



KEEPING TABS

Absolute Pharmacy is the prescription for what ails you.

In each quarterly edition, you'll find the latest news about pharmacy, new medications, technology and more – all through the lens of what is pertinent to the long-term care (LTC) industry.

Absolute Pharmacy has been serving the LTC industry since 1994. We're a part of a dynamic circle of care that consists of rehabilitation, home health care services, hospice care and much more. We have a rich perspective, and we're thrilled to share what we've been learning from industry leaders, our employees and our customers – you!

We are confident you'll find the information useful. If you have a suggestion for a topic you'd like to learn about, let us know at maryjo.mcelyea@abshealth.com.

Table of Contents

- 2** Industry
 - Responding to the Continuum of Care

- 4** Drug News
 - A Review of Asymptomatic Bacteriuria
 - Unleash the Hospice Hero Inside

- 8** Absolute Insights
 - Put a Face to a Name: Eric McCaw
 - Upcoming Events

Responding to the Continuum of Care

By Mary Jo McElyea, Business Development Manager, Absolute Pharmacy

The market is constantly evolving in areas related to compliance, the push to a home-based model and providing for the entire continuum of care. Cost and quality remain the biggest drivers of change. Mismanagement of medications is a large contributor to hospital readmissions, which is an area all parties are working to reduce. As a vendor and partner, Absolute Pharmacy has to plan and innovate ways to help clients improve patient outcomes in these areas. Two new solution pilots are active now – SynMed® multi-dose card packaging and the Livi at-home dispensing machine.

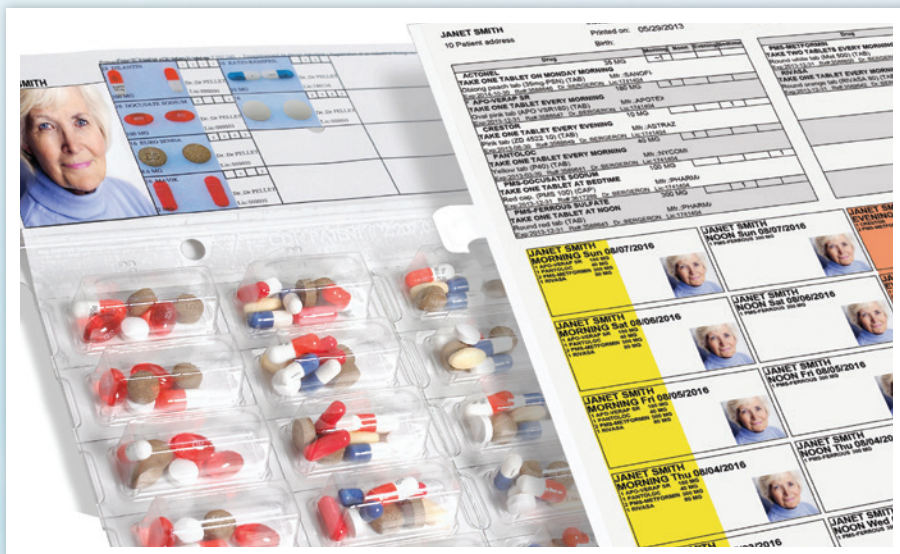
SYNMED MULTI-DOSE CARD PACKAGING

We're proud to introduce the latest in medication management, now being used to serve our clients – the SynMed® Adherence Packaging Solution. This state-of-the-art automated device distributes prescription medication in multi-dose blister packs that are clearly labeled for each and every dose. Residents' prescription drugs are grouped together by day and time in a handy blister pack so you can find their medication easily. The color-coded blister card includes a resident photo, pharmaceutical profile and even pictures of the

medication, which reduces errors. The perforated card lets you detach the blisters needed at each administration time, eliminating extra med-pass steps.

STATISTICS SHOW ISSUES ARISE BECAUSE OF INCORRECT MEDICATION MANAGEMENT

- 1 | 22 percent of Medicare patients in a nursing facility experience an adverse event during their stay (37 percent of which were attributed to medication).¹
- 2 | The majority of medication errors occur during care transitions, and this often results in readmission and/or an emergency department visit.¹
- 3 | Patients who use blister packs for prescription medication take the correct prescribed dose 97 percent of the time, versus 61.2 percent for non-blister pack users.²
- 4 | 71.3 percent of medication errors and reasons for noncompliance are due to wrong time of administration.³



SynMed® multi-dose card packaging

PACKAGING CAN HELP

SynMed multi-dose card packaging provides:

- 1** | Enhanced accuracy of medication administration (fewer errors)
- 2** | Enhanced accountability of controlled substances (less drug diversion)
- 3** | Enhanced efficiency of medication management (saves nursing time)



LIVI AT-HOME DISPENSING MACHINE

Medication adherence continues to be an issue once patients are released from the hospital and return home or to their assisted living facility. Medication management errors can cause extra caregiver visits, a return visit to the doctor, or, in some cases, re-hospitalization. And the impact isn't merely financial. There can be pain, suffering or the worst case possible – the pre-mature death of a patient.

