

Sepsis in Older Adults



Rebecca Hancock, PhD, RN, CCRC
Patient Safety & Quality Advisor
Indiana Hospital Association



SEPSIS ALLIANCE

**Sepsis Awareness
hits 65%, but few
know the signs.**

- Nation's leading sepsis organization, working in all 50 states
- Focus on:
 - Public awareness
 - Provider education
 - Survivor support
 - Advocacy



General Information

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This forum contains 30 topics and 78 replies, and was last updated by Trina Batley 7 hours, 42 minutes ago.

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Topic	Voices	Posts	Freshness
Following up with Providers and staff regarding fall outs on the Sep-1 measure Started by: Margaret O'Meara Beacham	7	7	7 hours, 42 minutes ago Trina Batley
Webinar Discussion: Sepsis Screening and Nurse Driven Protocols Started by: Marijke Vroomen Durning	2	8	4 days, 5 hours ago Sara McMannus
Sepsis Policy Started by: Lauren Hammer	4	4	5 days, 19 hours ago Rebecca Abutrab
Risk adjusted models for sepsis mortality Started by: William deVlaming, MD	1	1	6 days, 11 hours ago William deVlaming, MD
Have you seen our new Caregiver's Guide? Started by: Marijke Vroomen Durning	1	1	1 week, 2 days ago Marijke Vroomen Durning
What type of patient information would you like to see? Started by: Marijke Vroomen Durning	3	5	1 week, 2 days ago Marijke Vroomen Durning

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OLDER ADULTS' & CAREGIVERS' EXPERIENCES WITH SEPSIS

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INDIANA HOSPITAL ASSOCIATION

SEPSIS ALLIANCE
DECEMBER 18, 2018

**Older adults –
SEPSIS EXPERIENCED**

getting worse couldn't feel legs extreme joint pain unwell
stomach distension weight loss disoriented severe abdominal pain **crippling pain**
unable to eat hallucinations symptoms never recovered freezing
stopped breathing **low blood pressure** low potassium rash
delusions gasping for air end stage renal failure faintness incarcerated hernia
diverticulitis cold or flu-like agony **pain** shock felt worried hard to arouse
TURP cold weak muscles flu-like panicking cold shivering infection left lung infection
organs shutting down slurring words cold lik emotional
pulmonary embolism bug bites feel legs **SEPSIS** coded confused dizziness
unable to move comfortably **drainage** vomiting not feeling well
not moving very sick urine infection pale not talking feeling alone coma excruciating pain
shaking pneumonia anemia UTI
difficulty breathing fever cough unsteady blood pressure water infection
hemorrhaging energy fatigue high white blood count caregiver upset
confusion Ovarian cancer scared not eating bowel blockage felt warm and cold
kidney infection stomach extension **high heart rate** weakness urinary tract infection
distressed organs swelling shaking violently feeling body shutting down
unable to walk unstable blood pressure, heart rate, breathing diverticula unable to do anything
fistula unresponsive

Attitude of Gratitude

- ▶ Sepsis Alliance
 - ▶ Tom Heymann, BS, MBA
 - ▶ Tom Ahrens, PhD, RN
 - ▶ Marijke Vroomen Durning, RN
- ▶ Indiana University School of Nursing:
 - ▶ JoAnn Brooks, PhD, RN, FACP
 - ▶ Jan Buelow, PhD, RN, FAAN
 - ▶ Wendy Miller, PhD, RN
 - ▶ Kenzie Latham-Mintus, PhD
- ▶ Indiana Hospital Association

(Lofty) Objectives

- ▶ Describe challenges and opportunities for sepsis care for older adults in the:
 - ▶ Pre-acute phase of care
 - ▶ Acute (Hospital) phase of care
 - ▶ Post-acute phase of care

Sepsis Victim: ML

“Because our mum had been a sufferer of rheumatoid arthritis for 24 years the GPs who visited her assumed mum was suffering a flare up. Unfortunately mum was not assessed by any of the GPs and was left in severe pain for a week before being admitted as a 999 call. Mum had all the signs of sepsis but sadly these were missed.

The paramedics who attended her however knew instinctively what the problem was and admitted her to hospital.

If the health professionals had educated themselves in the symptoms of sepsis and better still educated our mother and her family of the risks she faced with infection we might have saved her. “



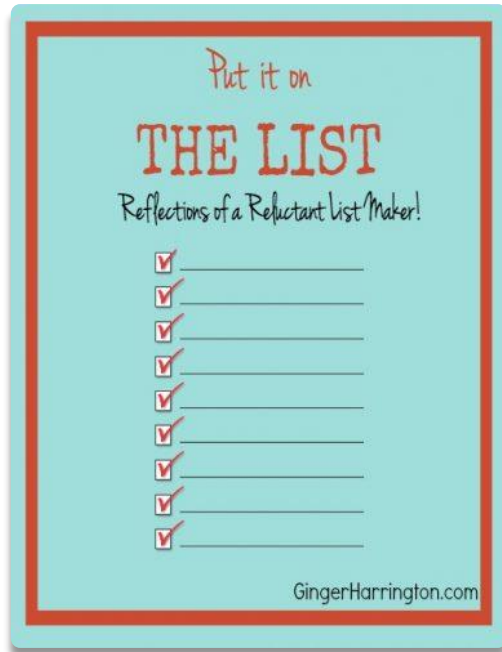
Sepsis Background Statistics

- ▶ Mortality Rates:
 - ▶ Leading cause of death in U.S. hospitals (35% of all hospital deaths) (Sepsis Alliance, 2016)
 - ▶ 29% sepsis (Stevenson et al., 2014)
 - ▶ 46% severe sepsis (Dellinger et al., 2013)
 - ▶ 56% septic shock (Kumar et al., 2006)
- ▶ Up to 87% of sepsis cases originate in the community
- ▶ **7.6% increase in mortality for every hour delay in effective antibiotic therapy for septic shock (Kumar, 2006)**

Readmissions

- ▶ Hospital readmissions within a year doubled 2005 to 2017: 11.5% to 23% (Reddy et al., 2018; Sutton & Friedman, 2013)
- ▶ Sepsis is #1 cause for readmissions
- ▶ Surviving patients who passed bundles had lower 30 day readmissions rate (20.4% vs 25.1%)
- ▶ Most common reason readmission: another bout of sepsis or another infection
- ▶ 20% re-admitted in 30 days and 40% re-admitted in 40 days

Why focus on older adults?



- ▶ 66% of sepsis patients over 65 y.o. (Sutton & Friedman, 2013)
- ▶ Most common discharge diagnosis for readmitted patients
- ▶ 20% re-hospitalized within 30 days; 40% within 90 days
- ▶ Medicare patients treated with guidelines had improved mortality rate (32% vs 21%) (Uppal & Dickerson, 2017)
- ▶ Age is independent predictor of mortality (Martin, 2012)
- ▶ More likely discharge to ECF (54% vs 76%) (Martin, 2012)
- ▶ Atypical symptoms
- ▶ 8/36 pages in 2012 guidelines focused on pediatrics with **suggested “more study needed in older adults”**

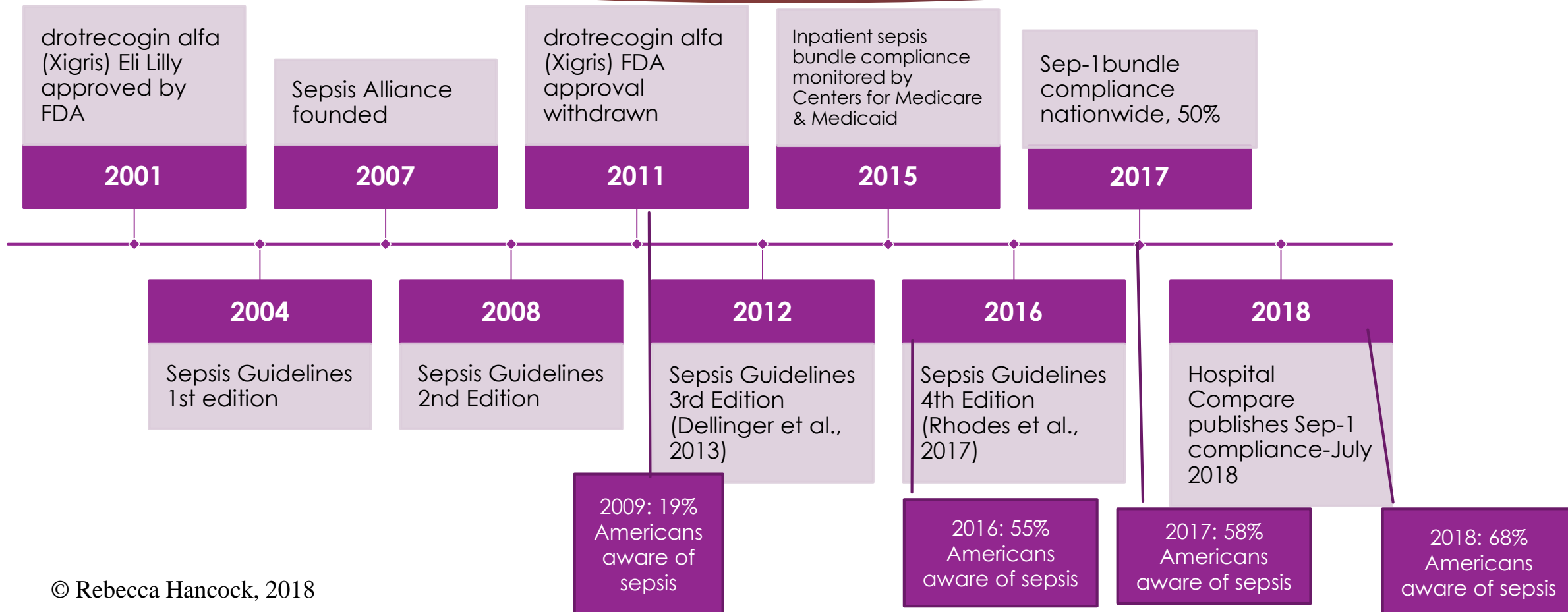
Sepsis Outcomes Affecting Older Adults & Caregivers

