

## Standardize 4 Safety Webinar Series

1. Background and purpose of the Standardize 4 Safety Initiative – Let’s go back in time
2. A look at current and future S4S medication lists – Where are we now?
3. How the S4S lists are being evaluated – What does the data say?
4. Challenges with implementation of the S4S Initiative – Jumping over the hurdles
5. How to ensure successful implementation of the S4S initiative – Gather your tools
6. Implementation of the S4S Initiative at an [Academic Medical Center] – An adoption story



## A look at current and future S4S medication lists – Where are we now?

**Mary Ann Kliethermes, Pharm.D.**  
Director, Medication Safety and Quality ASHP

**Sean O’Neill, Pharm.D.**  
Chief Clinical Officer Bainbridge Health



## ASHP and Bainbridge Health Collaboration

- Bainbridge Health
  - A network of infusion pump data from >100 hospitals
  - Utilize infusion data to identify opportunities for standardization of medication concentrations
- Goal of collaboration: to enhance the distribution, adoption, and sustainability of the Standardize 4 Safety Initiative

1/13/2022  
Press Release

**ASHP Innovation Center and Bainbridge Health Collaborate to Improve Patient Safety, Increase Use of Standardized Medication Concentrations in Health Systems**



## Learning Objective

- Review the current and future medication lists that will be available through the S4S initiative

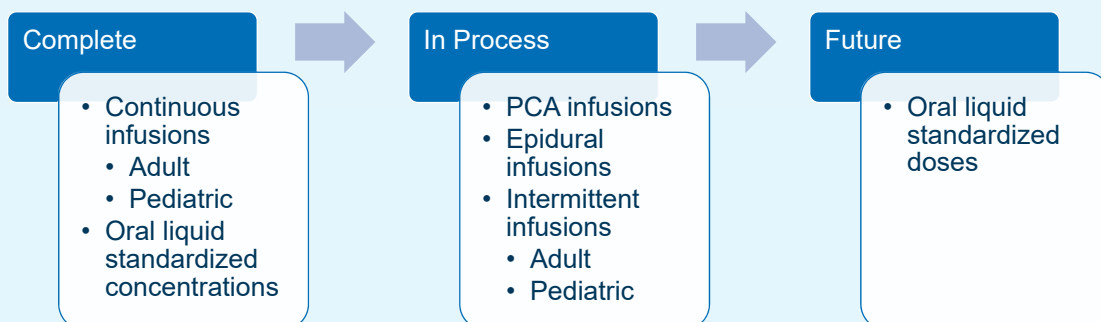


## S4S – Scope of work

- National Standards will cover:
  - Concentrations and dosing units for intravenous continuous medications for adult patients
  - Concentrations for compounded oral liquid medications
  - Concentrations and dosing units for intravenous continuous medications for pediatric patients
  - Concentrations for PCA and epidural medications
  - Concentrations for intravenous intermittent medications
  - Oral liquid standardized doses



## S4S – Timeline



## S4S – Adoption and Feedback

- ASHP S4S Standardized Concentration Interactive Checklist
- Bainbridge Health Infusion Pump Data Network
- Direct communication to ASHP
  - Submit a comment/join the initiative: <https://www.ashp.org/pharmacy-practice/standardize-4-safety-initiative/stay-informed>
- Join an online community of adopters
  - S4S Connect Community (Non-ASHP members may register as authenticated users): <https://connect.ashp.org/communities/community-home?CommunityKey=5518d248-1b6b-4b4a-8a41-ee69f4f0693b>



## ASHP S4S Standardized Concentration Interactive Checklist

- Released: November 2021

| Checklist                     | Completed | In Progress |
|-------------------------------|-----------|-------------|
| Adult Continuous Infusion     | 33        | 42          |
| Oral Liquid Medications       | 22        | 25          |
| Pediatric Continuous Infusion | 14        | 26          |

- Sample Questions

Adult Continuous Infusion

What concentration(s) of **Alteplase** do you use?  
1 mg/mL  
Other concentrations used: E.g. 5 mg/mL Add

What concentration(s) of **Amiodarone** do you use?  
1.8 mg/mL  
3.6 mg/mL  
Other concentrations used: E.g. 5 mg/mL Add

What concentration(s) of **Argatroban** do you use?  
1 mg/mL  
Other concentrations used: E.g. 5 mg/mL Add



# Sample of Summary Report

■ For institution

**example hospita**  
 Created: 04/27/2021  
 Bed Count: 200 - 299  
 State: Illinois

**Adult Continuous Infusion**

| Medication | High Alert | Standard Concentrations | My Concentrations | Standardized | Aligned |
|------------|------------|-------------------------|-------------------|--------------|---------|
| Alteplase  | Yes        | 1 mg/mL                 | 1 mg/mL           | Yes          | Yes     |
| Alteplase  | Yes        | -                       | 0.1 mg/mL         | Yes          | No      |
| Alteplase  | Yes        | -                       | 0.05 mg/mL        | Yes          | No      |
| Amiodarone | Yes        | 1.8 mg/mL               | 1.8 mg/mL         | Yes          | Yes     |
| Amiodarone | Yes        | 3.6 mg/mL               | 1.8 mg/mL         | Yes          | No      |
| Argatroban | Yes        | 1 mg/mL                 | 1 mg/mL           | Yes          | Yes     |

• For ASHP

| Adult Continuous Infusion |                                       |               | Data Set 1 (42 completed checklists) |                    |               |
|---------------------------|---------------------------------------|---------------|--------------------------------------|--------------------|---------------|
| Medication                | Drug Class 1                          | Concentration | Used (%) 2                           | Standardized (%) 3 | Aligned (%) 4 |
| Alteplase                 | Thrombolytic Agents                   | 1 mg/mL       | 71%                                  | 67%                | 62%           |
| Amiodarone                | Class III Antiarrhythmics             | 1.8 mg/mL     | 69%                                  | 64%                | 57%           |
|                           |                                       | 3.6 mg/mL     |                                      |                    | 12%           |
| Argatroban                | Direct thrombin inhibitors            | 1 mg/mL       | 43%                                  | 43%                | 40%           |
| Bumetanide                | Loop diuretics                        | 0.25 mg/mL    | 48%                                  | 45%                | 24%           |
| Cisatracurium             | Neuromuscular Blocking Agents         | 2 mg/mL       | 57%                                  | 57%                | 38%           |
| Dexmedetomidine           | Anxiolytics, Sedatives, and Hypnotics | 4 mcg/mL      | 64%                                  | 62%                | 60%           |



# Bainbridge Health Infusion Pump Network

111  
Inpatient Sites

30,000+  
Beds In Network

42,000+  
Pumps in Network

656 million  
Infusions Records  
Captured



## Bainbridge Health Infusion Pump Network

| Medication | ASHP Recommended Concentrations          | Bainbridge Health Network  |
|------------|--|--|
| Dopamine   | 800 mcg/mL<br>1600 mcg/mL<br>3200 mcg/mL | 60% use 800 mcg/mL<br>90% use 1600 mcg/mL<br>10% use 5000 mcg/mL<br><br>*2.8 concentrations per site average<br>**40% of sites only have 2 concentrations                                      |
| Fentanyl   | 10 mcg/mL<br>50 mcg/mL                   | 10% use 2.5 mcg/mL<br>30% use 5 mcg/mL<br>90% use 10 mcg/mL<br>30% use 20 mcg/mL<br>90% use 50 mcg/mL<br><br>*3 concentration per site average<br>**80% of sites have 3 or less concentrations |



## Questions & Feedback

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[www.ashp.org/standardize4safety](http://www.ashp.org/standardize4safety)