Livi is an at home dispensing machine that uses a cloud-based application to make scheduling and real-time monitoring of medications easy and convenient. Livi retains the medication history and adherence data, which can be shared with physicians and other caregivers. The machine automatically dispenses a 90-day supply of up to 15 different pills and supplements. If a dose is late or missed, Livi will alert a caregiver via text message or email. Remote monitoring gives the ability to add, change, hold and discontinue medications without going to patient's residence.

Please contact Mary Jo McElyea at 330-498-5220 or maryjo.mcelyea@abshealth.com to learn more.

References:

- ¹ Health Services Advisory Group (AZ) No Place Like Home, Phase 2 Campaign.
- ² Lee, J.K., Grace, K.A., Taylor, A.J. (2006). Effect of a Pharmacy Care Program on Medication Adherence and Persistence, Blood Pressure, and Low-Density Lipoprotein Cholesterol. *JAMA*, E1-E9.
- ³ Young, H.M. & Carley, M.M. Medication Management and Medication Errors in Assisted Living. 2007 Aug; 16 (4): 297-302.



Livi at-home dispensing machine



A Review of Asymptomatic Bacteriuria

By Courtney Myers, PharmD, BCGP, Absolute Pharmacy

The urinary tract is one of the most common sites of infection in the elderly. It is associated with about 20 percent of infections reported by long-term care facilities (LTCF), and treatment represents 30-50 percent of antibiotic use.¹ The prevalence of asymptomatic bacteriuria is higher than symptomatic urinary tract infections (UTI) in LTCF, and prevalence varies in populations based on age, gender and the presence of genitourinary abnormalities. Asymptomatic bacteriuria was estimated to affect 18-57 percent of non-catheterized residents with the prevalence greater in women.¹ In both men and women, the prevalence in catheterized residents starts at 3-8 percent and reaches 100 percent after 30 days of catheterization.¹ By recognizing who is at risk, what isolates are involved, who to screen and manage for bacteriuria, facilities can minimize inappropriate antimicrobial use, adverse consequences and antimicrobial resistance.

RISK FACTORS

Risk factors that increase a resident's chance to develop a UTI also increase the risk for asymptomatic bacteriuria. As residents age, the immune function declines, making it easier for bacteria to thrive. Having multiple comorbidities that further reduce immune system function, such as diabetes, cancer and autoimmune disorders, accentuates this issue.¹ Similarly, comorbidities may increase bowel and bladder incontinence and functional decline which can impair the body's innate immune system. In addition, physical obstructions, including enlarged prostate and catheters, can trap bacteria. Risk factors result from a combination of the physiological changes of aging as well

as the accumulation of comorbidities. These risk factors promote bacteria growth and can cause both symptomatic UTI and asymptomatic bacteriuria.

MICROBIOLOGY

The types of bacteria isolated and their resistance patterns vary from facility to facility. Usually in both catheterized and non-catheterized residents, one organism can be isolated but some residents may be polymicrobial. Most commonly, escherichia coli is the number one isolate, followed by proteus and klebsiella in both men and women.^{1,4} Men and woman with urologic devices may have polymicrobial bacteriuria and pseudomonas aeruginosa followed by proteus mirabilis, providencia stuartii, and morganela mornaii as the isolates found on culture.⁴

DIAGNOSIS

By being able to accurately identify residents with symptomatic UTIs, facilities can minimize inappropriate treatment of asymptomatic bacteriuria. In some LTC facilities, nursing staff and physicians utilize the Loeb and McGreer criteria to identify residents with symptomatic UTIs.^{2,3} By adopting a facility-adapted protocol, physicians are able to make accurate and timely decisions regarding when to treat and which antimicrobial to use. The diagnosis of asymptomatic bacteriuria should be based on culture of a non-contaminated urine sample. Pyuria, positive leukocyte esterase, positive nitrites, and/or foul smelling urine without symptoms in both catheterized and non-catheterized residents is not indicated for antimicrobial treatment.⁴ Table 1 gives the IDSA diagnosing criteria for asymptomatic bacteriuria. Screening is not routinely done in all patients.