- ▶ Functional limitations
- ▶ Cognitive limitations
- ▶ Anxiety
- ▶ Depression
- ▶ Post-traumatic stress disorder
- ▶ Chronic Illness Exacerbations
- ▶ Increased mortality
- ▶ Longer hospitalizations & ICU stay

(Prescott, 2018)

History:

Sepsis Inpatient Guidelines & Public Awareness



Most Common Sources of Sepsis

14

Up to 22%
sources
unknown
(septic shock)
(Kumar et al, 2006)



Pediatric

Respiratory (57.2%)

Genitourinary (21.6%)

Device (9.3%)

Abdominal (8.4%)

Wound / soft tissue (2.9%)



All Adult

Respiratory (44%)

Genitourinary (21%)

Abdominal (21%)

Skin (6%); Wound (4%); Catheter (4%)

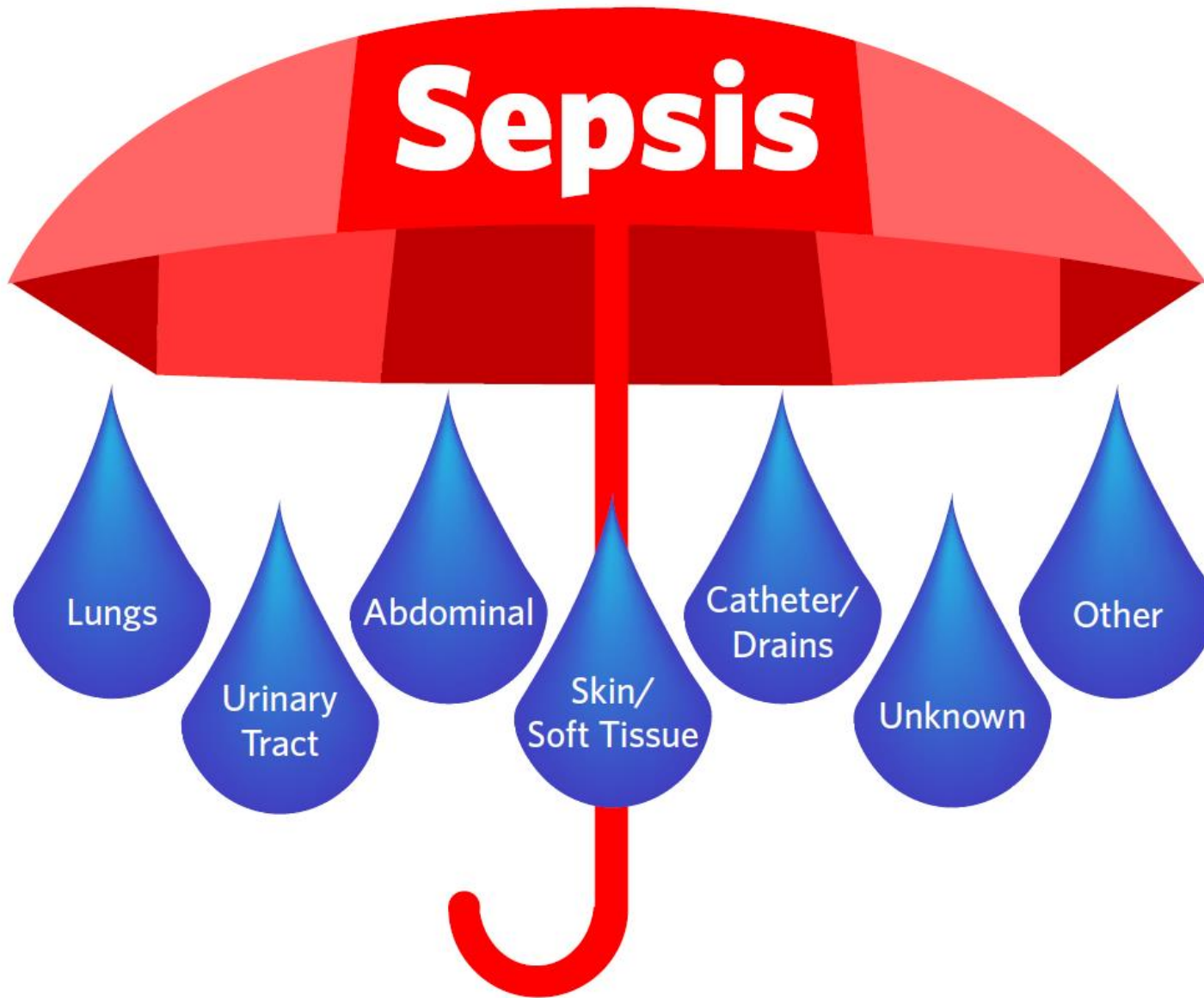
Older Adult

Genitourinary (44%)

Respiratory (33%)

Abdominal (16%)

Skin or soft tissue (7%)



Sepsis Signs & Symptoms (Clinical)

Systemic Inflammatory Response Syndrome (SIRS) Criteria:

▶ Suspected new or worsening infection with 2 or more:

1. Fever $> 38.3^{\circ}\text{C}$ / 100.4°F or less than 36°F / 96.8°F (NSAIDS / Tylenol can mask)
2. HR > 90 bpm (beta blockers can mask)
3. RR > 20 bpm
4. WBC $> 12,000$ or $< 4,000$ or $> 10\%$ bands

Other:

1. Altered mental status, falls
2. Severe Sepsis/Shock: SBP < 90 mm Hg or SBP decrease > 40 mm HG in adults
3. Delirium, anorexia, malaise, urinary incontinence, weakness, functional decline, withdrawal, agitation (Girard et al., 2015; Nasa et al., 2012; Englert & Ross, 2015)

Symptoms atypical in very old and very young

Sepsis Signs & Symptoms (Subjective)

SYMPTOMS OF SEPSIS

S Shivering, fever, or very cold
E Extreme pain or general discomfort ("worst ever")
P Pale or discolored skin
S Sleepy, difficult to rouse, confused
I "I feel like I might die"
S Short of breath



Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911 or go to a hospital and say, "I AM CONCERNED ABOUT SEPSIS."

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When it comes to sepsis, remember
IT'S ABOUT TIME™. Watch for:



Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911 or go to a hospital and say, "I AM CONCERNED ABOUT SEPSIS."

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- ▶ Systemic Inflammatory Response Syndrome (SIRS):
- ▶ Suspected or worsened infection with
 - ▶ Low blood pressure
 - ▶ Fever
 - ▶ Hypothermia
 - ▶ Heart rate over 90 bpm
 - ▶ Respiratory rate over 20 bpm
 - ▶ Significant edema
 - ▶ Hyperglycemia in absence of diabetes
 - ▶ Altered mental status?



(Dellinger et al., 2013)

Add Sepsis Risk Factors

- ▶ Diabetes
- ▶ Immunosuppressive therapy
- ▶ Neutropenia
- ▶ Elective surgery
- ▶ Chronic renal failure
- ▶ Alcohol abuse
- ▶ Functional status change
- ▶ **Nonmodifiable: Age** (old > young); gender (M>F); race (African American > Caucasian)
 - ▶ (Kumar et al., 2006; Torres et al. 2004; Englert & Ross, 2015; Clark et al., 2015; El Solh et al., 2008)

What are the sepsis guidelines?

