



# **MLN Connects<sup>®</sup>**

*National Provider Call*

## **National Partnership to Improve Dementia Care in Nursing Homes & Quality Assurance and Performance Improvement (QAPI)**

April 28, 2016



Official Information Health Care  
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# Agenda

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- Welcome & QAPI Update
  - Antibiotic Stewardship, Involving Urinary Tract & Respiratory Infections
  - Infection Control Pilot Project
  - National Partnership Update & Closing
  - Question & Answer Session
- Debbie Lyons, CMS  
Janet Snipes,  
Holly Heights Care Center
- Sheila Hanns, CMS  
Michele Laughman, CMS
- Moderator

# Welcome & QAPI Update

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# Antibiotic Stewardship: Performance Improvement Projects

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Janet Snipes, NHA

Holly Heights Nursing Center

Denver, Colorado

# 2015 Performance Improvement Project Management of Asymptomatic Bacteriuria

- Brainstorming session on Antibiotic Stewardship
  - Urinary Tract infections (UTI) were the most frequent infections treated in 2014 at Holly Heights
  - Medical Directors, Pharmacist and staff developed Performance Improvement Project
  
- Using Evidence to Drive Care
  - Holly Heights Nursing Center utilized the McGeer Criteria for UTI surveillance and to guide decision making related to antibiotic use

Reference: Stone, N.D., Ashraf, M.S., Calder, J., Crnich, C.J., Crossley, K., Drinka, P. J., & ... Bradley, S.F. (2012).  
Facilities: Revisiting the McGeer Criteria. *Infection Control & Hospital Epidemiology*, 33(10), 965-977.  
doi:10.1086/667743

# Why?

## Harm From Antibiotic Use in Nursing Homes

- Antibiotic use and misuse can lead to harm
  - Side effects, drug interactions and adverse events
  - Major risk factor for C.difficile (C-Diff) infection
  - Acquisition and infection from antibiotic resistant bacteria
- Residents in high antibiotic use in NHs have a 24% increased risk of antibiotic-related complications
  - Range of use per facility (n=607): 20.4-192.9 antibiotic-days/1,000 resident days
  - High use: >62 antibiotic-days/1,000 resident days
- Other predictors of experiencing antibiotic harms
  - Recent hospitalization or emergency department visit, indwelling medical device, incontinence, functional dependence

Daneman N et al. JAMAIntMed 2013; 173:673-82

# 2015 Performance Improvement Project

## ▪ Root Cause Analysis

- Indications for utilization of antibiotics to treat UTI's have changed
- Families often insist on antibiotics
- Hydration is not always adequate
- Physicians/Nurses/Families/others require education on indication/criteria

