The Home Care Association of New York State's Adult Screening Tool for Sepsis

- A National First -

Harnessing the Home Care System for Early Sepsis Recognition and Intervention: New Developments in Sepsis Identification & Detection in the Home Care Setting

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The Scope of the Problem - National Perspective

- 1.6 million cases of sepsis each year in the U.S.
- 258,000 deaths each year more than breast cancer, prostate cancer and AIDS – combined
- Takes more children than cancer 12 kids each day
- #1 cause of death in U.S. hospitals
- #1 driver of readmission to a hospital
- #1 cost of hospitalization \$24 Billon per year
- Up to 50% of sepsis survivors suffer from Post-Sepsis Syndrome (PSS)
- More than 80% of sepsis cases originate in the community
- Mortality increases 8% every hour that treatment is delayed

Source: Sepsis Alliance





The Scope of the Problem - National Perspective

Centers for Disease Control & Prevention (CDC) Morbidity & Mortality Weekly Report (August 26, 2016 / 65(33);864–869)

Vital Signs: Epidemiology of Sepsis: Prevalence of Health Care Factors and Opportunities for Prevention (http://www.cdc.gov/mmwr/volumes/65/wr/mm6533e1.htm)

- Sepsis as a <u>medical emergency</u>
- Sepsis begins outside of the hospital for nearly 80% of patients
- <u>Time matters</u>. When sepsis is quickly recognized and treated, lives are saved
- Healthcare providers are the critical link to preventing, recognizing, and treating sepsis



New York State Medicare Fee for Service 30-Day Readmission Trends CY 2015

Observations Drawn Fr	om The Numbers In The Re-admission Table			Numerator	Denominator
Overall 14 D	Day Re-admission Rate	14.7%	1	8,032	54,665
Overall 30 D	Day Re-admission Rate	24.2%		13,221	54,665
Percent Of I	Discharges With No After Care	27.0%		14,748	54,665
	14 Day Re-admission Rate For These Patients		11.4%	1,677	14,748
	30 Day Re-admission Rate For These Patients		19.4%	2,860	14,748
Percent Of I	Discharges To SNF	38.9%		21,283	54,665
	14 Day Re-admission Rate For These Patients		17.3%	3,674	21,283
	30 Day Re-admission Rate For These Patients		28.9%	6,142	21,283
Percent Of I	Percent Of Discharges To Home Health Care			11,208	54,665
	14 Day Re-admission Rate For These Patients		16.6%	1,865	11,208
	30 Day Re-admission Rate For These Patients		26.4%	2,964	11,208

Most Common Primary Diagnosis For Less Than 30 Day Re-admissions

Disease Category*	Number
Septicemia (except in labor)	4,12
Complication of device; implant or graft	68
Congestive heart failure; nonhypertensive	60
Pneumonia except that caused by tuberculosis or sexually transmitted	51
Complications of surgical procedures or medical care	46
Urinary tract infections	37
Respiratory failure; insufficiency; arrest (adult)	34
Acute and unspecified renal failure	34
Aspiration pneumonitis; food/vomitus	28
Gastrointestinal hemorrhage	28

^{*} Diseases are catergorized using 'Clinical Classification' software provided by CMS.

Source: Paid Medicare claims from CMS.