- ▶ Use diagnostic criteria & initiate treatment within 3 hours of sepsis diagnosis:
 - 1) Assess lactate blood levels—redraw if >2 and implement bundle if >4
 - 2) Obtain blood cultures
 - 3) Initiate antibiotic therapy
 - 4) Give intravenous fluids, 30 ml / kg body weight (e.g. 150 lb = 2,045 ml \approx 2 quarts)

Clinical Challenges in Older Adults

- ▶ Difficult to diagnosis with multiple co-existing illnesses and medications
- ▶ Possible inability to tolerate fluids
- ▶ Unclear end of life care planning
- ▶ Caregiver / patient dyad communications
- ▶ Atypical symptoms
- ▶ Transitions across continuum
- ▶ Maximum temp is different for hospitalized older vs younger adults
 - ▶ 39.1°C/102.4 °F vs 38.7 °C/101.7 °F (Lu, 2013)

Sepsis Bundle Compliance

Multiple clinical decision-making factors affect choice of who gets bundle

- ▶ Hospital Compare Sepsis Bundle Compliance-2017 (CMS)
 - ▶ Nation @ 50%

- ▶ 7.6% increased mortality for every hour delay in effective antibiotic for septic shock (Kumar, 2006)

Sepsis Survival Rates with Bundle

Payer	Passed	Did not pass
All payer Oct 15- May 17	94.8%	87.9%
	Difference 7%	
Medicare Oct 15-Mar 17	78.5%	67.7%
	Difference 8%	

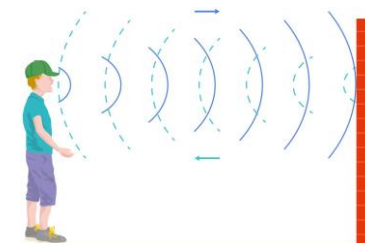
(Reddy et al, 2018; Dickerson (CMS), 2017, Kumar, 2006)

Setting Goals of Care: 2016 Surviving Sepsis Guidelines

- ▶ We recommend that goals of care and prognosis be discussed with patients and families. (BPS)
- ▶ We recommend that the goals of care be incorporated into treatment and end-of-life care planning, utilizing **palliative care** principles where appropriate. (Strong recommendation; moderate quality of evidence)
- ▶ We suggest that **goals of care** be addressed as early as feasible, but no later than within 72 hours of ICU admission. (Weak recommendation; low quality of evidence)

Sepsis Victim: CL

“Please push and advocate for yourself and loved ones. Doctors, nurses, and protocols don't always know everything or work properly....In loving memory of our dear sweet Mommy.”

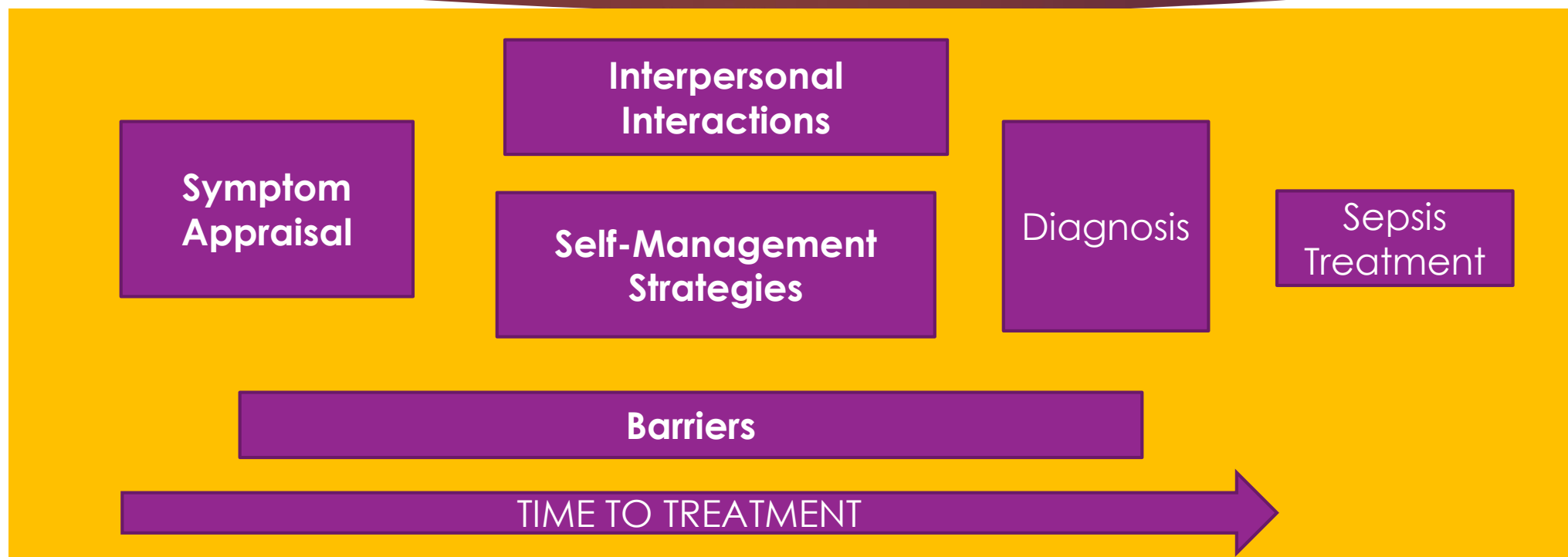


Qualitative Analysis of Older Adults' Experiences with Sepsis: Pre-Acute Phase of Illness

Rebecca Hancock, PhD, RN, CCRC

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Sepsis Concepts Affecting Time to Treatment



Care Factors: Environmental Transitions



- 54% of sepsis admissions transported by EMS
- More frequent EMS transports for sepsis than heart attack or stroke
- 57 minutes avg onsite/transport care (Seymour et al., 2012)

Specific Aims of the Research

Describe:

- 1) **Signs and symptoms** that older adults with sepsis and their CGs consider bothersome enough to seek care;
- 2) **Self-management strategies** that are attempted before care is sought in the ED;
- 3) **Interactions** between older adults, their CGs, and health care providers from the time of symptom identification at home to when emergency care is sought; and
- 4) **Barriers** encountered by older adults with sepsis and their CGs in seeking care in the ED.

Two Samples

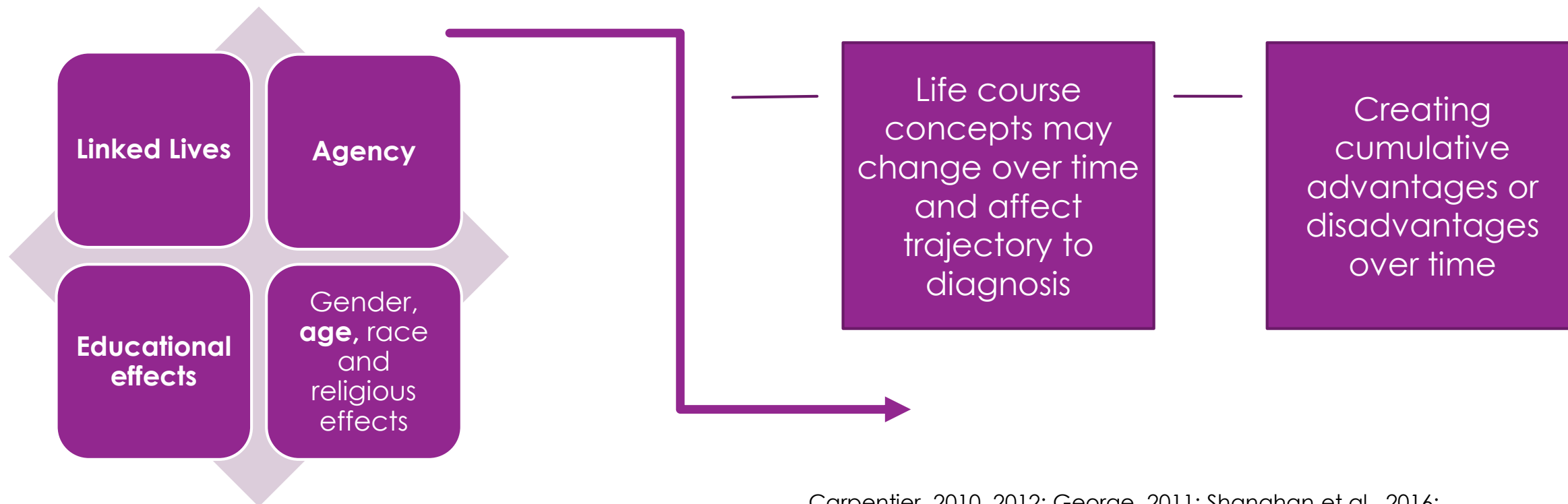
3 Nurse Interviews

25 Older Adult Posts in Sepsis Alliance Faces of Sepsis™ Posts

- ▶ Inclusion Criteria
 - ▶ Posted after October 2015
 - ▶ Older adults identified by stated age or contextual clues
 - ▶ Patient residing at home prior to diagnosis

Life Course Concepts— Effects on Patient-Caregiver Dyad Unique to Older Adults

LINKED LIVES MATTER!



