>	<input type="text"/>	Lying
<input type="text"/> / <input type="text"/>	<input type="text"/>	Sitting
<input type="text"/> / <input type="text"/>	<input type="text"/>	Standing

 Drop greater than 20 mmHg  
 Drop less than 20 mmHg

**Patient has a high risk for dehydration.**

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity	<input type="text"/>	BUN	<input type="text"/>	Calculate	
Glucose	<input type="text"/>	Creatinine	<input type="text"/>	Serum Osmolality	<input type="text"/>
Sodium	<input type="text"/>	BUN/Creat Ratio	<input type="text"/>	Serum Osmolality	<input type="text"/>
Potassium	<input type="text"/>	<input type="button" value="Check for New Labs"/>		<input type="button" value="Info"/> Anion Gap	<input type="text"/>
Chloride	<input type="text"/>	<input type="button" value="Laboratory Dates"/>		<input type="button" value="Info"/> Osmolar Gap	<input type="text"/>
HCO <sub>3</sub>	<input type="text"/>			Est. Creat Clearance	<input type="text"/>

**Hydration Status**

   
 Good     Marginal  
 Adequate     Dehydrated

**Home**

**Help Documents**

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**Hydration Orders**

The middle section of the Hydration Assessment addresses the Metabolic and Chemical Analysis of Hydration

## Hydration Assessment

Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Inappetence

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics:  /  /

Pulse:  Lying  
 Sitting  
 Standing

Drop greater than 20 mmHg  
 Drop less than 20 mmHg

**Home**

**Print**

**Help Documents**

- Degree of Dehydration
- Electrolytes and Osmolarity
- Ethical Issues about Hydration
- Factors Affecting Creat, BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration
- Signs of Dehydration

**Patient has a high risk for dehydration.**

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity <input type="text"/>	BUN <input type="text"/>	Calculate	
Glucose <input type="text"/>	Creatinine <input type="text"/>	Serum Osmolality	<input type="text"/>
Sodium <input type="text"/>	BUN/Creat Ratio <input type="text"/>	Serum Osmolality	<input type="text"/>
Potassium <input type="text"/>	<input type="button" value="Check for New Labs"/>	Info	Anion Gap
Chloride <input type="text"/>	<input type="button" value="Laboratory Dates"/>	Info	Osmolar Gap
HCO <sub>3</sub> <input type="text"/>			Est. Creat Clearance

**Hydration Status**

Good     Marginal  
 Adequate     Dehydrated

In this section, the following laboratory values are automatically drawn from the laboratory module in NextGen or absent that data, you can manually entered the data from another source. Those lab elements are:

- Urine Specific Gravity
- Glucose
- Sodium
- Potassium
- Chloride
- HCO<sub>3</sub>
- BUN
- Creatinine
- BUN/Creatinine Ratio

## Hydration Assessment

**Setting**     Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics                      Pulse

/                        Lying

/                        Sitting

/                        Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

**Patient has a high risk for dehydration.**

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity <input type="text"/>	BUN <input type="text"/>	Calculate
Glucose <input type="text"/>	Creatinine <input type="text"/>	
Sodium <input type="text"/>	BUN/Creat Ratio <input type="text"/>	Info
Potassium <input type="text"/>	<input type="button" value="Check for New Labs"/> <input type="button" value="Info"/>	
Chloride <input type="text"/>	<input type="button" value="Laboratory Dates"/>	
HCO <sub>3</sub> <input type="text"/>	<input type="button" value="Serum Osmolality"/> <input type="text"/>	<input type="button" value="Serum Osmolality"/> <input type="text"/>
	<input type="button" value="Anion Gap"/> <input type="text"/>	<input type="button" value="Osmolar Gap"/> <input type="text"/>
	<input type="button" value="Est. Creat Clearance"/> <input type="text"/>	

**Home**

**Help Documents**

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- 
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- 
-

**Hydration Status**

Good     Marginal  
 Adequate     Dehydrated

**Beneath the BUN/Creatinine Ratio are two buttons:**

- **Check for New Labs** – this checks the NextGen Lab Module for newer laboratory data to make sure that you are evaluating the patient’s hydration with the most recent data.

