

# MORNING CMO REPORT

06.21.2017

**FROM THE DESK OF:**

Anthony P. Weiss, MD, Chief Medical Officer,  
Associate Dean for Clinical Affairs,  
Upstate University Hospital

**UPSTATE**  
UNIVERSITY HOSPITAL

## Severe Shortage of Injectable Sodium Bicarbonate

[Applies to All Physicians](#)

Upstate University Hospital continues to experience a shortage of injectable sodium bicarbonate. This is part of a national backorder that has been ongoing for the past 6 months. This shortage was further exacerbated last week when Pfizer announced a recall on all existing sodium bicarbonate vials due to concern for microbiologic contamination. This recall has placed further strain on our supply. Furthermore, the current expected date of resolution for the shortage is late August, requiring plans for therapy management to stretch current supply.

Of note, sodium bicarbonate emergency syringes were not affected by the recall, and currently represent our only formulation of injectable sodium bicarbonate. These are also on backorder however.

Due to this shortage situation, the following actions steps have been implemented per the Pharmacy and Therapeutics Committee:

1. All recalled sodium bicarbonate vials have been removed and sequestered from clinical stock.
2. All adult code carts have had their sodium bicarbonate syringe stock reduced to 2 syringes.
  - a. Pharmacy has created two sodium bicarbonate kits that can be sent to codes if/when additional sodium bicarbonate is necessary
3. Sodium acetate is being used for urinary alkalization in patients treated with methotrexate

In addition to these steps, providers are asked to enhance their attentiveness to the prescribing of intravenous sodium bicarbonate and reserve its use whenever clinically possible. A management document developed the Society of Critical Care Medicine is attached for your review. Sodium acetate may represent a feasible alternative to sodium bicarbonate for some patients, but this product is also on shortage currently. Please check with pharmacy if you are considering using sodium acetate in place of sodium bicarbonate to ensure adequate supply exists.

Thank you for your awareness and participation with this difficult shortage situation. As further supply information becomes available, updates will be provided.

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## Medical Abbreviations

[Applies to All Physicians](#)

Abbreviations  
Informational

While the use of abbreviations for clinical documentation allows for improved efficiency, it is important to remember that not all providers are familiar with your individualized medical shorthand. There may be patient safety issues if the abbreviations are not approved and the abbreviations create confusion to providers in different areas. Policy **A-02 "Abbreviations-Medical"**, discusses the appropriate use of abbreviations in the EMR/paper record. This policy contains a link for a complete list of approved and unapproved abbreviations. Please view the Policy A-02 at the following link:

<https://upstate.ellucid.com/documents/view/1169>

## Outstanding Physician Comments

[Applies to All Physicians](#)

Comments  
Informational

Each week we receive written comments from our patients regarding the care we provide within the Hospital. Below are this week's comments from grateful patients receiving care on the units and clinics at Upstate:

**Emergency Department – Dr. Calleo** was excellent. **Dr. Andonian** was also great with my care. **Dr. Knudsen** talked to me with good humor not present in any medical interaction I've ever had. Good Humor is an important value to me.

**Inpatient Pediatrics – Dr. Ahmed** gave her fantastic care-patient, attentive & informative & empathetic.

**9E- Dr. Tovar Spinoza** very attentive and made sure he was on-call the weekend of the surgery so he could oversee care.

**UHCC Neurology - Dr Zhang** is excellent. He listens and includes the family in the plan of care. I would highly recommend him to others.

**Dr Izadyar** is wonderful he takes the time to talk to my husband - he doesn't talk down to him and is always taking the time for my husband to show him his new accomplishments - We love going to him.

**Dr. El Dokla**--his compassion and concern for me is genuine; I have the utmost confidence in him.

**Dr Izadyar**- he is never too busy to talk and listen to my husband even if it goes off subject but till related he listens and gives positive feedback.

**Dr. Ko** is very friendly and competent in the care I receive. She has excellent communication skills and I feel very comfortable with her as my doctor.