Source: CMS Medicare FFS Paid Claims





MFFS Length of Stay Data Albany & Syracuse Hospital Referral Region CY 2015

Medi	care EES Datients in Alba	ny & Syracuse				
Medicare FFS Patients in Albany & Syracuse Hospital Referral Region With Any Diagnosis of Sepsis						
Length of Stay for In-Hospital Deaths						
CY 2015						
Length Of Stay Prior To	Number Of Patients	Percent Of All In-Hospital Sepsis DX				
Death (days)		Deaths				
0	97	6.3%				
1	202	13.1%				
2	125	8.1%				
3	118	7.7%				
4	89	5.8%				
5	96	6.2%				
6	83	5.4%				
7	69	4.5%				
8	61	4.0%				
9	74	4.8%				
10	62	4.0%				
11	35	2.3%				
12	41	2.7%				
13	19	1.2%				
14	38	2.5%				
15	32	2.1%				
16	30	1.9%				
17	15	1.0%				
18	20	1.3%				
19	22	1.4%				
20	24	1.6%				
21	10	0.6%				
22	10	0.6%				
23	13	0.8%				
24	14	0.9%				
25	7	0.5%				
26	7	0.5%				
27	5	0.3%				
28	6	0.4%				
29	8	0.5%				
30	8	0.5%				
GT 30	99	6.4%				
Total	1,539					
Source: CMS MFFS Paid Clair	ns	-				



"Sepsis strikes quickly, and earlier recognition and improved care management can reduce sepsis-related morbidity and mortalities." (Castellanos-Ortega A et al, 2010).





NYS Medicare FFS Admissions with a Diagnosis of Sepsis While Receiving Home Health Care - CY 2015

Days Of Home Health Care Prior to A	\dmission*:		4	Opportunity to positively
Less Than Seven Days	1,687	20.0%		impact Home Health
Eight To Thirty Days	2,938	34.9%		•
More Than Thirty Days	3,793	45.1%		population through earlier
			_	recognition of sepsis

Hospital Admissions:

Patients with one or more admissions: 7,304
 Total number of admissions: 8,418

Hospital Utilization:

Average Length of Stay: 11.7 days
Total Days of Care: 99,770

Hospital Medicare FFS Expenditure:

Average Expenditure Per Case: \$22,486
 Estimated Total Expenditure: \$189 Million

Source: CMS Medicare FFS Paid Claims Data







The Opportunity

- Time to treatment is critical
- Early identification and treatment are the key to improved outcomes and reduced costs
- NYS Hospitals are one of two states with mandatory Sepsis Identification & Treatment Protocols in place
- Biggest next opportunity lies in public awareness and primary care education and training
- Home care and long term care population most vulnerable to sepsis





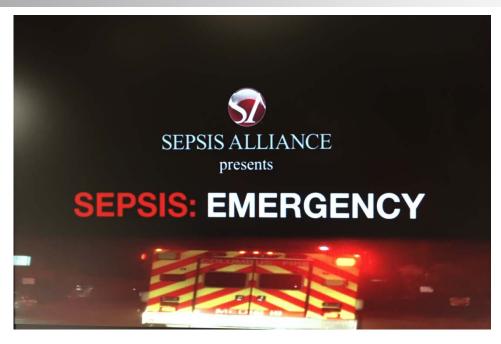
The Opportunity for Home Health

- The home care population embodies the high risks for sepsis elderly, medically fragile children and adults, conditions especially susceptible to infection and known sepsis risk
- Home Care Clinicians are skilled in the interaction with and care of these individuals

Home care provides a ready, statewide infrastructure of agencies and nurse clinicians with the unique community and in-home presence and expertise to conduct essential screening, evaluation, education and intervention with critical health system partners



Why This is Important



Sepsis: Emergency Video Available on Sepsis Alliance Website: http://www.sepsis.org

About Sepsis Alliance

Sepsis Alliance is the leading nonprofit patient advocacy organization in North America promoting awareness of sepsis. Sepsis Alliance's mission is to save lives by raising awareness of sepsis as a medical emergency. The organization hosts national and community events, distributes educational information, and promotes training and education of sepsis and its devastating effects. Sepsis Alliance also provides support by giving patients and family members information about sepsis and post sepsis syndrome. Sepsis Alliance, a 501(c)(3) charitable organization, is a GuideStar Gold Rated Charity.