## Hydration Assessment

Setting     Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics                      Pulse

/                        Lying

/                        Sitting

/                        Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

**Patient has a high risk for dehydration.**

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity     BUN

Glucose     Creatinine

Sodium     BUN/Creat Ratio

Potassium

Chloride

HCO<sub>3</sub>

Check for New Labs

Laboratory Dates

Calculate

Serum Osmolality

Serum Osmolality

Anion Gap

Osmolar Gap

Est. Creat Clearance

**Hydration Status**

Calculate

Good     Marginal

Adequate     Dehydrated

**Help Documents**

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- **Laboratory Dates** – this launches a pop-up which will give you the dates on which each of the above laboratory tests were performed.

Beside the laboratory values, in the third column of this second section of the Hydration Assessment template are five buttons which **automatically calculates and display information about the patients state of hydration**:

- **Serum Osmolality**

## Hydration Assessment

Setting    Clinic    Nursing Home  
 Hospital    Hospital Discharge

### Increased Risk of Dehydration

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

### Physical Evidence of Dehydration

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics      Pulse

/        Lying

/        Sitting

/        Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

**Home**

**Print**

### Help Documents

Degree of Dehydration

Electrolytes and Osmolarity

Ethical Issues about Hydration

Factors Affecting Creat, BUN

Fluid Requirements

Osmolality Norms

Osmolality Theory

Renal Physiology and Hydration

Signs of Dehydration

Patient has a high risk for dehydration.

### Metabolic & Chemical Analysis of Hydration

Urine Specific Gravity       BUN

Glucose       Creatinine

Sodium       BUN/Creat Ratio

Potassium

Chloride

HCO<sub>3</sub>

Calculate

Serum Osmolality	<input type="text" value="284.0"/>	Normal
Serum Osmolality	<input type="text"/>	
Anion Gap	<input type="text"/>	
Osmolar Gap	<input type="text"/>	
Est. Creat Clearance	<input type="text"/>	

- Serum Osmolarity

## Hydration Assessment

Setting  Clinic  Nursing Home  
 Hospital  Hospital Discharge

### Increased Risk of Dehydration

Recent Infection

Febrile  
Temp 102.00

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

### Physical Evidence of Dehydration

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics      Pulse

\_\_\_\_\_ / \_\_\_\_\_      \_\_\_\_\_ Lying

\_\_\_\_\_ / \_\_\_\_\_      \_\_\_\_\_ Sitting

\_\_\_\_\_ / \_\_\_\_\_      \_\_\_\_\_ Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

Patient has a high risk for dehydration.

### Metabolic & Chemical Analysis of Hydration

Urine Specific Gravity \_\_\_\_\_ BUN \_\_\_\_\_

Glucose \_\_\_\_\_ Creatinine \_\_\_\_\_

Sodium \_\_\_\_\_ BUN:Creat Ratio \_\_\_\_\_

Potassium \_\_\_\_\_

Chloride \_\_\_\_\_

HCO<sub>3</sub> \_\_\_\_\_

Check for New Labs      Laboratory Dates

Calculate

Serum Osmolality	284.0	Normal
Serum Osmolality	277.0	Abnormal
Anion Gap		
Osmolar Gap		
Est. Creat Clearance		

Info      Info

### Hydration Status

Calculate   Good  Marginal  
 Adequate  Dehydrated

**Hydration Orders**

Home

Print

### Help Documents

- Degree of Dehydration
- Electrolytes and Osmolality
- Ethical Issues about Hydration
- Factors Affecting Creat, BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration
- Signs of Dehydration

- **Anion Gap** – there is an help button next to this function which is entitled “Info,” this gives details of the value and interpretation of the Anion Gap.

## Hydration Assessment

Setting  Clinic  Nursing Home  
 Hospital  Hospital Discharge

### Increased Risk of Dehydration

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

### Physical Evidence of Dehydration

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics  /  /

Pulse  Lying  
 Sitting  
 Standing

Drop greater than 20 mmHg  
 Drop less than 20 mmHg

[Home](#)

[Print](#)

### Help Documents

- [Degree of Dehydration](#)
- [Electrolytes and Osmolarity](#)
- [Ethical Issues about Hydration](#)
- [Factors Affecting Creat, BUN](#)
- [Fluid Requirements](#)
- [Osmolality Norms](#)
- [Osmolality Theory](#)
- [Renal Physiology and Hydration](#)
- [Signs of Dehydration](#)

### Metabolic & Chemical Analysis of Hydration

Urine Specific Gravity

Glucose

Sodium

Potassium

Chloride

HCO<sub>3</sub>

BUN

Creatinine

BUN/Creat Ratio

Calculate

Normal

Abnormal

Good  Marginal  
 Adequate  Dehydrated

- Osmolar Gap** – this button launches a pop-up which calculates the Osmolar Gap. This calculation requires you to add a value to the pop-up for the measured Serum Osmolarity. The “info” button by the Osmolar Gap button gives information about the interpretation and use of the Osmolar Gap.

