

Centers for Medicare & Medicaid Services Special Innovation Project (SIP) Overview: Community Based Sepsis Initiative

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Objectives

- Provide an overview of the CMS Special Innovation Project (SIP): Community Based Sepsis Initiative
- Discuss the impact of sepsis in New York State
- Review timeline, target communities, interventions and performance measures incorporated into SIP
- Discuss your partnership with IPRO for this initiative

CMS Special Innovation Project Overview

- **CMS Special Innovation Project Award**
 - **Special Innovation Project 2 – Community Based Sepsis Initiative**
- **Two year contract award**
 - **September 18, 2015 – September 17, 2017**
- **Performance based measures**
- **Sepsis Initiative –AQIN Based**
 - **New York (IPRO)**
 - **South Carolina (The Carolinas Center for Medical Excellence (CCME))**

CMS Special Innovation Project: Community Based Sepsis Initiative Evidence

Sepsis treatment protocols and provider education are primarily limited to Emergency Medical Services (EMS) and the acute care hospital setting, specifically the Emergency Department (ED) and critical care units

- 80% of sepsis cases are identified within acute care EDs in contrast to hospital inpatient stay occurrences.*
- Sepsis strikes quickly, and earlier recognition and improved care management can reduce sepsis-related morbidity and mortalities. †
- Ideal outcomes require team-based tactics with pre-hospital providers (home healthcare (HHC) staff, skilled nursing facility (SNF) personnel, physician practices, and EMS responders) and the public at large through education and awareness of signs of severe sepsis and septic shock. ‡
- Sepsis is one of the most under recognized and misunderstood conditions by healthcare providers and the public. Therefore, delivering information, education, and resources to the public and providers about the risks and symptoms of sepsis is critical. **

* *Sepsis Alliance, 2015*

** *Sepsis Alliance, 2015*

† *Castellanos-Ortega A et al, 2010*

‡ *Sterling et al, 2015*

CMS Special Innovation Project: Community Based Sepsis Initiative Evidence

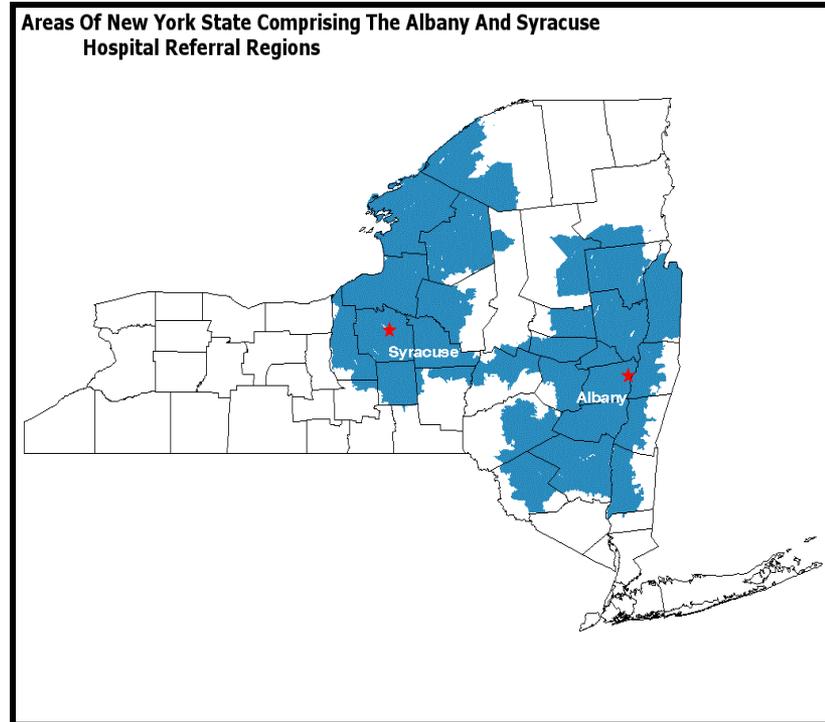
- For Medicare nationally, septicemia (except in labor) is the principal discharge diagnosis exceeding 700,000 hospital discharges a year, and is the costliest diagnosis condition, consuming 6.9% of all Medicare payments yearly (AHRQ)
- In New York, septicemia is the number one driver of 30-day readmissions (21.3%) and has a mortality rate of 17% which is three times greater than the all-diagnosis Medicare in-hospital mortality rate of 4.2% (CMS Medicare FFS Paid Claims Data)
- New York is the first state in the nation to enact sepsis regulations requiring every hospital to identify and implement a sepsis recognition and treatment protocol that aligns with current evidence and addresses:
 - Recognition of risk factors, early signs and symptoms of sepsis
 - Resuscitation, including but not limited to fluids and early antibiotic administration, upon diagnosis of sepsis
 - Training for staff
 - Measurement and evaluation, including use of a standardized data dictionary, centralized data repository, and development of a risk-adjusted mortality measure

Target Region

Albany & Syracuse Hospital Referral Region (HRR)