Centers for Medicare & Medicaid Services Special Innovation Project (SIP) Overview:

Community Based Sepsis Initiative

Eve Bankert MT (ASCP)

Quality Improvement Specialist / IPRO







AQIN Community Based Sepsis Initiative

- Centers for Medicare and Medicaid Special Innovation Project
 - Two Year Contract Award
 - September 2015- September 2017
- Performance Based Measures
- AQIN Based (Atlantic Quality Innovation Network)
 - New York (IPRO)
 - South Carolina (The Carolinas Center for Medical Excellence)
- Sepsis is number one reason for Medicare Fee for Service population 30-day readmissions in New York State
- Community awareness of sepsis signs and symptoms low



New York State Target Regions

Albany & Syracuse Hospital Referral Regions (HRRs)

- Albany HRR
 - In-hospital sepsis mortality rate of 14.6%
 - Ranks 8th in NYS Hospital Referral Regions for sepsis admissions
- Syracuse HRR
 - In-hospital mortality rate of 15.6%
 - Ranks 7th in NYS Hospital Referral Regions for sepsis admissions
- National
 - In-hospital All Cause Mortality Rate 4.2%



Source: CMS Medicare FFS Paid Claims Data





Community Based Sepsis Initiative Approach

- Facilitate education and build awareness of sepsis among prehospital providers and caregivers
- Train-the-Trainer format
- Identify best practices and educate pre-hospital providers on prompt recognition of early signs and symptoms of sepsis
- Educate on the premise that Sepsis is a medical emergency
- Improve processes of care transitions and sepsis treatment between pre-hospital and emergency/hospital care settings as well as post-acute discharge into the community
- Increase public awareness of the signs, symptoms and risk factors for sepsis





IPRO Community Based Sepsis Train-the-Trainer Sessions

- Home Health Agencies
 - Clinical and non-clinical staff
- Skilled Nursing Facilities
 - Clinical and non-clinical staff
- Physician Practices
 - Non-clinical staff
- 30 Regional Train-The-Trainer sessions held to date
 - 7,967pre-hospital providers and caregivers have been trained on Sepsis Awareness utilizing IPRO-developed training tools



Assessment of Learning Measured by Pre and Post Assessment Tool

50% Increase in knowledge post training across all individuals trained





PRE AND POST ASSESSMENT CLINICAL STAFF

PLEASE CO. OLETE THE FOLLOWING QUESTIONS AS DIRECTED. THIS INFORMATION WILL BE USED TO ASSESS PARTICIPAN NEVEL OF UNDERSTANDING AND LEARNING PRE AND POST SESSION. THANK YOU!

Pre-Training Assessment		Please answer the questions in the green section <u>PRIOR TO</u> the start of the session			
_	Yes	No	Post Training Assessment	Yes	No
know what sepsis is	1		I know what sepsis is		
can identify high risk groups for developing epsis			I can identify high risk groups for developing sepsis		
am familiar with the early signs and ymptoms of sepsis			I am familiar with the early signs and symptoms of sepsis		
am aware of the risk factors and early signs nd symptoms of sepsis associated with the Iderly			I am aware of the risk factors and early signs and symptoms of sepsis associated with the elderly		
am aware of time sensitive interventions vith regards to initial diagnosis and reatment of early sepsis			I am aware of time sensitive interventions with regards to initial diagnosis and treatment of early sepsis		
know the appropriate diagnostic tests or atients exhibiting the early signs of epsis			I know the appropriate diagnostic tests for patients exhibiting the early signs of sepsis		
a. familiar with Post Sepsis Androme			I am familiar with Post Sepsis Syndrome		
I had the opportunity to have all my question Was this presentation informative? Yes Do you have any additional questions related My provider setting is: ☐Hospital ☐SNF☐H describe) Do you know someone who has had sepsis? Are you a Sepsis Survivor? *Yes No.	No d to seps dome He Yes	 is? alth □Ho	ospice Assisted Living Community Agency O	ther (pl	ease
*If "Yes", would you be willing to share your If you are willing to share your stor eve.bankert@area-i.hcqis.org			rease sepsis awareness? Yes No Ct: Eve Bankert at: (518) 320-3552 or		

Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents do not necessarily





reflect CMS policy. 11SOW-AQINNY-TskSIP-Sepsis-16-08.

