



What to Know About Glacial Acetic Acid: **STOP USING IT**

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Multiple events involving patient harm from the use of undiluted glacial acetic acid have been reported to the Pennsylvania Patient Safety Reporting System (PA-PSRS). Glacial acetic acid is anhydrous pure acetic acid available in concentrations between 99.5% and 100%.¹⁻⁴ Unlike acetic acid solutions which have various medical uses when diluted to different concentrations (e.g., 0.25% for irrigation, 2% for otic use), glacial acetic acid is highly corrosive; has no medical purpose; and has been associated with serious patient harm, such as severe tissue damage and third-degree burns.¹⁻⁴ Because glacial acetic acid is not considered to be a drug, it is not regulated by the U.S. Food and Drug Administration (FDA) to have standardized labeling on its containers to prominently display the strength of acetic acid and warnings against medical use.^{2,3} Despite our previous publication describing two cases involving unintended applications of glacial acetic acid and several strategies to prevent error,¹ we have recently received PA-PSRS reports of additional patient injuries due to the use of glacial acetic acid. Therefore, we advise facilities to review and implement the Action Items listed below.

Action Items



Completely eliminate the use and storage of glacial acetic acid from the facility.¹⁻⁴



Purchasing and acquisition:

- Purchase commercially available premixed acetic solutions at the lowest concentrations deemed medically effective at the facility.¹⁻⁴
- Assign a specific individual or department to be in charge of purchasing acetic acid solutions for all procedural areas.³
- Purchase 4% or 5% acetic acid as vinegar to reduce the potential for confusion with glacial acetic acid.¹⁻⁴
- Obtain premade acetic acid solutions of desired concentrations from a reputable compounding pharmacy to minimize in-house dilutions.^{1,2}
- Remove glacial acetic acid from the available purchasing options.¹⁻³
- Manually examine any product that does not have a National Drug Code (NDC) or a scannable barcode upon delivery.



Prescribing and ordering:

- Require prescribers to indicate the specific strength of acetic acid and indication for use in the order.¹⁻³
- Require orders for acetic acid to be sent to the pharmacy at least one day in advance to allow sufficient time for verification, compounding, and dispensing.^{1,2}
- Remove the term “glacial” from all orders for acetic acid solution.^{1,2}

- Prescribe and dispense acetic acid on a patient-specific basis rather than making it available as a batch in patient care areas.²
- If continuing the use of acetic acid solution from home, perform an accurate medication reconciliation using the patient as a historian.²



Dispensing and administration:

- Develop a standard formula for in-house compounding of diluted acetic acid solutions by the pharmacy.²
- Implement an independent double check and/or an observation process to ensure the accuracy of the acetic acid dilution before dispensing or administering the product.¹⁻³
- Minimize distractions and interruptions in the compounding area.¹
- Apply a barcoded label on all compounded acetic acid solutions that must be scanned prior to patient administration.



Education and training:

- Educate staff members that undiluted glacial acetic acid has no medical use and should not be confused for diluted acetic acid solutions.¹⁻³
- Instruct staff members to not use acetic acid if it smells stronger or different than usual.¹
- Confirm the availability of up-to-date drug information references containing clinical and compounding information for acetic acid.^{1,2}
- Instruct staff to neutralize acetic acid with baking soda should any exposure occur. Stock baking soda in all areas where acetic acid solutions are used.^{1,2}

References

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