Patients' and Caregivers Experiences



A Qualitative Investigation of Patients' and Caregivers' Experiences of Severe Sepsis*

Katy H. Gallop, MSc¹; Cicely E. P. Kerr, PhD¹; Annabel Nixon, PhD¹; Lara Verdian, MSc, MBA²;
Joseph B. Barney, MD, MSPH³; Richard J. Beale, MB, BS, FRCA⁴

Five main themes of needed education:

- awareness and knowledge of severe sepsis;
- experience of hospitalization,
- ongoing impact of severe sepsis;
- impact on caregivers; and
- support after severe sepsis.

Gallop et al., 2015

Qualitative Descriptive-Research and Person & Family Engagement

Samples

- ▶ Convenience-3 interviews
- ▶ 25 older adult postings from 700+

Rationale for Descriptive Research

- ▶ **Complex trajectory** with patient-caregiver dyads (Creswell, 2013) and must **empower through voice of patient**
- ▶ “When people share stories, common themes, sequences of events, behaviors, and meanings become evident” (Draucker & Martsof, 2010)
- ▶ “Through inductive process, needs and interventions can be addressed that are client centered” (Carpentier, 2012)



(Charmaz, 2014; Creswell, 2013; Sandelowski 2000a, 2000b; Sandelowski, 2010; Sandelowski & Leeman, 2012)

Interviews

- ▶ Nurse Informants given questions in advance
- ▶ Convenience Sample
- ▶ One nurse-patient and two nurse-caregivers
- ▶ All patients survived sepsis

	Case Study 1: Jane	Case Study 2: Betsy	Case Study 3: Theresa
Interview duration	19 minutes	30 minutes	44 minutes
Relationship	Caregiver-Wife	Caregiver-Daughter	Patient
Time since event	7 months	18 years	6 weeks
Patient age	53	79	66
Source of infection	Decubitus skin ulcers	Urinary catheter	Post-op Aspiration pneumonia
Time to treatment	2 weeks	4 hours	17 hours

Faces of Sepsis™ (FoS)

- ▶ 25 older adult FoS posts after Oct 2015
 - ▶ Older adults identified by picture and context
 - ▶ Unedited posts
 - ▶ Pre-acute phase experienced at home
 - ▶ Qualitative Descriptive Methods

Faces of Sepsis Data

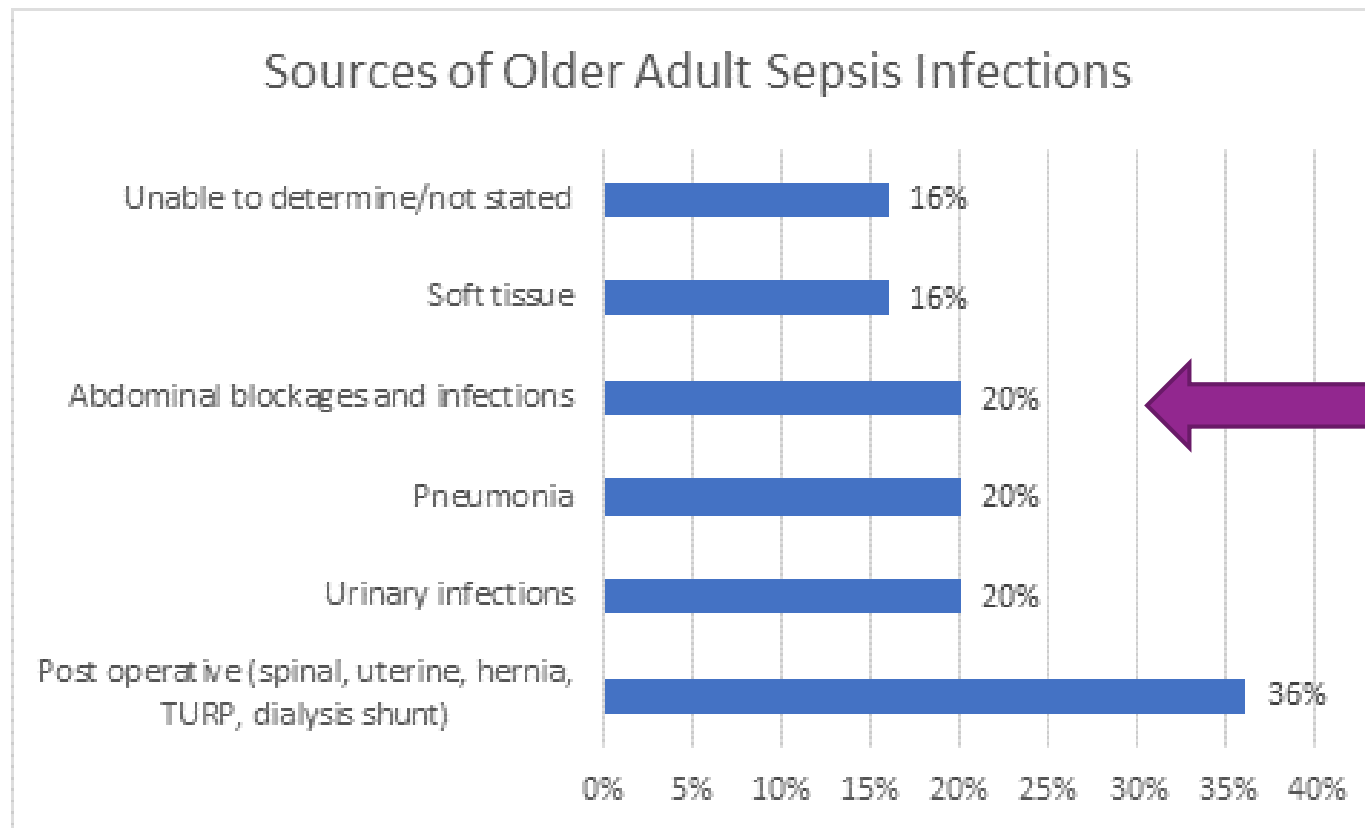
- ▶ Total words in 25 posts: 12,774
 - ▶ Avg 510 words (range 152-2007 words)
- ▶ 494 coded data lines
 - ▶ Pre Diagnosis (63%)---Post-Diagnosis (37%)
 - ▶ Signs & Symptoms (48%)
 - ▶ Self-Management strategies (7%)
 - ▶ Interactions (7%)
 - ▶ Barriers (13%)
 - ▶ Residual (25%)

Higher mortality rate in
FoS posts than in
literature (52% vs 32%)

Demographics of FoS Textual Analysis

Sample Demographics (n=25)			
	Total	Male	Female
Est. Average age	65.2 years		
Patients		8 (32%)	17 (68%)
Narrators		4 (20%)	21 (80%)
Relationship to patient			
Children	12 (48%)	4 (33%)	8 (64%)
Self	8 (32%)	4 (50%)	4 (50%)
Granddaughters	2 (8%)		
Wife	2 (8%)		
Niece	1 (4%)		
Survivors	12 (48%)	9 (75%)	3 (25%)
Victims	13 (52%)	5 (38%)	8 (62%)
% Post-operative	9 (36%)		
Survived	5 (56%)		
Died	4 (44%)		