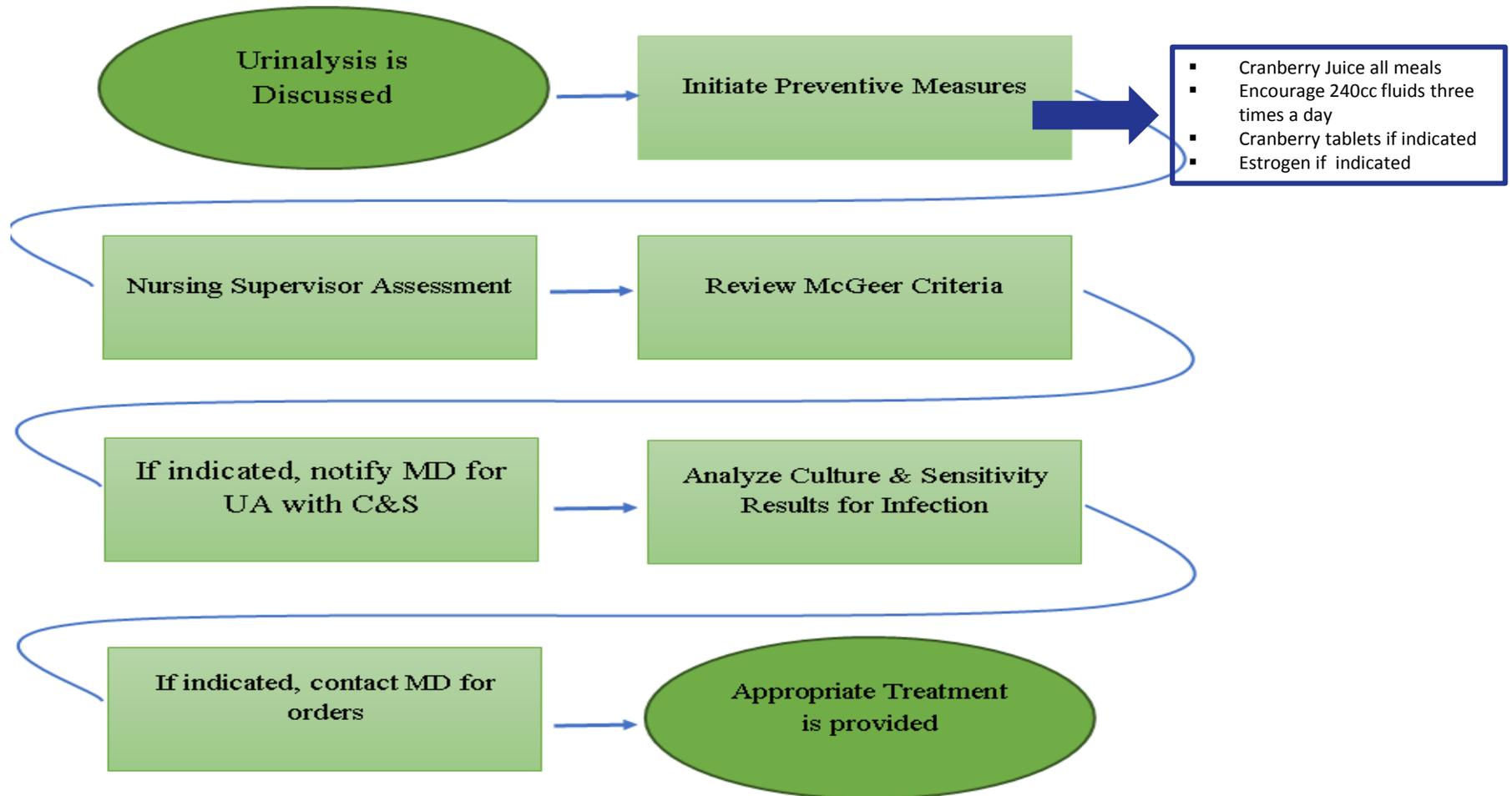
## ▪ Objectives

- Reduce urinalysis (UA) obtained by 25%
- Reduce culture and sensitivity (C&S) of those UA's by 25%
- Reduce antibiotic usage for asymptomatic bacteria by 25%

# Action Plan

- Education provided in multiple topics throughout 2015
  - McGeer criteria
  - Colonization
  - Reading and understanding culture and sensitivity
  - Asymptomatic bacteriuria
  - Appropriate peri-care
  - Risks for C-Diff and Adverse events
  
- Education targeted to multiple groups
  - Nurses
  - Therapists
  - Senior leaders
  - Certified Nursing Assistant (CNA)
  - Residents/Patients
  - Families