## Hydration Assessment

Setting  Clinic  Nursing Home  
 Hospital  Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp: 102.00

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and move

**Physical Evidence of Dehydration**

Skin Turgor:

Buccal Mucosa:

Home

Print

**Help Documents**

- Degree of Dehydration
- Electrolytes and Osmolarity
- Ethical Issues about Hydration
- Factors Affecting Creat, BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration
- Signs of Dehydration

**Metabolic & Chemical Analysis**

Urine Specific Gravity	<input type="text"/>	Creatinine	<input type="text"/>	Serum Osmolarity	284.0	Normal
Glucose	<input type="text"/>	BUN/Creat Ratio	<input type="text"/>	Anion Gap	<input type="text"/>	Abnormal
Sodium	<input type="text"/>	Check for New Labs		Osmolar Gap	-284.0	High
Potassium	<input type="text"/>	Laboratory Dates		Est. Creat Clearance	<input type="text"/>	
Chloride	<input type="text"/>					
HCO <sub>3</sub>	<input type="text"/>					

**Hydration Status**

Calculate:

Good  Marginal  
 Adequate  Dehydrated

Hydration Orders

- Est Creatinine Clearance** – this button launches a pop-up calculates the estimate glomerular filtration rate based on the patient’s weight, sex, age and serum creatinine. These data are pulled over automatically. To have this estimate calculate, you must click the “calculate” button on the pop-up.

### Hydration Assessment

**Setting**     Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

**Home**

**Print**

**Help Documents**

- Degree of Dehydration
- Electrolytes and Osmolarity
- Ethical Issues about Hydration
- Factors Affecting Creat, BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration
- Signs of Dehydration

**Normal**

**Abnormal**

Info    Osmolar Gap    -284.0    **High**

Est. Creat Clearance

**Hydration Status**

Calculate      Good     Marginal  
 Adequate     Dehydrated

**Hydration Orders**

#### Creat Clearance

### Estimated Creatinine Clearance

Complete the following four fields and click Calculate.

wWeight  lbs  
 Sex  (must be uppercase)  
 Age   
 Serum Creatinine

Calculate >>>     mL/min

*Note:* This calculation is the same and the resulting value is the same as the Cockcroft-Gault, which is one of five estimation-of-glomerular-filtration-equations which are displayed on SETMA's Renal Failure Suite of Templates (See the bottom line of the AAA Home).

**The bottom section of the Hydration Assessment Template addresses the patient's**

## Hydration Assessment

Setting    Clinic    Nursing Home  
 Hospital    Hospital Discharge

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomiting

Diarrhea

Unable to turn and position

**Physical Evidence of Dehydration**

Skin Turgor

Buccal Mucosa

Urine Output < 30 cc/hr

Orthostatics                      Pulse

/                        Lying

/                        Sitting

/                        Standing

Drop greater than 20 mmHg

Drop less than 20 mmHg

**Home**

**Print**

**Help Documents**

- Degree of Dehydration
- Electrolytes and Osmolarity
- Ethical Issues about Hydration
- Factors Affecting Creat, BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration
- Signs of Dehydration

Patient has a high risk for dehydration.

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity       BUN

Glucose                       Creatinine

Sodium                       BUN/Creat Ratio

Potassium

Chloride

HCO<sub>3</sub>

Calculate

Normal

Abnormal

High

**Hydration Status**

Good                       Marginal

Adequate                       Dehydrated

## Hydration Status

Using the information in the

- Increased Risk of Dehydration
- Physical Evidence of Dehydration
- Metabolic and Chemical Analysis of Hydration

When you click on the “Calculate” button in this bottom section, the algorithm which is built into this template determines that the patient’s state of hydration is:

- Good
- Adequate
- Marginal
- Dehydrated

## Hydration Assessment

Setting     Clinic     Nursing Home  
 Hospital     Hospital Discharge

**Increased Risk of Dehydration**

 Recent Infection  
 Febrile  
     Temp   
 Recent Weight Loss  
 Impaction  
 Decreased Appetite  
 Change in Mental Status  
 Paralysis  
 Inability to Feed Self  
 Diabetes Mellitus  
 On Diuretics  
 Hypoalbuminemia  
 Age over 60  
 Nursing Home Resident  
 Nausea  
 Nausea w/vomiting  
 Diarrhea  
 Unable to turn and position