- **3,230,419 NYS residents** (NYS Vital Statistics 2013)
- **Over 601,000 Medicare beneficiaries** (CMS 2014 Denominator File)
 - 40 Hospitals
 - 131 Skilled Nursing Facilities
 - 32 Home Health Agencies
- **Albany HRR**
 - In-hospital mortality rate of 14.6%
 - Ranks 8th in the NYS HRRs for sepsis admissions
- **Syracuse HRR**
 - In-hospital Mortality rate of 15.6%
 - Ranks 7th in the NYS HRRs for sepsis admissions
- **National**
 - In-hospital All Cause Mortality Rate = 4.2%

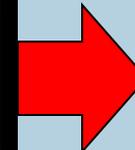
Source: CMS Medicare Paid Claims Data



MFFS Length of Stay Data **Albany & Syracuse** Hospital Referral Region CY 2014

MCFFS Patients in Albany & Syracuse Hospital Referral Region With Any Diagnosis Of Sepsis in Length of Stay for In-Hospital Deaths		
Length Of Stay Prior To Death (days)	Number Of Patients	Percent Of All In-Hospital Sepsis DX Deaths
0	95	6.5%
1	186	12.6%
2	135	9.2%
3	117	7.9%
4	93	6.3%
5	69	4.7%
6	82	5.6%
7	59	4.0%
8	65	4.4%
9	68	4.6%
10	54	3.7%
11	45	3.1%
12	41	2.8%
13	28	1.9%
14	34	2.3%
15	22	1.5%
16	24	1.6%
17	24	1.6%
18	17	1.2%
19	18	1.2%
20	17	1.2%
21	15	1.0%
22	14	1.0%
23	14	1.0%
24	14	1.0%
25	11	0.7%
26	8	0.5%
27	9	0.6%
28	5	0.3%
29	5	0.3%
30	6	0.4%
GT 30	78	5.3%
Total	1,472	

Source: CMS MFFS Paid Claims



Highest Mortality Rate Occurs Within first 4 Days of Hospital Stay

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

Albany & Syracuse Hospital Referral Region

MFFS Readmission Trends CY 2014

Observations Drawn From The Numbers In The Re-admission Table		Numbers Used In Computation	
		Numerator	Denominator
Overall 60 Day Re-admission Rate	31.6%	2,423	7,657
Overall 120 Day Re-admission Rate	42.3%	3,241	7,657
Percent Of Discharges With No After Care	32.9%	2,521	7,657
60 Day Re-admission Rate For These Patients	27.8%	700	2,521
120 Day Re-admission Rate For These Patients	39.2%	988	2,521
Percent Of Discharges To SNF	32.6%	2,497	7,657
60 Day Re-admission Rate For These Patients	35.2%	880	2,497
120 Day Re-admission Rate For These Patients	45.5%	1,136	2,497
Percent Of Discharges To Home Healthcare	21.7%	1,663	7,657
60 Day Re-admission Rate For These Patients	36.4%	606	1,663
120 Day Re-admission Rate For These Patients	49.1%	816	1,663

Most Common Primary Diagnosis For Less Than 120 Day Re-admissions

Disease Category*	Number
Septicemia (except in labor)	760
Complication of device; implant or graft	173
Pneumonia except that caused by tuberculosis or sexually transmitted	156
Urinary tract infections	149
Congestive heart failure; nonhypertensive	142
Respiratory failure; insufficiency; arrest (adult)	98
Acute and unspecified renal failure	88
Chronic obstructive pulmonary disease and bronchiectasis	87
Skin and subcutaneous tissue infections	79
Aspiration pneumonitis; food/vomitus	71

* Diseases are categorized using 'Clinical Classification' software provided by CMS.

Source: CMS Medicare Paid Claims Data

CMS Special Innovation Project: Community Based Sepsis Initiative Approach

- **Facilitate education and build awareness of sepsis among pre-hospital providers and caregivers in contact with at-risk community dwelling Medicare beneficiaries**
 - **Skilled Nursing Facilities – all levels of staff**
 - **Home Health Agencies – all direct care staff**
 - **Physician Practices – direct patient contact staff – all levels**
- **Identify best practice protocols and educate pre-hospital providers on the recognition and importance of efficient referral to the next level of care for emergent care management**
- **Improve processes of care transitions and care pathways with sepsis treatment between pre-hospital and hospital/emergency care setting providers and post acute discharge to the community**
- **Increase public awareness of the signs, symptoms, and contributing factors to sepsis through community outreach, public service announcements, and social media**

CMS Special Innovation Project: Community Based Sepsis Initiative Technical Experts

Sepsis Alliance

- Charitable organization run by a team of dedicated laypeople and healthcare professionals who share a strong commitment to battling sepsis.
- Founded in 2007, by Dr. Carl Flatley, whose daughter Erin died of sepsis at the age of 23
- Created to raise sepsis awareness among both the general public and healthcare professionals

Home Care Association of New York State

- Quality Council efforts focusing on resources for early identification of the signs and symptoms of sepsis and referral to the next level of care
 - Adult Sepsis Screening Assessment Tool & Protocol (Beta Test Phase)
 - Pediatric Sepsis Screening Assessment Tool & Protocol (to be developed)