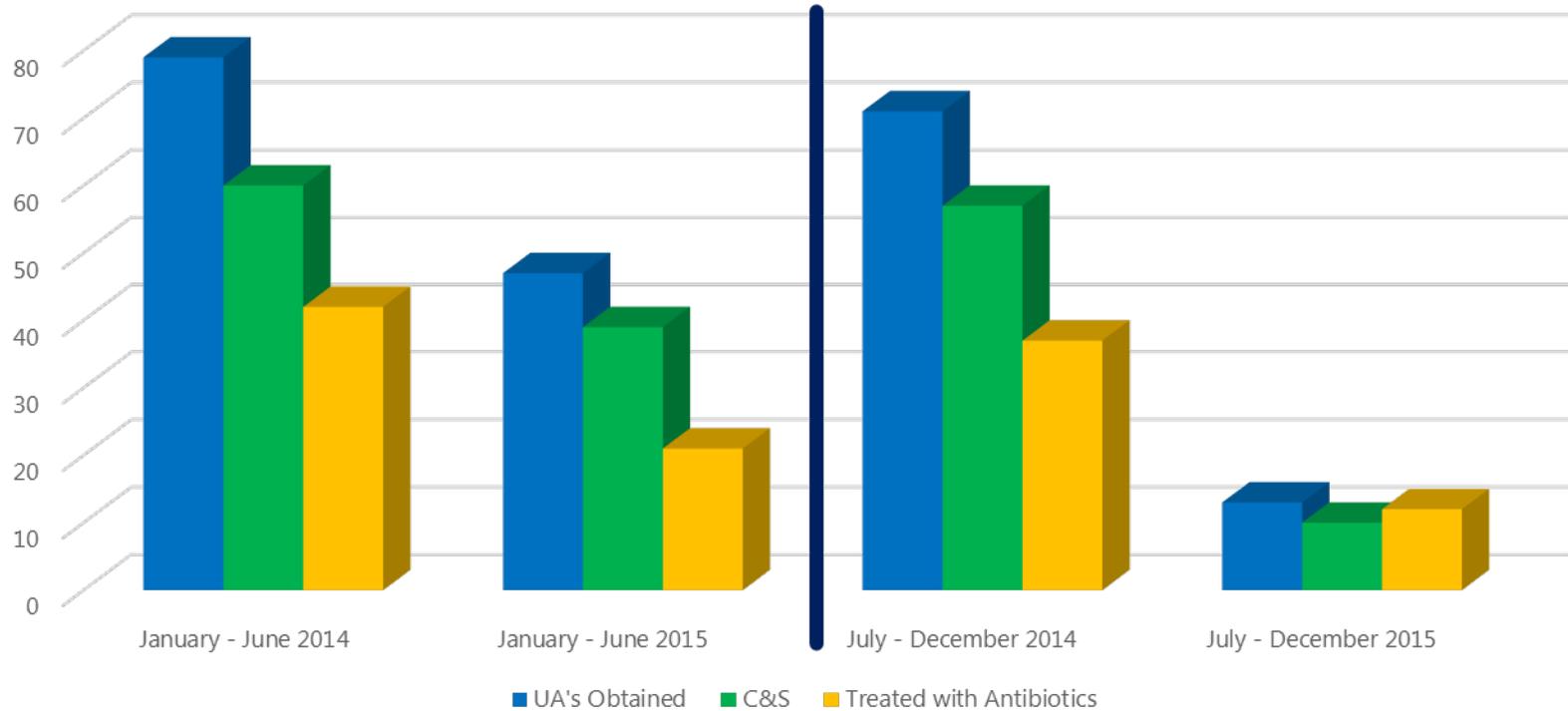
# UTI Reduction Flow Chart



# Particular Challenges for Residents with Dementia

- 41% of residents with dementia
  - Unable to convey symptoms and pain
  - Behaviors exacerbated related to symptoms
  - Families “I know my mom- you have to get a UA” of demented residents
- Staff training included
  - Watching for change in behaviors
    - Increase in agitation/anxiety
    - Decrease in Activities of Daily Living (ADL), mood, and lethargy
  - Sharing information of multi-drug resistant organisms and antibiotic stewardship
  - Non-pharmacological interventions specific to each residents
- Always start pushing fluids and cranberry juice

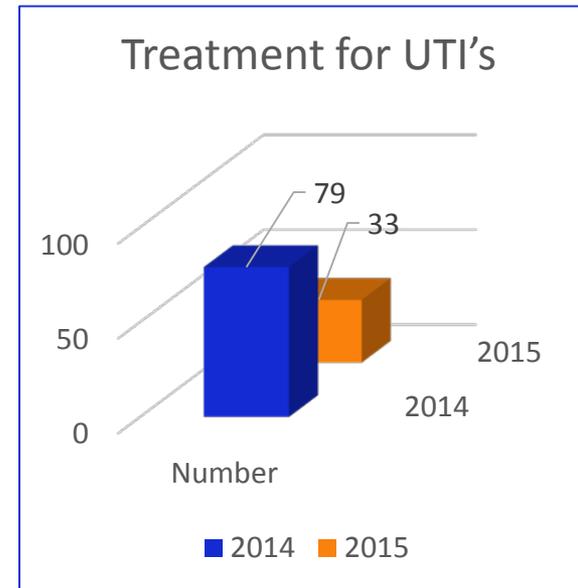
# 2014 Results vs 2015 Results



January - June 2014: 79 UA's were obtained, 60 with C&S, 42 were treated with antibiotics  
January - June 2015: 47 UA's were obtained, 39 with C&S, 21 were treated with antibiotics  
July - December 2014: 71 UA's were obtained, 57 with C&S, 37 were treated with antibiotics  
July - December 2015: 13 UA's were obtained, 10 with C&S, 12 were treated with antibiotics

# Results

- 81% reduction in UA's obtained
- 82% reduction in C&S obtained
- 67% reduction in use of antibiotics for UTI's
  
- Overall 2014-2015
- Bottom line
  - 2014 = 79 residents treated
  - 2015 = 33 residents treated