DIAGNOSIS OF ASYMPTOMATIC BACTERIURIA ⁴	
Asymptomatic Women	Two consecutive voided urine specimens with isolation of the same bacterial strain $\geq 10^5$ CFU/mL
Asymptomatic Men	Single, clean catch, voided urine specimen with 1 bacterial species isolated $\geq 10^5$ CFU/mL
Asymptomatic Catheterized Men or Women	Single catheterized urine specimen with 1 bacterial species isolated $\geq 10^2$ CFU/mL

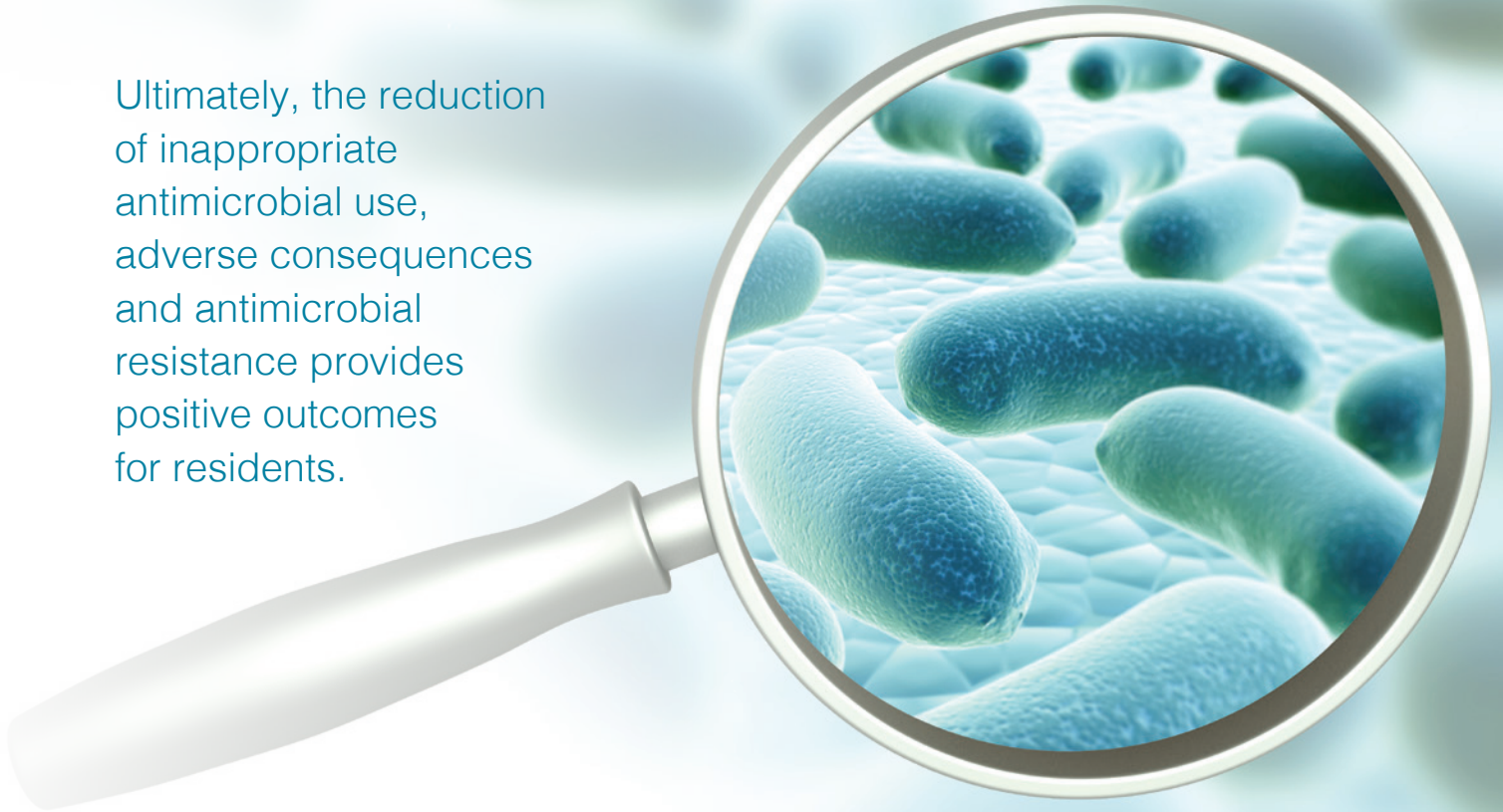
Table 1



In both men and women, the prevalence of asymptomatic bacteriuria in catheterized residents starts at **3%-8%** and reaches **100%** after 30 days of catheterization.

Drug News

Ultimately, the reduction of inappropriate antimicrobial use, adverse consequences and antimicrobial resistance provides positive outcomes for residents.



