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Office of Disease Prevention and Health Promotion  
Attn: Division of Health Care Quality  
Department of Health and Human Services  
1101 Wootton Parkway, Suite LL100  
Rockville, MD 20852

To Whom It May Concern:

The Society for Healthcare Epidemiology of America (SHEA) appreciates the opportunity to review and provide comments on the proposed new five-year targets for the acute care hospital measures for the *National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination* (HAI Action Plan).

#### **SHEA General Comments:**

SHEA applauds and supports the goal to move towards the prevention and elimination of HAIs as proposed in these measures. However, the Society recommends reconsideration of the goals in light of current literature and progress by hospitals and healthcare organizations to date. Many of the measures have potentially unachievable targets irrespective of magnitude of effort or dedicated resources. Additionally, due to the complexity of this broad spectrum effort, we recommend cautious use of the measures to enact punitive actions against individual hospitals, e.g., hospital ranking, non-payment for HAI, etc., unless little to no improvement has been realized by their local efforts.

Currently, target reductions are measured without the use of confidence intervals around the SIR estimates. The use of estimates in this manner is easier to interpret; however, as HAI rates decline further, these point estimates might not be adequate to capture the significance (or lack thereof) of changes in frequencies of rare events. This would be even more important if rates are measured on units smaller than the national aggregate.

Finally, recent changes in surveillance criteria for HAI without associated changes in measurements have resulted in distortion of temporal trends in some instances (e.g., facility-onset *C.difficile* infections). We recommend that further modifications to surveillance criteria, if deemed necessary by NHSN, be made prior to 2015. If that is not possible, we recommend that additional changes to surveillance criteria during the period 2015 to 2020 be made without loss of comparability over time.

## **1. Reduce central line-associated bloodstream infections (CLABSI) in intensive care units and ward-located patients**

Data Source: CDC's National Healthcare Safety Network (NHSN)

Baseline: 1.0 SIR (2006-2008)

2013 Target: 50% reduction or 0.50 SIR

2012 Progress: 44% reduction or 0.56 SIR

**PROPOSED 2020 TARGET:  
50% reduction from 2015 baseline\***

\*Infections from Mucosal Barrier Injury (MBI) will be excluded from the calculation

### ***SHEA comments***

Measure: Recommend modification.

- Change to exclude burn ICU patients.

2020 Proposed Target: too aggressive, change to 25% reduction compared to new 2015 baseline

- The 25% reduction from 2015 baseline is reasonable since a larger proportion of CLABSIs occurring in 2015-2020 will be related to factors other than those targeted by established prevention guidance (related to mucosal-barrier injury). Most of the evidence for CLABSI prevention is applicable to the intensive care units and most hospitals have implemented the currently known evidence based measures. In the ward location, number of providers is much greater and the potential for variation in care is higher. Different strategies will likely be needed to reduce CLABSI in the wards compared to the ICUs.
- The rationale for excluding burn ICUs is that evidence-based prevention measures to reduce CLABSI are less clear in this patient population. The skin barrier loss in these patients predisposes them to have skin translocation of bacteria, which is not reflected in the current NHSN surveillance criteria.

## **2. Reduce catheter-associated urinary tracts infections (CAUTI) in intensive care units and ward-located patients**

Data Source: CDC's National Healthcare Safety Network (NHSN)

Baseline: 1.0 SIR (2009)

2013 Target: 25% reduction or 0.75 SIR

2012 Progress: 2% increase or 1.02 SIR

**PROPOSED 2020 Target:  
25% reduction from 2015 baseline\***

\*The target will reflect aggregate data, but interim assessments of the rate will also be stratified by ICUs and non-ICUs in order to better understand the areas needed for improvement.

***SHEA Comments***

Measure: Recommend modification.

- Change to “Reduce catheter-associated urinary tract infections (CAUTI) and urinary catheter use in intensive care units, ward-located patients, and long-term acute care patients.
- Change single SIR to two distinct SIRs; 1.0 SIR ICU and Ward(2015), and 1.0 SIR LTAC (2015)
- Consider use of an alternative measure, population-based CAUTI rate expressed as CAUTI per 10,000 patient-days that will incorporate the current catheter-based CAUTI rate and also the urinary catheter utilization ratio. (Fakih MG, Greene, MT, Kennedy, EH, Meddings, JA, Krein, SL, Olmsted, RN, Saint, S. Introducing a population-based outcome measure to evaluate the effect of interventions to reduce catheter-associated urinary tract infection. Am J Infect Control 2012;40:359-64)

2020 Proposed Target: Change to reflect acute care and long-term acute care patient populations

- 2020 Target of 25% CAUTI reduction among ICU and ward locations (acute care) from new 2015 baseline
- 2020 Target of 10% CAUTI reduction among LTAC locations/hospitals from new 2015 baseline
- 2020 Target of 15% reduction in urinary catheter utilization ratio in the ICU and ward.
- 2020 Target of 5% reduction in urinary catheter utilization ratio among LTAC locations.
- If our recommendation to use population-based CAUTI rate is adopted, we propose a 2020 Target of 25% reduction among ICU and ward locations, and remove the targets related to CAUTI rate and catheter utilization ratio.