# Cost Savings

## ■ Urinalysis

➤ 2014 150 UA x \$31.24 = \$4686

➤ 2015 60 UA x \$31.24 = \$1875

Savings = \$2811

## ■ Culture and Sensitivity

➤ 2014 117 C&S x \$25.94 = \$3035

➤ 2015 49 C&S x \$25.94 = \$1271

Savings = \$1764

## ■ Antibiotic (ABX) (based on average of Top 5 course)

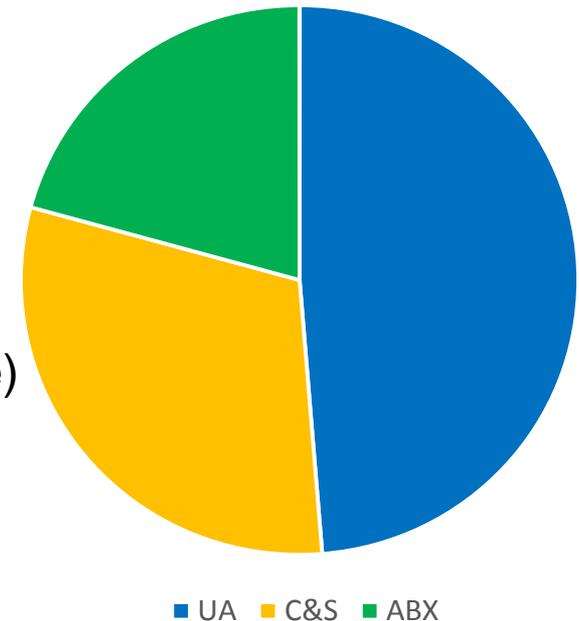
➤ 2014 79 ABX x \$26.00 = \$2054

➤ 2015 33 ABX x \$26.00 = \$858

Savings = \$1196

**2015 Total Savings \$5771**

Total Savings



# 2016 Performance Improvement Project

## Antibiotic Stewardship

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- Using Evidence to Drive Care
  - Respiratory infections were the most frequent infection treated in 2015 at Holly Heights
  - Respiratory infections - 53% of total infections
  - Loeb's Criteria

# 2016 Performance Improvement Project

## Antibiotic Stewardship Continued

### Minimum Criteria for Initiation of Antibiotics in Long-Term Care Residents Suspected Lower Respiratory Tract Infection

- Fever  $>38.9^{\circ}\text{C}$  [ $102^{\circ}\text{F}$ ] **and** at least one of the following:
  - Respiratory rate  $>25$
  - Productive cough

(Or)

- Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature, but  $\leq 38.9^{\circ}\text{C}$  [ $102^{\circ}\text{F}$ ]) **and** cough **and** at least one of the following:
  - Pulse  $>100$
  - Rigors
  - Delirium
  - Respiratory rate  $> 25$

(Or)

- Afebrile resident with Chronic Obstructive Pulmonary Disease (COPD) and  $>65$  years **and** new or increased cough with purulent sputum production

(Or)

- Afebrile resident with COPD and new cough with purulent sputum production **and** at least one of the following:
  - Respiratory rate  $>25$
  - Delirium

(Or)

- New infiltrate on chest X-ray thought to represent pneumonia **and** at least one of the following:
  - Fever ( $>37.9^{\circ}\text{C}$  [ $100^{\circ}\text{F}$ ] or a  $1.5^{\circ}\text{C}$  [ $2.4^{\circ}\text{F}$ ] increase above baseline temperature)
  - Respiratory rate  $>25$
  - Productive cough

Chest X-ray and complete cell count with differential is reasonable for residents with fever, cough, and at least one of the following: pulse  $>100$ , worsening mental status, rigors

Source: Loeb et al, Development of Minimum Criteria for the Initiation of Antibiotics in Residents of Long-Term Care Facilities: Results of a Consensus Conference. Inf Control Hosp Epi.