Sources of Sepsis



Agonizing, crippling pain

Symptom Appraisal: Interviews

Sepsis Symptoms and Risk Factors

Sepsis Symptoms Observed and Experienced by Nurses

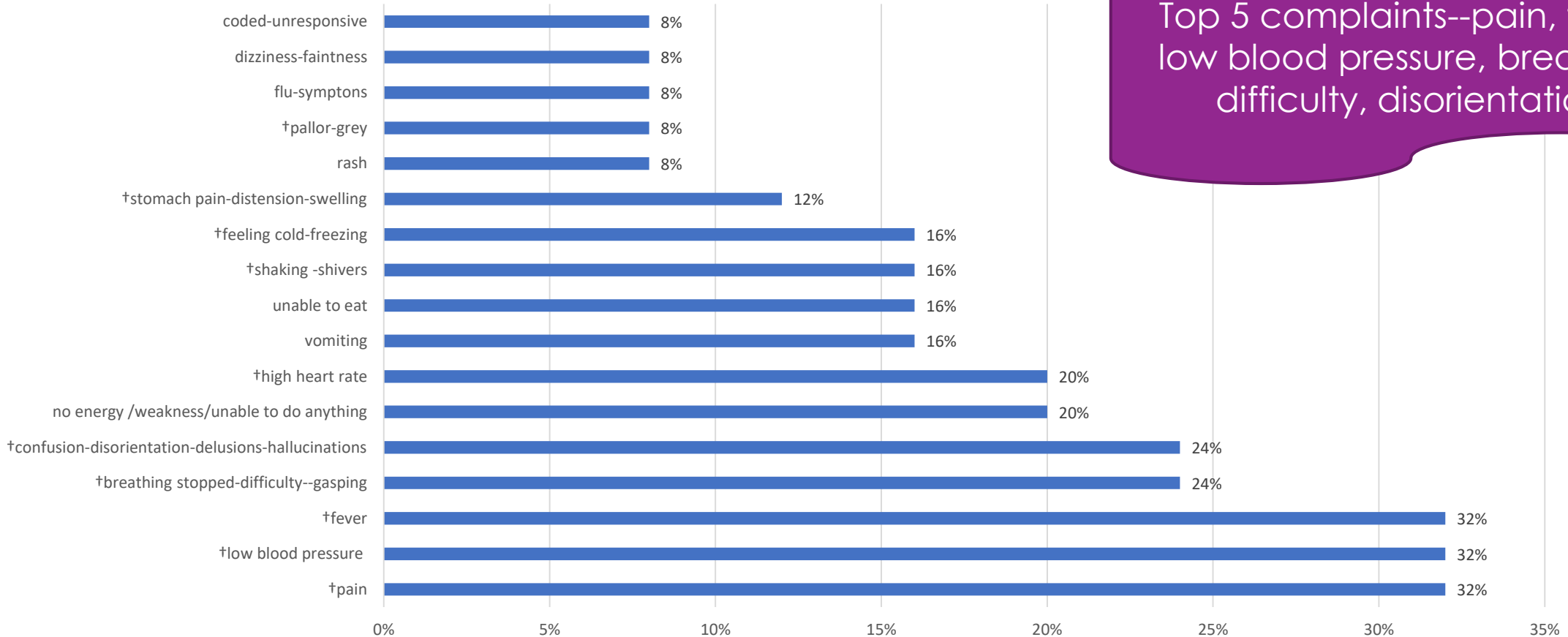
Case Study 1: Jane	Case Study 2: Betsy	Case Study 3: Theresa
Caregiver Observations	Caregiver Observations	Patient Experiences
<ol style="list-style-type: none"> 1. Shaking cold 2. Decreased urine output 3. Listlessness 4. Confusion 5. † Hard to arouse 6. Fatigue 7. † Excessive sleep 8. Weakness 9. Dehydration 10. Decreased appetite 11. Really tired 12. “not feeling good” 13. Scared 14. Almost passed out 	<ol style="list-style-type: none"> 1. Not feeling well 2. Fever 3. Sweaty 4. Decreased energy 5. Decreased Parkinsonian movements 6. Decreased appetite 7. † Lethargy 8. Eyes “wouldn’t light up” 9. “Just not himself” 10. History of aspiration pneumonia 	<ol style="list-style-type: none"> 1. Surgical site drainage 2. Back pain with inspiration 3. Nausea 4. Feeling of generalized discomfort 5. Feeling <u>really bad</u> 6. Unable to get out of bed 7. † Fever 8. Headache “like the top of my head coming off” 9. Low blood pressure 10. Vomiting 11. Heart rate 100

“I started feeling generalized discomfort, wouldn’t call it pain.... I got to feeling really bad and couldn’t get out of bed”



FoS Signs & Symptoms

Percent of Older Adults with Stated Sepsis Signs or Symptoms
(≥5%, n=25)

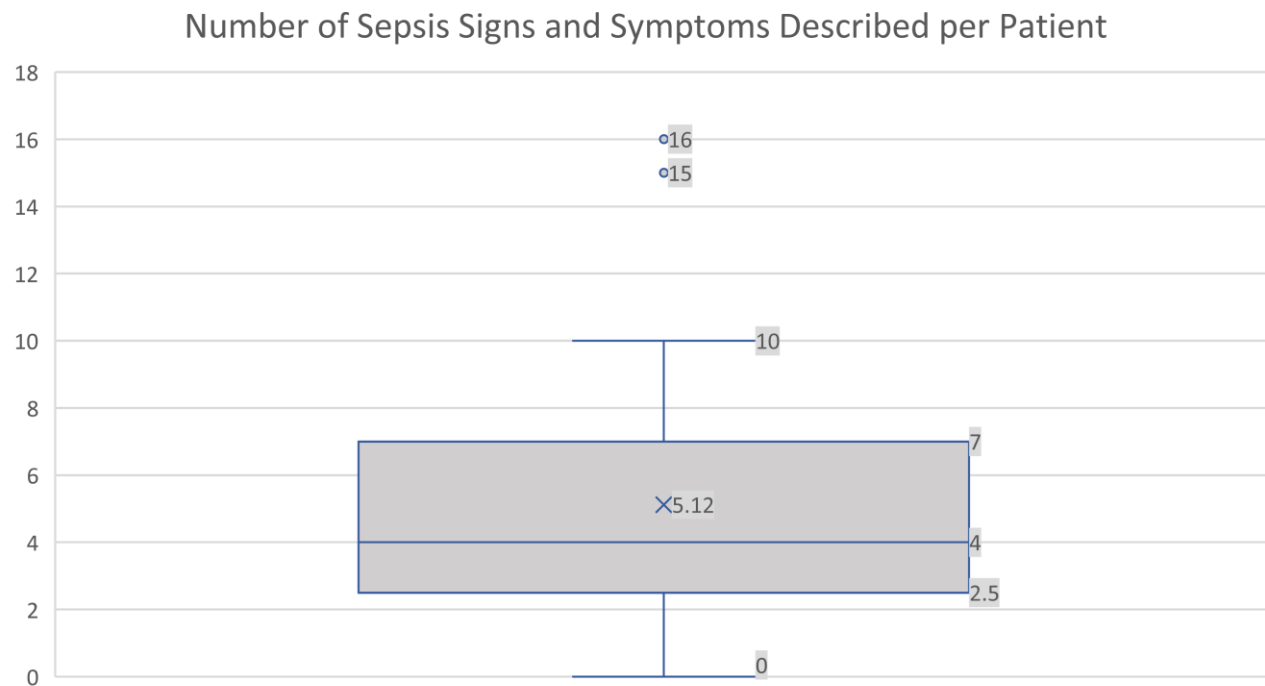


Top 5 complaints--pain, fever, low blood pressure, breathing difficulty, disorientation