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**Adult Medicine - Dr. Umar** was an extremely good doctor. He has put my faith in doctors back. My health has improved 75 %. I truly feel that without him caring for me like he did my health right now would be critical I cannot thank him enough for giving me back life and will to live life. He is an outstanding doctor.

**Dr Umar** is one of the most caring and attentive doctors I've ever had; he has truly been a life saver.

**Dr. Ukwuoma** in helping me put my health in perspective. It's overwhelming at times but my doctors are helping me keep hope.

**Upstate Urology - I** respect and trust **Dr. Shapiro**.

**Dr. Byler** was key to identifying a serious health issue I didn't know about, I know he and his staff saved my life. God bless him!

It is refreshing to know **Dr. Byler** genuinely cares about me, made me feel that I was truly in good hands.

**Dr. T Byler** was most informative and impressed me greatly.

**Dr. Ginzburg** was wonderful in her overall care.

**University Internists – I** very much like **Dr. Wani** and would like to transfer my care to her.

**Dr. Krenzer** I prefer my doctor is the absolute BEST you are lucky to have her she is second to no one.

**Dr Krenzer**; very knowledgeable, professional.

**Dr. Frechette** is an exceptional provider.

**Dr. Krenzer** is a very conscientious doctor. When she is with you, you know that you are her prime concern of the moment.

**Dr. Krenzer**. Very thorough examination. Takes time to answer all the questions. An asset to Upstate Hospital.

**Dr. Frechette** It was my first time there and he knew more about my healthcare than my previous primary care. He was very interested in my healthcare.

**Dr. Krenzer** has been my doctor for many years; her thoroughness, kindness & patience.

**Surgery Harrison Center - Dr. Lucia** is fantastic and explained and answered my husband's questions he had.

**Surgery UH - Dr. Wallen** is outstanding.

**Family Medicine –** Feel most fortunate to have **Dr. K. Nanavati** as my doctor.

**Dr. Elkins** is always very attentive, thorough, and a pleasure to interact with.

**Breast Care Center - Dr. Charlamb** because she thoroughly answered most of my questions even before I asked them, presented statistics, explained options and was totally kind and not in a rush.

**Dr. Lisa Lai**. She organized a mammogram and ultrasound on the spot in order to save me another drive from Ithaca at a later date. She was caring and knowledgeable. I have great confidence in her ability.

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**Medicine Subspecialties - Dr. Yu** was great! She is professional and was concerned with my medical condition, and asked for me to be specific and detail the symptoms and timeline for my knee pain. She took detailed notes and examined me thoroughly. I have the highest confidence in her examination and diagnosis.

**Dr. Rayancha** was very helpful and I felt she understood the auto-immune disorder I had and explained it better to me than a previous physician.

**Dr. Neupane** is always kind and compassionate.

**Dr. Neupane** is a most caring and knowledgeable doctor who attended to my health problems with open discussion and love, thanks to him I am feeling much better.

**Joslin - I** thought **Dr. Dhaliwal** was thorough and knowledgeable and careful.

**Dr. Kelly** was very helpful and quickly established trust in her ability to care for my condition and do what is best for me. This was my first appointment with **Dr. Kelly** and she made me feel very much at ease.

**Dr. Kelly**, she is friendly, very efficient, caring. Is very busy but takes time if you need it to go over your needs and come to a solution.

**Dr Angela P Mojica Sanabria** was wonderful. I highly recommend her.

**Dr Hopkins:** professional and kind and knowledgeable.

**Dr. Lipeski** is always very nice, takes enough time to explain problems and possible solutions.

**Urology at Community - Dr. Shapiro** is excellent!

**Dr. Shapiro** went above & beyond with regard to my situation! **Dr. Shapiro** is an excellent communicator & extremely interested in my case, my care & my follow-up.

**Dr. Khanna** - very calming - Fully explained my condition & treatment

**University Geriatricians – Dr. Berg** - very genuine with a great personality & good instinct.

**5W Inpatient Psychiatry – CG – Dr. Reyes** she listened to my concerns

**AP1 - Dr. Swarnkar** was informative and very good.

**O/P Surgery Center - Dr. Swan-** Excellent! Very informative, very thorough, did not make us feel rushed. Overall- could not have been taken care of any better.