Rationale:

- Consider the addition of urinary catheter use measures as a target, as reducing unnecessary catheter use is the most effective method to prevent all urinary catheter associated complications – infectious and non-infectious. Setting a target for urinary catheter use reduction can also motivate hospitals to focus resources on interventions to reduce unnecessary placement and removing indwelling catheters as soon as no longer medically required, in all settings (Meddings J, Rogers MA, Krein SL, Fakhri MG, Olmsted RN, Saint S. Reducing unnecessary urinary catheter use and other strategies to prevent catheter-associated urinary tract infection: an integrative review. *BMJ Qual Saf.* 2013). These initial suggested targets are selected as small, to be feasible yet still motivating, and to allow more time for development of a standardized device utilization ratio (similar to the SIR).
- Projections reflect recent experience at realistic preventability considering limitations of surveillance definitions, and differences in preventability between ICU, wards, and LTAC locations. Tracking in different settings will help avoid dampening success/struggle in any one setting by using a single overall measure.

### **3. Reduce the incidence of invasive health care-associated methicillin-resistant *Staphylococcus aureus* (MRSA) infections**

Data Source: CDC's Emerging Infections Program Network (EIP) Active Bacterial Core Surveillance (ABCs)

Baseline: 27.08 infections per 100,000 persons (2007-2008)

2013 Target: 50% reduction or 13.5 infections per 100,000 persons

2012 Progress: 31% overall reduction or 18.6 infections per 100,000 persons

**PROPOSED 2020 TARGET:  
75% reduction from 2007-2008 baseline\***

\*Healthy People 2020 goal

#### ***SHEA Comments***

Measure: Recommend no modification

2020 Proposed Target: too aggressive, change to 30% reduction compared to new 2015 baseline

- The target is unachievable considering challenges regarding prevention outside of hospital setting. We are not on track to meet the 2013 goal of 50% reduction for this measure, therefore, 75% reduction by 2020 compared to a baseline rate established in 2015 is not probable.

Target-Setting Methodology:

- Projection does not account for the historical 7% annual decline in disease outside of hospitals, which in turn accounts for the 77% of the disease tracked by this measure. Without more targeted prevention programs focused on infections occurring in the post-discharge setting, the likely reduction from 2007/8 baseline is (given current trend) is only about a 66% reduction.

**4. Reduce facility-onset methicillin- resistant *Staphylococcus aureus* (MRSA) in facility-wide health care**

Data Source: CDC's National Healthcare Safety Network (NHSN)

Baseline: 1.0 SIR (2010-2011)

2013 Target: 25% reduction or 0.75 SIR

2013 Progress: 3% reduction or 0.97 SIR

**PROPOSED 2020 TARGET:  
50% reduction from 2015 baseline**

***SHEA Comments***

2020 Proposed Target: Change to 25% reduction compared to new 2015 baseline

- 2020 Target of 25% reduction from (2015) baseline is aspirational, but not unreasonable and translates roughly to a 60% reduction from old baseline with a relative decrease of about 9% per year (a value comparable to that observed from EIP national experience 2005 – 2011).

Target-Setting Methodology:

- Proposed 2020 target translates to roughly a 60% reduction from current baseline (2010-2011), so by projection from current values.
- Consider adding new measure to track progress nationally (but not at the facility level) of community-onset MRSA BSI/1000 admissions.

**5. Reduce facility-onset *Clostridium difficile* infections in facility-wide health care**

Data Source: CDC's National Healthcare Safety Network (NHSN)

Baseline: 1.0 SIR (2010-2011)

2013 Target: 30% reduction or 0.70 SIR

2012 Progress: 2% reduction or 0.98 SIR

**PROPOSED 2020 TARGET:  
30% reduction from 2015 baseline**

***SHEA Comments***

Measure: Recommend no modification

2020 Proposed Target: Reasonable, maintain 30% reduction compared to new 2015 baseline

Target-Setting Methodology:

- An important confounder is that with increased use of PCR as a diagnostic, there are more asymptomatic carriers being detected. Many of these people were likely colonized on admission to the hospital. How far we can reduce HO-CDI incidence when a relatively large proportion of HO-CDI patients are likely colonized on admission to the hospital is not clear. Therefore, a 30% reduction is still aspirational considering we have had no change from baseline CDI incidence, and will likely fail to meet the 2013 goal.