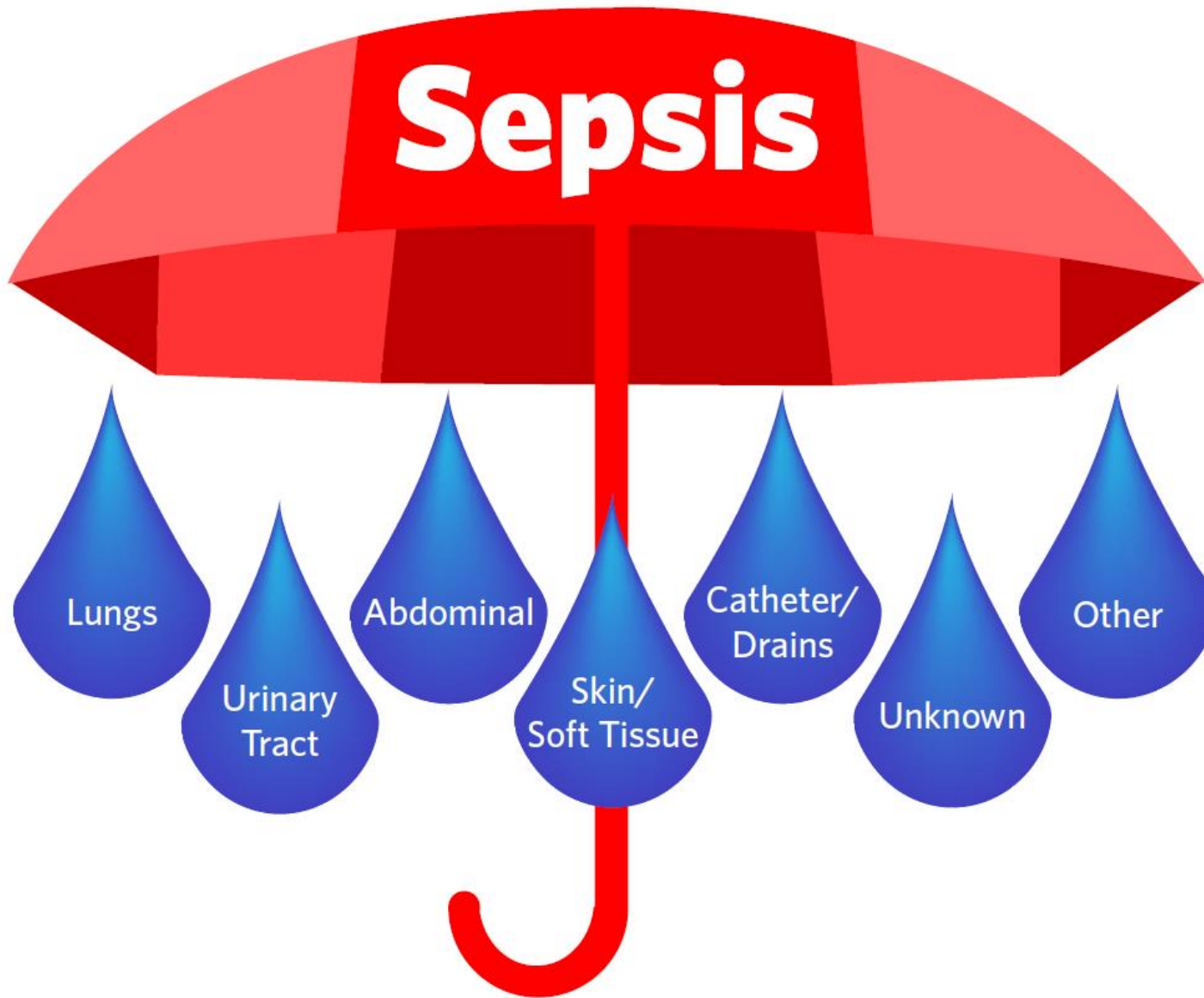
Older adults –
SEPSIS EXPERIENCED

getting worse couldn't feel legs extreme joint pain unwell
stomach distension weight loss disoriented severe abdominal pain crippling pain
unable to eat hallucinations symptoms never recovered freezing
stopped breathing low blood pressure low potassium rash
delusions gasping for air end stage renal failure faintness incarcerated hernia
diverticulitis cold or flu-like agony pain shock felt worried hard to arouse
TURP cold weak muscles flu-like panicking cold shivering infection left lung infection
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urine infection pale not talking feeling alone coma excruciating pain
difficulty breathing fever shaking pneumonia anemia UTI
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distressed organs swelling shaking violently feeling body shutting down
unable to walk unstable blood pressure, heart rate, breathing diverticula unable to do anything
fistula unresponsive

Symptom Appraisal: FoS



“Quantitizing”
(Sandelowski, 2000a)



FURTHER RESEARCH?

Barriers: Interviews

- ▶ Denial of symptoms by patient / refusal to seek care
 - ▶ Outpatient wound clinic not treating
 - ▶ Emergency Department discharged patient without diagnosis
 - ▶ Differing expectations on goals of care
-
- ▶ *“They did all the appropriate screening, but they didn't do anything with the data that they got. They didn't make any kind of diagnosis. They did blood cultures, and then they sent me home”*
 - ▶ *“Like I said, they [the outpatient clinic] didn't seem concerned. It was my speaking to them-- they didn't even do the wound cultures on their own. I had to request that and almost demand that. I had to almost demand they put him on antibiotics because they weren't concerned “*



Overcoming Barriers: FoS

- ▶ Hospital services-not admitting,
- ▶ Delays-refusing care, surgical
- ▶ Inexperienced staff
- ▶ Care omissions-missed diagnoses
- ▶ Care errors-guidelines

“At the second hospital they started antibiotics, 12 hours after she presented to the emergency room at the first hospital. She never received any of the care described in the Surviving Sepsis Guidelines. Because my mother was more than 70 years old, she was not being treated aggressively. My brother and I decided to immediately bring her home via air ambulance.”



“For the next 60 days I never left his side. I stopped a total of 15 medical errors before they reached my husband”



Patient-Caregiver-Healthcare Provider Vacillating Locus of Control: Interviews

"I was appalled with that 'pneumonia is Parkinson's friend' because I wasn't going to buy that...we don't have to have him die of sepsis or be in that much pain and suffering"



"I had to request that and almost demand wound cultures and then I had to almost demand they put him on antibiotics"



"Quite frankly, he saved my life, because with my blood pressure going down even more, it could have been a bad scene if I hadn't gotten adequate care, but he did a fabulous job."



Self-Management Strategies: Interviews

- ▶ Self-medication for fever, pain, nausea
- ▶ Wound vac maintenance
- ▶ Ingesting fluids
- ▶ Information seeking
- ▶ Medical attention seeking

“I got sicker, but I was trying to think, ‘If I lie real still and drink plenty of fluids and take the ibuprofen, I’ll get to feeling better’”



Self-Management Strategies: FoS

- ▶ Information seeking
 - ▶ Googling septicemia
- ▶ Medical care seeking
 - ▶ One patient & 11 caregivers requested care
- ▶ Self-medicating



“Treated the pain with the usual antacids and Tylenol and tried to go back to sleep”

“Why didn’t anyone at the hospital or any of his doctors tell us that he had or could have sepsis? By the time I had hunted for his diagnosis on the paperwork sent home, he probably had the beginnings of what would become sepsis. There were no checklists for us—nothing that would have ever led us to believe that this infection would kill him.”

Interpersonal Interactions: FoS

- ▶ Interactions sought from doctors, nurses, paramedics, patients, other family members.
- ▶ 90% of healthcare professional interactions were in person
- ▶ 25% diagnosed by paramedics compared to 54% in literature



“I had been awake for nearly 24 hours and I craved a shower and a nap. Four hours later he called me. ‘I’m in trouble!’ he said. ‘I need you to come back.’ There was an odd sound to his voice, but I didn’t question his concerns and I flew back to the hospital.”

Emergent Themes/Opportunities

- ▶ Transitions (avg 3.3; range 1-7)
- ▶ Grief & Anger
- ▶ Quality of Life justifications/changes
- ▶ Gratitude

“We are truly Blessed that she is still alive and will take whatever struggles GOD gives us and we thank GOD every day for Blessing us with our beautiful mother and grandmother”

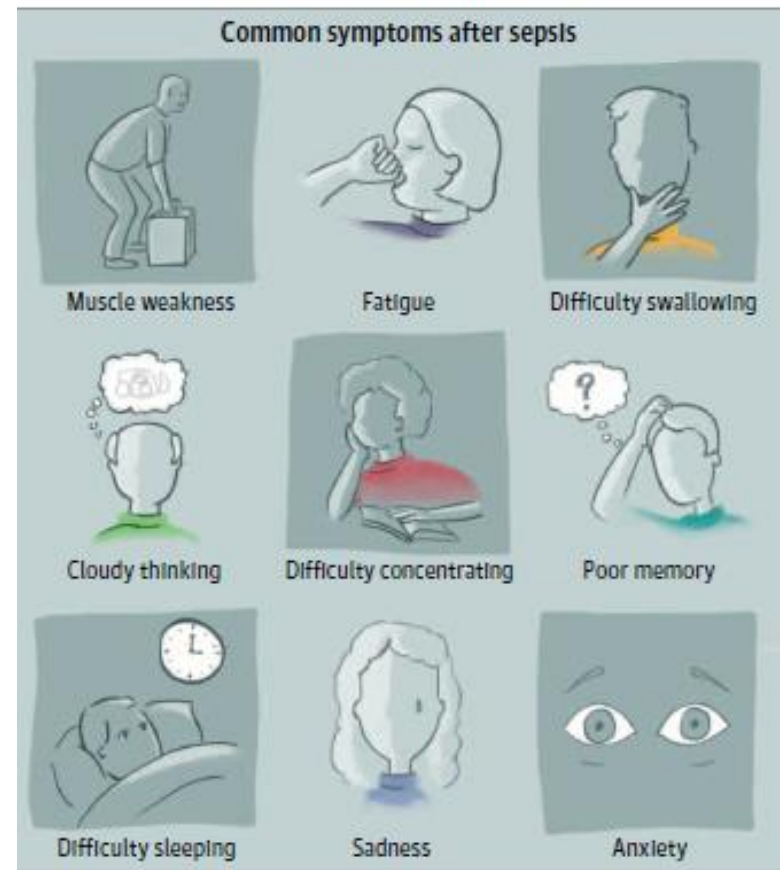
“I realize how fortunate I have been after reading about so many losses and what other survivors experienced. Thank all of you for sharing. I hope I can help someone through recuperation.”



Life after sepsis & effects on older adults

► Impairments:

- Average 1-2 new functional limitations (e.g. inability to bathe)
- 3 fold increase in mod-severe cognitive impairment
- High prevalence of anxiety (32%), depression (29%), PTSD (44%) (Prescott, 2018)



Transitional Care Management

- ▶ CPT Code 99495 – moderate medical decision complexity
- ▶ CPT Code 99496 – high medical complexity
- ▶ January 1, 2013, to December 31, 2015 - of the nearly 19 million discharges identified, only 5.2% were linked to billing for TCM services.