**O/P Surgery Center - Dr. Riddell** is awesome.

**Vascular Surgery Clinic – CG - Dr Surowiec-** He is wonderful! Very professional, knowledgeable, caring, helpful and a super person.

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## Drug Shortages Alert

September 2016

*Recommendations and information provided in Drug Shortage Alerts are compiled by experts in the field. Practitioners always are advised to consult with staff to ensure response to any drug shortage is in line with internal policies and procedures.*

### Introduction

- Intravenous (IV) sodium bicarbonate syringes and vials have previously and sporadically been affected by shortages due to manufacturer discontinuation and/or increased demand. More details can be found here: <http://www.ashp.org/shortages>
- In addition to this brief summary, the SCCM Drug Shortages Task Force has developed a detailed review of common uses of IV sodium bicarbonate in the ICU, and suggested management strategies.
- The recommendations provided are based on a combination of the current evidence as well as the need for conservation during this shortage.

### Management Strategies

Select Indications in the Critically Ill	Recommendation	Key Points
Prevention of contrast-induced nephropathy in those at risk	0.9% NaCl 1 mL/kg/hr for 6–12 hrs pre- and 6–12 hrs post-procedure  For emergent procedures: 0.9% NaCl 3mL/kg bolus, followed by 1 mL/kg/hr for 6–12 hrs post-procedure	Use of sodium bicarbonate is associated with mixed results; studies have differing therapeutic end points.  Identify patients at high risk and minimize modifiable risks (concomitant nephrotoxins, etc.).  Use iso-osmolar, non-ionic contrast where possible.
Urinary alkalization to enhance drug elimination	Optimal alternatives will be agent-specific (see text for details)	Evidence to support use of sodium bicarbonate is limited for most agents, with the best data in relation to enhancing elimination of high-dose methotrexate.
Rhabdomyolysis (see Urinary Alkalization in previous row)	Aggressive resuscitation with 0.9% NaCl	Sodium bicarbonate offers no significant improvement over aggressive fluid resuscitation with 0.9% NaCl.
Hyperkalemia (acute management)	Insulin, 10 units IV push with 50% dextrose, 50 mL  +/- inhaled beta-2 agonists	Sodium bicarbonate therapy has little use in the routine treatment of hyperkalemia unless severe metabolic acidosis is present.

Sepsis-induced acidosis	Sodium bicarbonate not recommended in patients with pH $\geq$ 7.15	Studies do not support the hypothesis that sodium bicarbonate enhances catecholamine effectiveness.  Treat underlying shock and/or source of acidemia.
Diabetic ketoacidosis	Sodium bicarbonate not recommended	Treat underlying ketogenesis.

### Pharmacotherapeutic Considerations

- The use of IV sodium bicarbonate and management strategies in the setting of drug shortages is indication dependent. Please refer to the detailed review for more information.
- Sodium acetate is listed as an alternative; however, it is currently on shortage (as it has been before), and supplies may be sporadic. Tromethamine is no longer manufactured (as of May 2016) and therefore not a viable alternative.

### Safety Implications

- Lack of prefilled syringes in code boxes may present patient and responder safety issues in emergent situations.
- Use of alternatives that are not commonly used presents safety concerns and a potential for errors throughout the entire medication use process. As such, a heightened awareness for errors is warranted during the prescription, preparation, and administration processes.

### Impact on ICU Care

- Lack of availability of a buffering solution can present challenges for management of acidotic patients, potentially resulting in prolonged acidosis and the subsequent physiologic effects, which may include but are not limited to: depression of myocardial contractility, tachycardia, vasoconstriction, dysrhythmias, and central nervous system depression.
- Outsourcing the production of sodium bicarbonate syringes and continuous infusions (a strategy some pharmacies may use to obtain more supply) can represent increased drug acquisition costs.

### Additional Resources

See detailed review developed by the SCCM Drug Shortages Task Force.

Original date: July 2012

Revision date: September 2016

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