CMS Special Innovation Project: Community Based Sepsis Initiative Measures

Outcome Metrics

- Number of inpatient admissions of Medicare FFS patients by stage of sepsis:
 Sepsis; 2) Severe sepsis; 3) Septic shock
- Inpatient mortality for Medicare FFS patients by stage of sepsis: 1) Sepsis; 2)
 Severe sepsis; 3) Septic shock
- Acute Length of Stay with mortality by stage of sepsis: 1) Sepsis; 2) Severe sepsis; 3) Septic shock
- Acute Length of Stay <u>without</u> mortality by stage of sepsis: 1) Sepsis; 2)
 Severe sepsis; 3) Septic shock
- Reduction in 30, 60 and 180 day readmissions for Medicare FFS patients with a principal diagnosis of sepsis





HCA Sepsis Engagement – How Started

- The National Sepsis Alliance's outreach to the health continuum by its Executive Director Tom Heymann led to HCA's initial query into sepsis in the community venue
- HCA queried the Association's home care clinicians to examine incidence, prevalence and risk in this venue and population; no immediate profile of incidence or prevalence, or clinicians' serendipity of relevance in the specific sector

The Journey

- HCA Quality Committee subsequently identified factors that compelled HCA's decision to further pursue, including:
- National morbidity, mortality, cost and hospitalization/rehospitalization data showing leading indices related to septicemia
- Inclusion of quality improvement goals specific to septicemia in key parts of the system
- Medicare FFS hospital readmission data showing septicemia to be #1 diagnosis for 30-day all cause readmissions for NYS hospitals (data presented to Committee by IPRO) and; also, data derived from Staunton Foundation development of sepsis protocols for hospitals)



The Journey

- Based on such indicators, HCA moved to further delve to determine potential of home care role in combating sepsis
- HCA investigated at the national level, across states and array of professional sources in attempt to identify home care sepsis experience, possible resources and tools related to home health/community setting; none were found, but HCA received reinforcement to pursue from all contacts, and great interest in what HCA might innovate
- HCA moved to highlight sepsis in November 2014 HCA Statewide Quality Symposium and December 2014 session of the HCA Quality Committee



HCA Home Care Screening Tool for Sepsis Early Recognition and Intervention

HCA Adult Sepsis Screen and Protocol

Authorized Use!

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HCA Home Care Screening Tool for Sepsis Early Recognition and Intervention

Home Care Services Adult Sepsis Screening – SBAR Form

Patient's Name:	
Medical Record #:	# 10 P # 10 P 9 P F
Date Completed:	

1	Does the patient's history, physical examination, or other findings	suggest an infection? — Yes — No or potential source
	If Yes, specify source of infection	and select one or more suspected sites: of infection?
	1889 4	□ Active treatment
		□ Implanted device infection
		□ Endocarditis
		□ Recent Chemotherapy/Immunocompromised
		□ Wound infection or skin infection
		□ Other source of infection (describe)
		Under source of infection (describe)
2	Are any 2 (or more) of the following systemic criteria present?	□ Yes □ No If yes, check all that apply:
	□ Fever (oral temperature >38.3° C [100.9° F] or hypothermia (core temperature <36.0° C [96.8° F])	 □ Tachycardia (heart rate or pulse >90 beats/minute) □ Tachypnea (respirations >20 breaths/minute)
3	Is at least one new (since the last screen) sepsis-related organ If yes, check all that apply:	dysfunction criteria present from the following list? □ Yes □ No
	Neurological	Cardiovascular
	□ New onset acutely altered mental status/difficult to arouse	□ New onset hypotension (systolic blood pressure <90 or
	□ New onset acutely altered mental status/difficult to alouse	decreases by >40 mm Hg)
	Lung	<u>, </u>
	☐ New onset saturation <90% by pulse oximetry, on supplemental oxygen SPO2 other than baseline	□ New onset pale/discolor
	11 70	Pain
	Kidney	□ New onset pain/general discomfort
	□ New onset urine output decreased from the patient's baseli	
	with adequate fluid intake (and not due to ESRD)	25
	man subjuste man mano (and not and to botto)	

If the answers to questions 1, 2, and 3 above are all "No", then STOP. Screening is complete for this visit.