# Performance Improvement Project

## ■ Objectives

- Reduce total antibiotic usage by 25%
- Reduce use of broad spectrum antibiotics
- Achieve 90% compliance with antibiotic prescribing practices
  - Right Drug
  - Right Dose
  - Right Time
- Achieve 90% compliance with Pnuemovax/Previnar 13

## ■ Measurement Period

- July 2015 – June 2016
- July 2016 – July 2017

# Action Plan

- Education to appropriate disciplines in 2016:
  - Loeb's Criteria
    - Suspected lower Respiratory Tract Infections
  - Symptomatic treatment for all infections
  - Broad spectrum/narrow spectrum antibiotic indications
- Determine prescribing practices and if indicated educate physicians
- Systematically review all orders for right dose, right drug, right amount and time
- Education to residents and families

# Resources for Consumer Education



Core Elements for Antibiotic Stewardship in Nursing Homes

## What You Need to Know About Antibiotics in a Nursing Home

### What are antibiotics?

Antibiotics are drugs used to treat infections caused by bacteria. They do not work for illnesses caused by viruses, like flu and most cases of bronchitis.



### When are antibiotics necessary?

There are times when antibiotics are urgently needed; for example, to treat sepsis (e.g., when bacteria cause a severe infection of the bloodstream), pneumonia caused by bacteria, and meningitis caused by bacteria. Using antibiotics when they are not necessary increases the risk they will not work when needed most.



### Can taking antibiotics be harmful?

Antibiotics, like any medications, can have minor side effects like upset stomach or a rash, as well as serious allergic reactions or dangerous interactions with other medications a person is taking. In particular, antibiotics put people at risk for a deadly type of diarrhea caused by *C. difficile*. Frequent or excessive use of antibiotics leads to developing bacteria that are resistant to those antibiotics. Antibiotic-resistant bacteria are harder to kill, and can cause untreatable infections. A person also can carry resistant bacteria without feeling sick (this is called “colonization”), but if that bacteria causes an infection, it can require more complex treatments and transfer to the hospital.



### What is antibiotic stewardship?

Antibiotic stewardship refers to a set of commitments and actions designed to make sure patients receive the right dose, of the right antibiotic, for the right amount of time; and only when truly necessary. Improving antibiotic use will ensure these life-saving medications are effective and available when we need them.



<http://www.cdc.gov/longtermcare/pdfs/factsheet-core-elements-what-you-need-to-know.pdf>

# Triple Aim

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**Better Care  
Better Health  
Reduced Costs**

**Success!**

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# Infection Control Pilot Project

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Sheila Hanns, MBA, BS-HSM, ADN-RN

Centers for Medicare & Medicaid Services

# Context

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- CMS Survey and Certification Group/Centers for Disease Control and Prevention (CDC) Division of Healthcare Quality Promotion History
- Ebola funding
- New Regulations
- Combating Antibiotic Resistant Bacteria (CARB)

# Pilot Goals

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- Improve assessment of infection control and prevention regulations in nursing homes, hospitals, and during transitions of care
- Develop and test new surveyor tools
- Promote transparency of regulations
- Prevent infections in nursing home residents

# Pilot Surveys

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- Unannounced surveys
- Educational surveys
- Facility selection
- 2016: 10 pilot nursing home surveys
- 2017: 40 hospital and 40 nursing home surveys
  - Review findings
  - Technical assistance
  - 2018: Revisit surveys

# Surveyor Tools and Processes

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- New and Proposed Regulations, CARB
- Develop Pilot Nursing Home Infection Control Worksheet (ICWS)
- Revise Hospital ICWS
- Assess for Infection Control and Prevention During Transitions of Care

# New Processes

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- Analyze hospital and nursing home survey results
- Develop action plans for improvement
- Provide technical assistance
- Perform revisit surveys
- Observe National Health Safety Network (NHSN) data as metric for outcome

# Outcomes of Pilot

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- Develop new tools (consistency, transparency)
- Test new processes to assess infection prevention during transitions of care
- Optimize surveyor assessment of infection control regulations in hospitals and nursing homes
- Prepare for the future

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# National Partnership Update & Closing

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# Question & Answer Session

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# Acronyms in this Presentation

- ADL: Activities of Daily Living
- ABX: Antibiotics
- CARB: Combating Antibiotic Resistant Bacteria
- C&S: Culture and Sensitivity
- CDC: Centers for Disease Control and Prevention
- C-Diff: C.difficile
- CNA: Certified Nursing Assistant
- COPD: Chronic Obstructive Pulmonary Disease
- ICWS: Infection Control Worksheet
- NHSN: National Health Safety Network
- QAPI: Quality Assurance and Performance Improvement
- UA: Urinalysis
- UTI: Urinary Tract infection

# Evaluate Your Experience

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- Please help us continue to improve the MLN Connects® National Provider Call Program by providing your feedback about today's call
- To complete the evaluation, visit <http://npc.blhtech.com> and select the title for today's call

# Thank You

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