**Physical Evidence of Dehydration**

 Skin Turgor   
 Buccal Mucosa   
 Urine Output < 30 cc/hr  
  
 Orthostatics                      Pulse  
 /                        Lying  
 /                        Sitting  
 /                        Standing  
 Drop greater than 20 mmHg  
 Drop less than 20 mmHg

**Home**

Print

**Help Documents**

- Degree of Dehydration
- Electrolytes and Osmolarity
- Ethical Issues about Hydration
- Factors Affecting Creat, BUN
- Fluid Requirements
- Osmolality Norms
- Osmolality Theory
- Renal Physiology and Hydration
- Signs of Dehydration

Patient has a high risk for dehydration.

**Metabolic & Chemical Analysis of Hydration**

Urine Specific Gravity	<input type="text"/>	BUN	<input type="text"/>
Glucose	<input type="text"/>	Creatinine	<input type="text"/>
Sodium	<input type="text"/>	BUN/Creat Ratio	<input type="text"/>
Potassium	<input type="text"/>		
Chloride	<input type="text"/>		
HCO <sub>3</sub>	<input type="text"/>		

Calculate

Serum Osmolality	<input type="text" value="284.0"/>	Normal
Serum Osmolality	<input type="text" value="277.0"/>	Abnormal
Anion Gap	<input type="text"/>	
Osmolar Gap	<input type="text" value="-284.0"/>	High
Est. Creat Clearance	<input type="text"/>	

**Hydration Status**

      
 Good     Marginal  
 Adequate     Dehydrated

At this point, it is possible to click on the Hydration Orders button which will launch a pop-up which will automatically indicate appropriate actions to prevent dehydration and/or to correct it if it is already present.

These orders will print on the hydration assessment note and then can be placed in the order section of the clinic, hospital or nursing home.

When the hydration template is completed, it provides an objective and comprehensive documentation of the patient's state of hydration on the date of the present evaluation.

**Hydration Orders**

**Increased Risk of Dehydration**

Recent Infection

Febrile  
Temp

Recent Weight Loss

Impaction

Decreased Appetite

Change in Mental Status

Paralysis

Inability to Feed Self

Diabetes Mellitus

On Diuretics

Hypoalbuminemia

Age over 60

Nursing Home Resident

Nausea

Nausea w/vomitting

Diarrhea

Unable to turn and position

**Metabolic & Chemical Analysis**

Urine Specific Gravity

Glucose

Sodium

Potassium

Chloride

HCO<sub>3</sub>

**Hydration Orders**

Monthly BMP

Monthly Urinalysis

Monthly Serum Osmolality Calculation

Monthly Skin Turgor Assessment

Monthly Buccal Mucosa Moisture Eval

I and O q shift

I and O q shift x 3 days

BMP in 3 days

If PO, increase fluids to at least 1000cc free fluids daily

If G-tube, increase free water by 10-20 cc per hour

Monitor closely for signs/symptoms of skin break down

BMP in AM and repeat in 72 hours

Insert 2 way urinary catheter (if resident incontinent)

If resident bed bound, turn q 2 hours and monitor closely for skin break down

Monitor for signs/symptoms of edema

Auscultation lung sounds q shift and report change

Consult SETMA Nephrologist

**IV Therapy**

If NH allows IV therapy, Start IV

If NA is normal, 1/2 NS at 100 cc/hr for 3 hours and then reduce to 80 cc/hr for a total of 4,000 cc and reassess

If NA is below 130, start D5 NS at 100 cc/hr for three hours and then reduce to 80 cc/hr for a total of 4,000 cc and reassess

If NA is above 150, start D5 1/2 NS at 100 cc/hr for 3 hours and then reduce to 80 cc/hr for a total of 4,000 cc and reassess

If K+ is below 4.0, add 20 mEq KCl to every other 1000 cc IV fluids

If NH does not allow IV therapy, transfer to Memorial Hermann Baptist Hospital

**Hydration Status**

Calculate    
 Good   
 Marginal   
 Adequate   
 Dehydrated

**Hydration Orders**

## Print

Once the template has been completed, the “Print” button should be launched. This will create an independent Hydration Assessment document which can be placed on the patient’s hospital or nursing home note. The data will also be placed automatically on the clinic, nursing home and discharge notes.