Population and systems based approaches for sepsis prevention

Kempker et al. *Critical Care* (2018) 22:116
<https://doi.org/10.1186/s13054-018-2048-3>

Critical Care

COMMENTARY

Open Access

Sepsis is a preventable public health problem

Jordan A. Kempker^{1*}, Henry E. Wang² and Greg S. Martin¹



Abstract

There is a paradigm shift happening for sepsis. Sepsis is no longer solely conceptualized as problem of individual patients treated in emergency departments and intensive care units but also as one that is addressed as public health issue with population- and systems-based solutions. We offer a conceptual framework for sepsis as a public health problem by adapting the traditional model of primary, secondary, and tertiary prevention.

Primary Prevention of Infections and Sepsis Onset

Immunization

Hygiene

Public Awareness

Antibiotic Prophylaxis

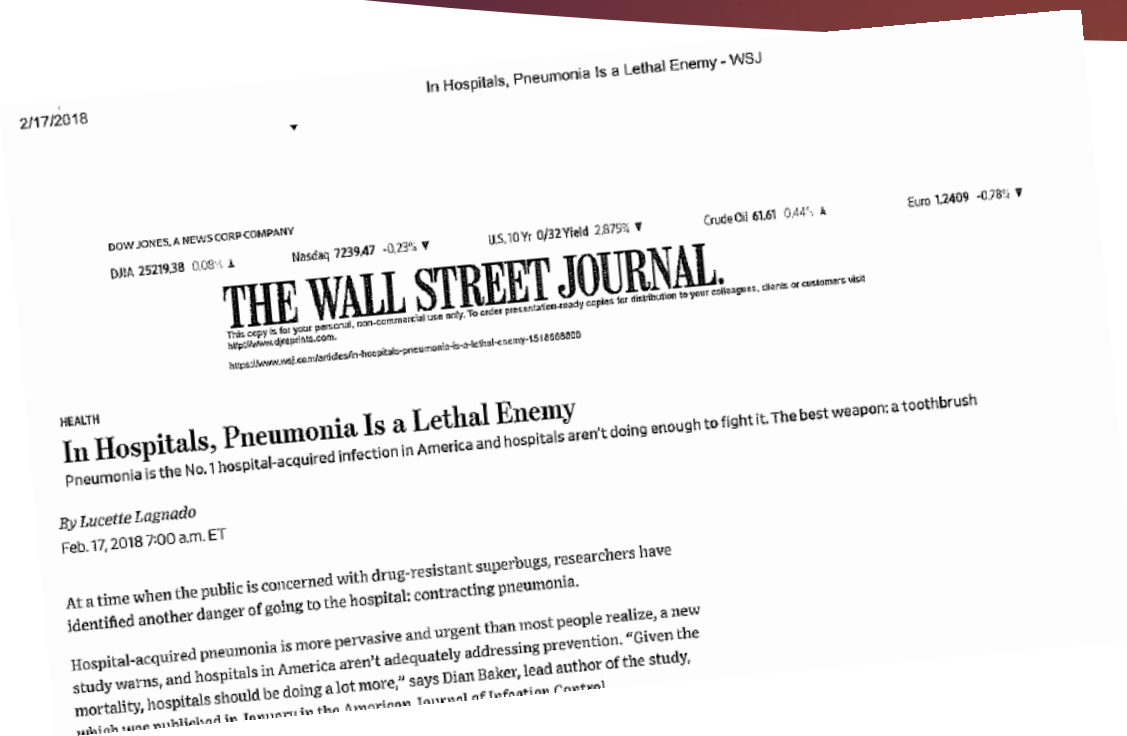
Manage Risk Factors



Kempker et al, 2018;

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Preventing Hospital Acquired Pneumonia



- Nurses: Barbara Quinn & Dr. Diane Baker @ Sutter Health, California
- Pneumonia is #1 hospital acquired infection according to CDC-
- 15-31% death rate from hospital acquired pneumonia
- “They go to the operating room within 20 minutes of brushing teeth” --& gargle
- **Brushing teeth several times per day cut hospital pneumonias by 70% with 50,000 toothbrushes expenditure**

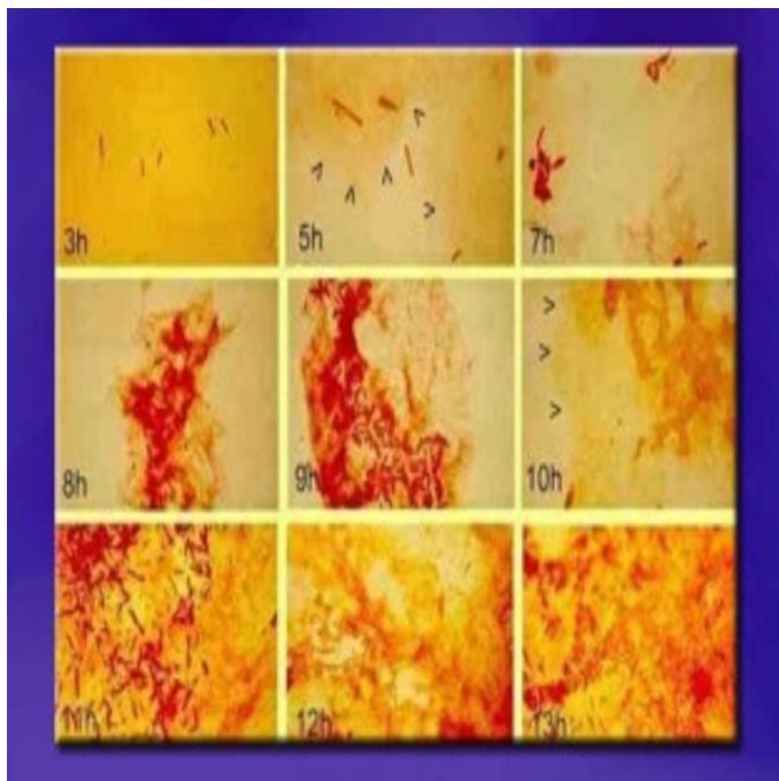
(Brooks, J. (2018). Stop It. Non-Ventilator Hospital Acquired Pneumonia Research Update.

https://www.ihaconnect.org/Resources/Public/Patient%20Safety/Sepsis/GMT20180918-190048_Sepsis-Awa_2256x1504.mp4;

Lagnado, L. (2018). In hospitals, pneumonia is a lethal enemy. The Wall Street Journal. 2/17/2018)

Focus on host: brush teeth!

Cycle of Bacteria Growth in the Mouth within Hours



What is your patient care policy for oral health?



(Brooks, J. (2018). Stop It. Non-Ventilator Hospital Acquired Pneumonia Research Update. https://www.ihaconnect.org/Resources/Public/Patient%20Safety/Sepsis/GMT20180918-190048_Sepsis-Awa_2256x1504.mp4;

Lagnado, L. (2018). In hospitals, pneumonia is a lethal enemy. The Wall Street Journal. 2/17/2018)

Bio-psycho-social approach

Social Determinants of Health



Housing



Food



Education



Transportation



Violence



Social Support



Employment



Health Behaviors

- ▶ Age Friendly Health Systems (IHI)
- ▶ Focus on
 - ▶ Patient & Family Engagement
 - ▶ Social Determinants of Health that drive health outcomes
 - ▶ Dual Medicare / Medicaid eligible patients??

Adding life after sepsis-Host Focus

**Hand
Hygiene**

Oral Hygiene

Mobility

Hydration

Nutrition

Medical
follow-up
1-3days

Immunization

Sepsis
education

Sepsis source
specific
education

Address post-
sepsis
symptoms

Pre-Acute Recommendations for Older Adults

- ▶ **Denial & Awareness:** Educate communities on sepsis symptoms—urgent like heart attack/stroke to reduce time to treatment
- ▶ **Earlier access to EMS** instead of longer self-appraisal of symptoms & identify source
- ▶ **Educate outpatient clinics** on sepsis guidelines & symptoms (e.g. wound clinics)
- ▶ Provide **infection prevention education to patients** (e.g. rapid contact with health care provider for suspected infection)
- ▶ Listen to patient & caregiver & **allow advocacy**—CGs seek care > patients
- ▶ Beware of **mental status changes** as risk factor for sepsis / infections
- ▶ **Consider self-medications that mask** fever, heart rate elevation, & pain during assessment--only 32% had fever
- ▶ **Watch trended vital signs** for elevation from baseline
- ▶ **Notice subjective clusters of symptoms & history of symptoms** for source

Acute Recommendations for Older Adults

- ▶ **Address goals of care** early
- ▶ Compliance: **Educate clinical staff** on symptoms & guidelines
- ▶ Improve outcomes with sepsis guidelines through **earlier diagnosis**
- ▶ New paradigm: **TRANSITION NOT A DISCHARGE!**
- ▶ Engage **patients & caregivers as partners** not adversaries
- ▶ **Improve guideline compliance**