Unleash
THE HOSPICE HERO INSIDE



Share your heart and time with those who need it most. Learn about all the volunteer positions and more. Contact Margaret Mullen, volunteer coordinator, for more information at 330.491.6421 or margaret.mullen@abshealth.com

abshospicefoundation.org/volunteer

MANAGEMENT

It is not recommended to routinely screen for asymptomatic bacteriuria. Residents that warrant screening and where it is proven to be beneficial includes pregnant woman, transurethral resection of the prostate, and/or urologic procedures in which mucosal bleeding is anticipated.⁴ Residents who undergo prostate resection or urologic procedures and have bacteriuria have a high rate of introducing the bacteria systemically causing bacteremia or sepsis. It is suggested to treat with a susceptible antimicrobial within 12-24 hours prior to the intervention.⁴ As the length of time between the procedure and antimicrobial therapy initiation increases, risk of developing antimicrobial resistance and a superinfection also increases.

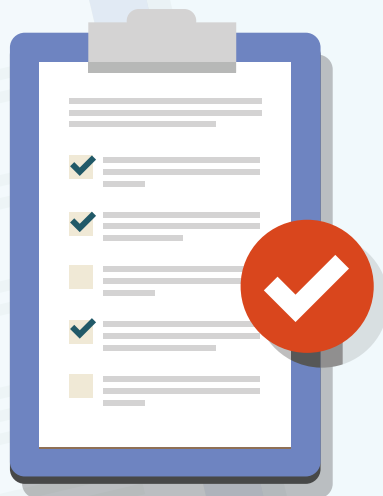
It is not recommended to screen for or treat asymptomatic bacteriuria in elderly institutionalized residents. Studies have shown that there was no decrease in rate of symptomatic infection, improvement of survival and no changes in chronic genitourinary symptoms associated with antimicrobial therapy.⁴ Treatment with antimicrobials increases the risk of drug interactions, adverse consequences, and increases antimicrobial resistance without providing additional benefit to the resident. It is not appropriate to screen and treat asymptomatic bacteriuria in residents for whom treatment benefit has not been established as beneficial.

UTIs are one of the most common infections in LTCF. Asymptomatic bacteriuria is prevalent and can lead to inappropriate prescribing of antimicrobials. Certain risk

factors increase a resident's risk of bacteriuria, which can lead to a UTI. By establishing facility-adapted protocols to identify residents with symptomatic UTIs, prescribers will minimize the treatment of asymptomatic bacteriuria. Likewise, these protocols can also identify residents with asymptomatic bacteriuria who need treatment due to urologic manipulations. Ultimately, the reduction of inappropriate antimicrobial use, adverse consequences and antimicrobial resistance provides positive outcomes for residents. These types of initiatives are an excellent opportunity for an antimicrobial stewardship program to measure, provide feedback and improve outcomes in your facilities.

References:

- ¹ Genao L, Buhr GT. *Urinary tract infections in older adults residing in long-term care facilities. Annals of Long-term Care. 2012;20 (4):33-38.*
- ² Loeb M, Bentley DW, Bradley S, et al. *Development of minimum criteria for the initiation of antibiotics in residents of long-term-care facilities: results of a consensus conference. Infect Control Hosp Epidemiol. 2001;22 (2):120-124.*
- ³ McGeer A, Campbell B, Emori TG, et al. *Definitions of infection for surveillance in long-term care facilities. Am J Infect Control. 1991;19 (1):1-7.*
- ⁴ Nicolle LE, Bradley S, Colgan R, et al. *Infectious diseases society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults. Clin Infect Dis. 2005; 40:643-54.*



HOW ARE WE DOING?

What's your input on the services we provide at Absolute Pharmacy? We value your feedback and are always looking for ways we can improve. The survey will take no more than 3-5 minutes. We want to hear from you!

www.abshealth.com/absurvey



Absolute Insights



Put a Face to a Name: Eric McCaw

Q: How long have you worked for Absolute Pharmacy?

A: I have been with Absolute for 11 years.

Q: What do you do for Absolute Pharmacy?

A: I work as a consultant pharmacist. My primary role is to ensure optimal and proper use of medication for our residents. I also act as a liaison between the facilities and pharmacy to maintain successful partnerships.

Q: What's your favorite quote or saying?

A: Martin Luther King Jr: "If you can't fly then run, if you can't run then walk, if you can't walk then crawl, but whatever you do you have to keep moving forward."

Q: What do you enjoy doing the most?

A: I love spending time outdoors with my wife and kids.

Q: If you could choose anyone, who would you pick as your mentor?

A: After long deliberation, I would choose Theodore Roosevelt, the American statesman, author, explorer, soldier and naturalist.

Q: As a child, what did you want to be when you grew up?

A: I wavered between treasure hunter, explorer and famous inventor.

Q: If you could take a vacation anywhere in the world, where would it be?

A: I would love to travel to Africa. I would start with relaxing on the beaches of the West Coast, then enjoy a few days at a safari resort, and finish by trekking Mt Kilimanjaro. This is a bucket-list trip!

UPCOMING EVENTS

OHCA WINTER CONFERENCE

January 30-31

Columbus, OH

CLIENT APPRECIATION EVENT

March 15

North Canton, OH