UP

The Patient Meets Criteria for Infection

If the answer to #1 is yes and the answer to #2 and #3 are no educate the patient on signs and symptoms of Sepsis.

The Patient Meets Criteria for MD Notification

If the answer to question #3 is "Yes" and answers to questions #1 and/or #2 are "No", then notify MD of your findings and document.

The Patient Meets Criteria for Sepsis

If the answer to questions #1 and #2 are "yes", but the answer to question #3 is "no", then the patient meets criteria for sepsis. Document your findings, notify the provider and **obtain MD order to draw CBC.**

The Patient Meets Criteria for SEVERE Sepsis

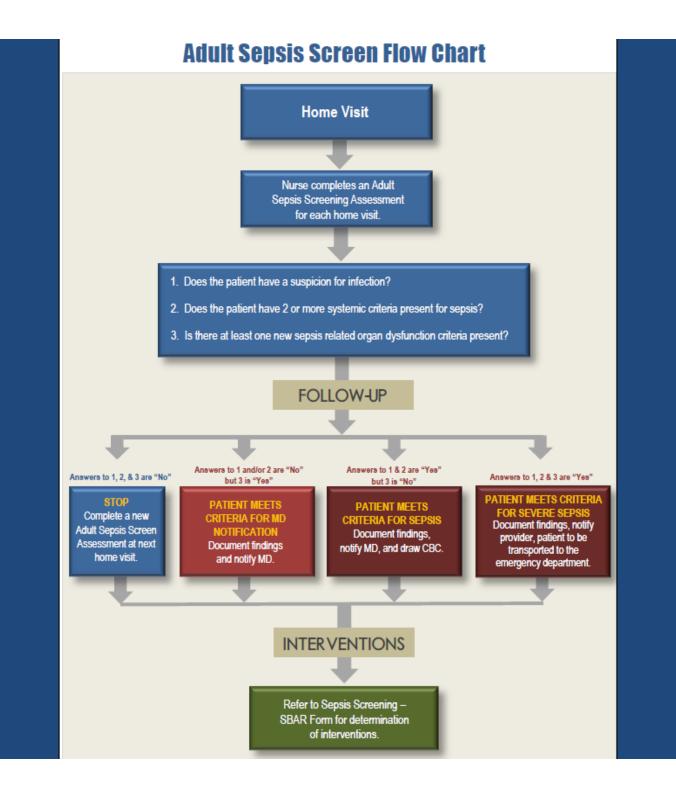
If the answer to questions #1, #2, and #3 are all "yes," then the patient meets screening criteria for **severe** sepsis. Document your findings, notify the provider and have patient transported to emergency department for evaluation.