**6. Reduce the rate of *Clostridium difficile* hospitalizations**

Data Source: AHRQ's Healthcare Cost and Utilization Project

Baseline: 11.6 hospitalizations with *C. difficile* per 1,000 discharges (2008)

2013 Target: 30% reduction

2012 (Projected) Progress: 13.6 hospitalizations per 1,000 discharges

**PROPOSED 2020 TARGET:  
30% reduction from 2015 baseline**

***SHEA Comments***

Measure: Recommend removal

2020 Proposed Target: none

- Past research has demonstrated the PPV of ICD9 codes is ~75% and has been worsening over time. Many of the false positives are from people with CDI in the past, but do not actually have CDI during that admission. Also, it does not make sense to use a surrogate marker for CDI (i.e. ICD9 codes) for measuring CDI reduction when there is a more accurate marker for CDI (NHSN) also proposed to measure CDI reduction.

## 7. Reduce Surgical Site Infection (SSI) admission and readmission

Data Source: CDC's National Healthcare Safety Network (NHSN)

Baseline: 1.0 SIR (2006-2008)

2013 Target: 25% reduction or 0.75 SIR

2012 Progress: 20% reduction or 0.80 SIR

**PROPOSED 2020 TARGET:  
30% from 2015 baseline**

### ***SHEA Comments***

Measure: Recommend modification with clarification

- Does "Surgical Site Infection (SSI) admission and readmission" mean only SSIs detected during admission or readmission to the same facility where the procedure was performed?
- Which inpatient procedures were finally selected for inclusion in this metric?
- Does the metric include only deep and organ/space infections, or all SSIs?
- Given the greater subjectivity and variability in ascertainment of superficial SSIs, particularly now with inclusion of open wounds in SSI surveillance, we recommend that only deep and organ/space infections should be included in this metric (if that is not already the case).

2020 Proposed Target: too aggressive; recommend 20% compared to new 2015 baseline

- Assuming that this target utilizes only inpatient, deep and organ/space infections identified only during admission/readmission, the proposed 30% reduction is aggressive. We recommend that a 20% reduction from the 2015 baseline would be a more reasonable target.
- Given the inclusion of incisions that are not primarily closed in SSI surveillance, and lack of evidence around the efficacy of SSI prevention measures in the presence of open wounds, consider stratifying SSI rates by open and closed wounds (this stratification will be available in NHSN data).
- We recommend exclusion of contaminated wounds because preventing infections in this category of surgical procedures is extremely challenging.

## **8. Surgical Care Improvement Project (SCIP) Measures: Adherence to process measures to prevent Surgical Site Infection (SSI)**

- SCIP Infection Measure 1: Antibiotics within 1 hour before incision or within 2 hours if vancomycin or quinolone is used;
- SCIP Infection Measure 2: Received prophylactic antibiotics consistent with recommendations;
- SCIP Infection Measure 3: Prophylactic antibiotics discontinued within 24 hours of surgery end time or 48 hours for cardiac surgery;
- SCIP Infection Measure 4: Controlled 6 am postoperative serum glucose for cardiac surgery patients;
- SCIP Infection Measure 6: Appropriate hair removal for surgery patients.

Data Source: CMS's Hospital Compare

Baseline: 2006, 2007, 2008\*

- SCIP Inf 1 – 83%, 87%, 91%
- SCIP Inf 2 – n/a, 92%, 95%
- SCIP Inf 3 – 74%, 80%, 87%
- SCIP Inf 4 – n/a, n/a, 89%
- SCIP Inf 6 – n/a, n/a, 97%

\*SCIP Inf 4 and Inf 6 were not required for reporting until Q1 2008. The baseline data is based on approximately 3,650 hospitals reporting each quarter since mid-2006.

2013 Target: 95% Adherence

2012 Progress:

- SCIP Inf 1 – 98%
- SCIP Inf 2 – 99%
- SCIP Inf 3 – 97%
- SCIP Inf 4 – 96%
- SCIP Inf 6 – suspended January 2012

### **PROPOSED 2020 TARGET:**

**Suspend from HAI Action Plan as these processes are now widely accepted as standards of practice**

### ***SHEA Comments***

Measure: Support discontinuing this measure.