Post-Acute Recommendations for Older Adults

- ▶ Harm Reduction: increase **anticipatory guidance** for patients at high risk infection
 - ▶ (i.e. Post-surgical-drains, lines, pneumonia, urinary infections, abdominal surgeries, wound care)
- ▶ Improved **oral and hand hygiene –pneumonia prevention**
- ▶ Warn staff and patients of life after sepsis / **post-sepsis syndrome with grief**
- ▶ Anticipatory guidance for **infection prevention based on patient's source of sepsis**
- ▶ Use Transitional Care Management coding & practices to lower readmissions

Faces of Sepsis-Victims



Quotes from families of victims: Grief

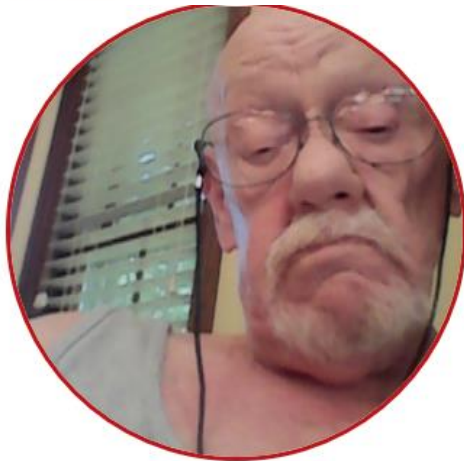
"We can send people to another planet but we can't fix something that seems so simple....I miss her terribly Screw you sepsis."

"I know my entire family struggles every day with "what ifs" - had we only known the signs of Sepsis, this would have had a very different outcome."

"I share this story in hopes that people realize the importance of getting a second opinion when "something just doesn't feel right" with your body or medically. ...RIP Mom and with this story, maybe we can save a life! Peace to all!"

Faces of Sepsis-Survivors

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Quotes from Survivors: Struggle & Gratitude

“My Infectious Disease Doctor told me that when I had the shakes, coldness and shivering that a bacteria was invading my body and if that ever happened again I should go directly to the emergency room. Education is every with sepsis. I know that my Doctor saved my life.”

“I had no clue how devastating septic shock could be. Thanks to the Sepsis Alliance for the work you do and for educating the public.”

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Q and A

When it comes to sepsis, remember
IT'S ABOUT TIME™. Watch for:

T	I	M	E SM
TEMPERATURE higher or lower than normal	INFECTION may have signs and symptoms of an infection	MENTAL DECLINE confused, sleepy, difficult to rouse	EXTREMELY ILL "I feel like I might die," severe pain or discomfort

Watch for a combination of these symptoms. If you suspect sepsis, see a doctor urgently, CALL 911 or go to a hospital and say, "I AM CONCERNED ABOUT SEPSIS."

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www.SepsisItsAboutTime.org

Sepsis and Aging

- Sepsis Information Guide
- Coming soon Sepsis 911 Sepsis and Aging



Sepsis can and does affect people of all ages. However, more than 80% of sepsis cases occur among people aged 50 years and older.

Often incorrectly called blood poisoning, sepsis is the body's often deadly response to infection. Sepsis kills and disables millions and requires early suspicion and rapid treatment for survival. If left untreated, sepsis can progress to septic shock and death. Worldwide, one-third of people who develop sepsis die. Many who do survive are left with a number of physical and psychological problems, such as amputations, chronic pain, post-traumatic stress disorder, and more. This is post-sepsis syndrome (PSS).

HOW DOES SEPSIS OCCUR?

As people age, they may develop chronic illnesses, such as diabetes, kidney disease, or heart failure. It's not unusual to see someone with two or more chronic diseases. Diseases such as cancer, chronic obstructive pulmonary disease (COPD), hypertension, liver cirrhosis, and HIV are common conditions among people who have sepsis.

Any type of infection can cause sepsis, from the flu to an infected bug bite. The most common infections that trigger sepsis among older people

are pneumonia and urinary tract infections (UTIs). Infections can also happen through abscessed teeth or sores on the skin, either from a simple skin tear because the skin may be dry or fragile, or a pressure sore from sitting in a wheelchair or lying in bed.

It's not always easy to spot infections among older people. For example, symptoms of a UTI usually include frequent urination, burning or pain while urinating, and cloudy and foul-smelling urine. For many seniors though, the first sign of a UTI is a change in mental status – they become confused or disoriented.

WHY IS SEPSIS SO SERIOUS?

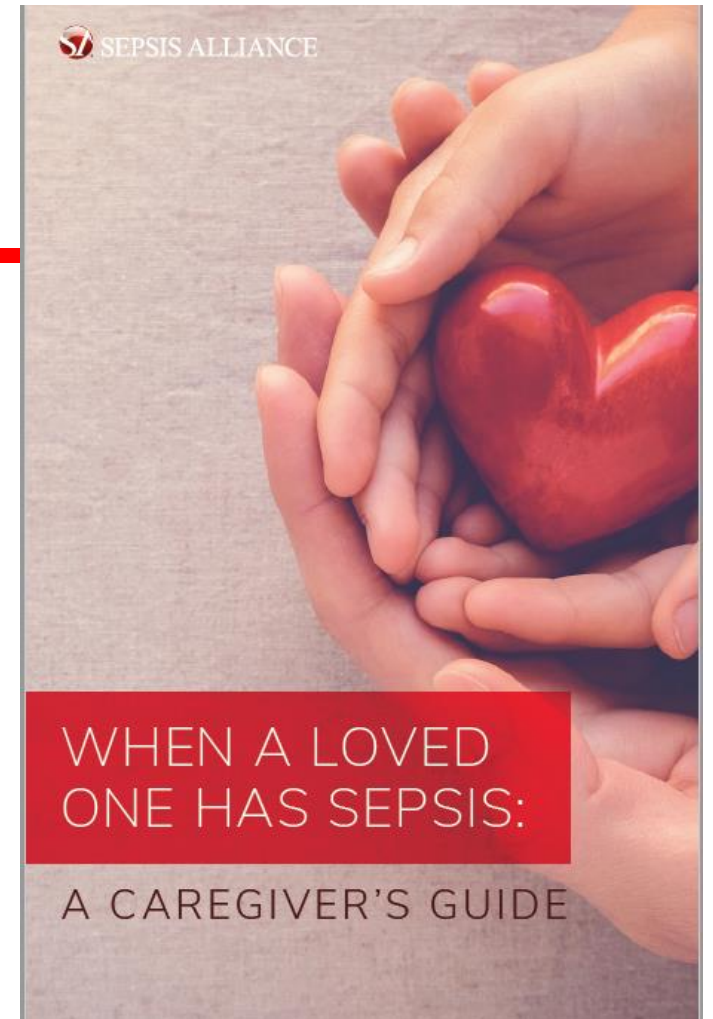
Sepsis is a very serious illness for anyone at any age, but it can be particularly devastating for seniors. According to a study published in 2010, older severe sepsis survivors were more than three times more likely to see a drop in cognitive (mental) abilities after having sepsis. This can make it impossible for them to return to their previous living arrangements and often results in admission into a long-term healthcare facility. As well, the risk of dying from septic shock rises as you get older.

Sepsis also doesn't affect just the patient, researchers have discovered. A study published in 2012 found that wives of older sepsis survivors had a three to four times higher risk of depression than average.

SEPSIS INFORMATION GUIDE – SEPSIS AND AGING

When A Loved One Has Sepsis A Caregivers Guide

- Information and tips to help navigate the ICU from a patient's admission to discharge.
- Topics such as the different roles of ICU team members and what nurses are checking when they assess their patients.
- Encourages caregivers to take time to care for themselves.



To download: www.sepsis.org/resources/caregivers



SEPSIS COORDINATOR NETWORK
Resources and Guidance for Improved Outcomes

Sepsis Champions - How Hospital-Wide Involvement Changes Sepsis Care

January 16 at 2 pm ET



Frankie Hamilton, MBA, BSN, RN, CNML, PCCN, CCRN-K
Sepsis Quality Specialist
Lenox Hill Hospital



Lily Popkin, BSN, MSN, RN
Sepsis Coordinator
Lutheran Medical Center

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Challenge sepsis. Change lives.



Children's Hospital Association 2019 Sepsis Webcast Series

Challenging Sepsis: Nurses Take the Lead

A special event in partnership with Sepsis Alliance



Mary Kate Abbadessa MSN, RN, RN-BC, CPEN
Children's Hospital of Philadelphia



Andrea Cowan, RN, BSN
Primary Children's Hospital

January 31, 2019 @ 2:00 pm ET



Webinar series

Sepsis: Across the Continuum of Care

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This webinar series is made possible with support from bioMérieux, Inc.