INTERVENTIONS

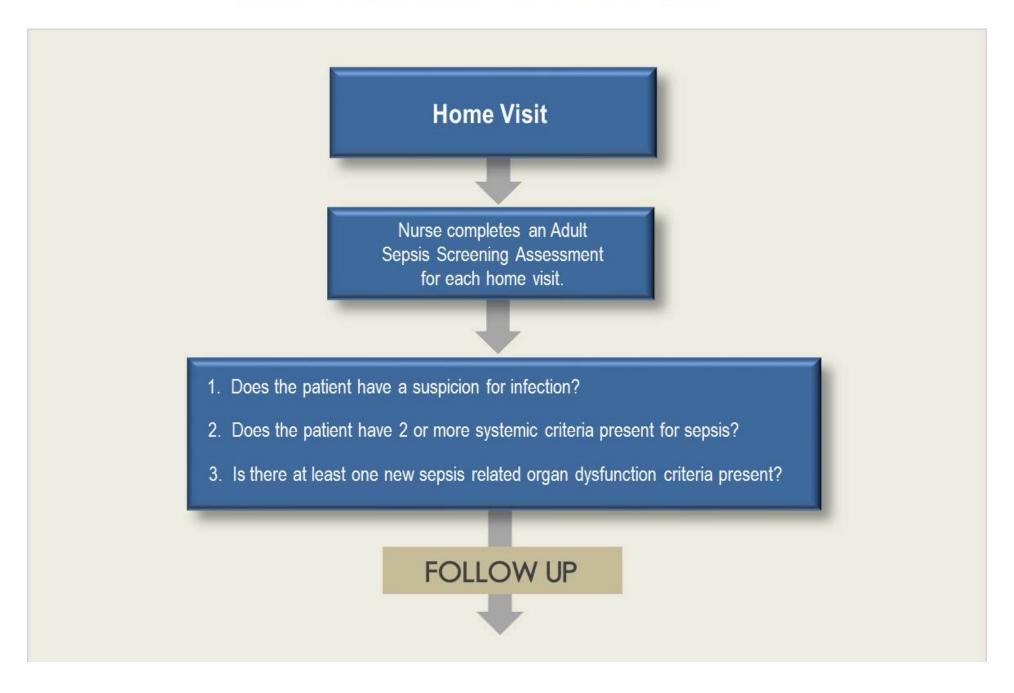
Check all that apply:

- □ The interventions in the Sepsis Protocol are clinically contraindicated (provider determination) the patient has been educated on the signs and symptoms of Sepsis.
- □ The patient has advanced directives in place at this time which precludes any of the protocol interventions (e.g., an order in place for "comfort measures only"). Education has been completed with the patient and/or caregiver on symptom management of Sepsis.
- □ The patient or surrogate declined or is unwilling to consent to protocol interventions. Provider has been notified of the decision not to receive acute intervention. Education has been completed with the patient and/or the caregiver as to the risks and benefits of declining intervention.
- □ The patient has met all criteria for severe sepsis and requires immediate intervention, MD notified, patient to be transported to emergency department, and report called to the receiving emergency department.
- ☐ The patient meets Sepsis criteria, MD notified, antibiotics initiated, and next skilled nursing visit to be completed within 24 hours.

Time criteria met and provider notified:		Provider Notified:		
	Date/Time	,	Provider's Name	
Signature:	RN			



Adult Sepsis Screen Flow Chart



FOLLOW UP

Answers to 1, 2, & 3 are "No"

STOP

Complete a new Adult Sepsis Screen Assessment at next home visit. Answers to 1 is "Yes" but 2 and 3 are "No"

EDUCATE THE PATIENT ON SIGNS AND SYMPTOMS OF SEPSIS Answers to 1 and/or 2 are "No" but 3 is "Yes"

PATIENT MEETS
CRITERIA FOR MD
NOTIFICATION
Document findings
and notify MD.

Answers to 1 & 2 are "Yes" but 3 is "No"

PATIENT MEETS CRITERIA FOR SEPSIS

Document findings, notify MD, and draw CBC. Answers to 1, 2 & 3 are "Yes"

PATIENT MEETS CRITERIA FOR SEVERE SEPSIS

Document findings, notify provider, patient to be transported to the emergency department.

INTERVENTIONS

Refer to Sepsis Screening – SBAR Form for determination of interventions.









Early Signs and Symptoms of Sepsis

Has your healthcare provider diagnosed you with an INFECTION?
You could be at risk for SEPSIS. Know the signs!

What is Sepsis?

Sepsis is your body's life-threatening response to an INFECTION anywhere in your body. Anyone can get sepsis!

Signs and Symptoms of Sepsis

Watch for a combination of INFECTION + fever or feeling chilled, confusion/sleepiness, fast heart rate, fast breathing or shortness of breath, extreme pain and pale/discolored skin.

SEPSIS IS A MEDICAL EMERGENCY

GREEN Zone: ALL CLEAR - Feeling well

- · No fever or feeling chilled
- No fast heart rate
- No increase in pain

- No confusion or sleepiness
- Easy breathing

RED Zone: Call your doctor or nurse immediately if you experience INFECTION and...

- Fever or feeling chilled
- Confusion/sleepiness (recognized by others)
- Fast heart rate

- Fast breathing or shortness of breath
- Extreme pain
- Pale or discolored skin

CALL 911 OR HAVE SOMEONE TAKE YOU TO THE EMERGENCY DEPARTMENT.

Key Contacts:

This material was prepared by the Atlantic Quality Innovation Network (AQINI), the Medicare Quality Innovation Network-Quality Improvement Organization for New York State, South Carolina, and the District of Columbia, under contract with the Centers for Medicare & Medicarie & Medic

Key Points About the Sepsis Screening Tool

- Screening is to be completed at start of care, resumption of care, and <u>every</u> visit
- The interventions are recommended interventions and not a substitute for treatment, consultation or direction from a physician or authorizing practitioner
- If clinicians choose to order tests/interventions not listed on the tool, they need to document at bottom of the screen tool (or "refer to nurse note" and document on nurse note the intervention that was ordered)
- Patient/public education component is significant



- Agency adoption; leadership buy-in
- Staff training, effective discernment of criteria, effective application of screen
- Incorporation in agency EHRs
- Evaluation, tracking of outcomes, feedback for potential improvement
- Effective work with partners (MD, hospital, EMS)
- Support for home care agency and partner effort (from public officials, payors, other actors)

Guidance for Agency Adoption of Tool: Experience & Takeaways from IPRO Initiative

- Senior leadership support is imperative for the success of this initiative
- Feedback from the training sessions has been positive
 - Professional staff are surprised at the data sepsis statistics
 - Training sessions inspire "awesome discussions"
 - Utilization of the screening tool would be significantly greater if it was integrated into their electronic health assessment
- Survey of IPRO trained home health staff (August 2016):
 - Requested educational webinar on use of tool
 - Revealed that most agencies have plan of care parameters and guidelines to identify sepsis



http://atlanticquality.org/initiatives/sepsis-initiative/

- Webinar I September 30, 2016
 - Critical background on the sepsis emergency, presentation of the HCA Home Care Sepsis Screening Tool and Protocol
- Webinar II October 20, 2016
 - Strategies for agency adoption of the Tool and EHR integration
 - Webinar III: Train the Trainer Date Pending

<u>Participation in all three (or subsequent if needed) of these</u> <u>preparatory webinars is required for agencies to be able to</u> <u>utilize the tool</u>

Following the third or final webinar, this tool itself will be made directly accessible to agencies



Next Steps

- Our goal is that *all* NYS home care providers adopt and employ this lifesaving screen and protocol
- Guide and assist providers in adoption and use
- Seeking complementary federal, state and philanthropic reinforcement and the forging key strategic health system partnerships further building upon this effort
- Work with Visiting Nurse Association of America which has reached out to partner w/us to promote in NYS and nationally
- Further collaboration with Centers for Disease Control
- Continuing discussion with the State Hospital Association re collaborative hospital-homecare sepsis initiatives - e.g., bundled payments, clinical pathways
- Upcoming meeting with State Medicaid Director
- Upcoming meetings with the State Administration and Legislature to support in the coming budget and legislative session



Panel Discussion Questions & Feedback

Resources

- Home Care Association of NYS, Inc. http://hca-nys.org/
- Centers for Disease Control & Prevention http://www.cdc.gov/sepsis/
- Sepsis Alliance http://www.sepsisalliance.org/
- The Rory Staunton Foundation
 https://rorystauntonfoundationforsepsis.org/
- NYS Department of Health https://www.health.ny.gov/
- AQIN / IPRO http://www.stopsepsisnow.org
- Centers for Medicare & Medicaid Services <u>http://www.medicare.gov</u>

Questions, Comments

- Al Cardillo, HCA <u>acardillo@hcanys.org</u>
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