Rory Staunton Foundation

- Seek to reduce the number of sepsis caused deaths through education and outreach aimed at faster diagnosis and effective treatment of sepsis, particularly in children
- Created by Rory Staunton's parents, Ciaran and Orlaith Staunton

CMS Special Innovation Project: Community Based Sepsis Initiative Measures

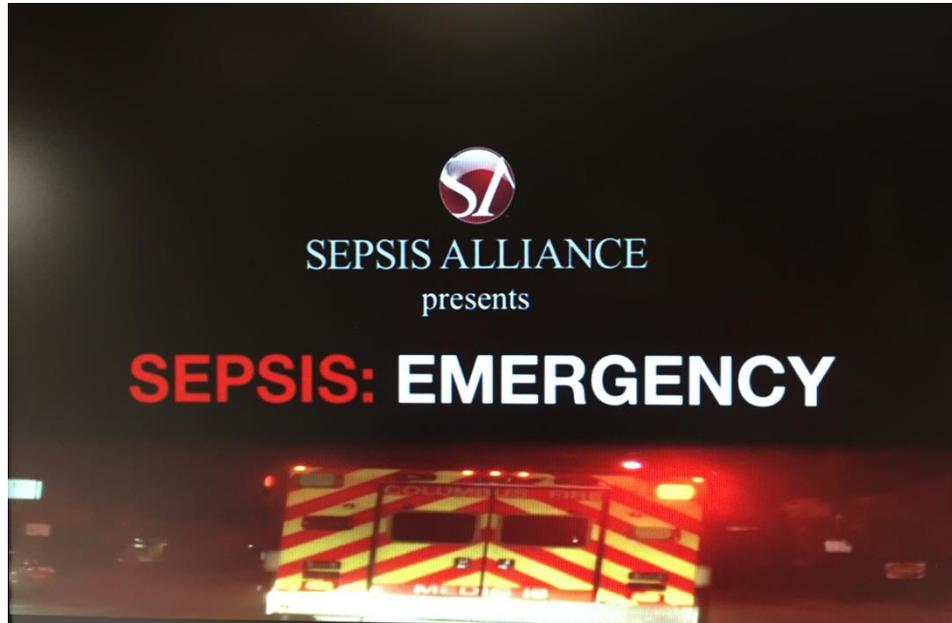
Outcome Metrics

- Number of inpatient admissions of Medicare FFS patients by stage of sepsis: 1) 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 without 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

CMS Special Innovation Project: Community Based Sepsis Initiative Status

- **Assembled expert Advisory Council (NY and SC target regions)**
- **Developed train-the-trainer educational programs**
 - **SNF – Clinical and Non-Clinical Staff**
 - **Home Health – Clinical & Non-Clinical Staff**
 - **Physician Practice – Non-Clinical Staff**
 - **Generic Clinical Staff**
- **Developed SNF Sepsis Care Pathway**
- **Organizing evidence based tools and resources**
- **Identification of senior outreach venues**
- **Two American College of Physician (NY chapter) LAN meetings planned for March 2016**

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.

Dr. Alan Sanders

Upstate Infectious Diseases Associates, LLP

The Community Perspective



The Outpatient Recognition of Sepsis

**The Role of Practitioner , Patient and
Family in the Earliest Phase of Sepsis**

Sequential Features of Sepsis

- A uniformly, fairly predictable series of symptomatic, objective and laboratory events occur from the earliest phase of infections that progress to severe sepsis and septic shock.
- This progression does not always manifest in the same timeline/aggressive format, with differences by site of infection, pathogen and host.

SIRS – The Dawn of Sepsis

- The Systemic Inflammatory Response Syndrome (SIRS) is a constellation of physical exam and laboratory features that project a dysregulation of inflammation, and may be due to an inflammatory OR infectious insult.
- SIRS CRITERIA WHEN 2 OR MORE OF THE FOLLOWING MET
- TEMPERATURE > 38.3c or < 36c
- HEART RATE >90
- RESP RATE > 20/ min
- WBC > 12,000 or < 4,000 or > 10% band forms

SIRS – The Dawn of Sepsis

- When SIRS criteria are met, a source for infection should always be sought/investigated, including in an out-patient setting.
- With > 2 SIRS criteria, in the presence of a probable or documented infection the picture is now**SEPSIS.**
- With the additional features of decreased urine output, altered mental status or cool/mottled extremities the patient has progressed to.... **SEVERE SEPSIS.**

Common Infectious Diseases that may Progress to all Stages of Sepsis

- Skin/ Soft Tissue Infections – Strep/Staph
- Pneumonia – *S. pneumoniae*, Legionella
- Endometritis (post-partum) – Strep/polymicrobial
- Urinary Tract – device exchange, obstructive stone disease
- Enteritis – notably *C.diff* in immunosuppressed and elderly
- TBI – Babesia in the immunosuppressed/asplenic

Host Factors that Require Added Attention for Progression to Sepsis

- Immunosuppressed by medications
- Asplenic
- Malignancy
- Elderly
- Alcoholics/Cirrhosis – Vibrio, Strep pneumo, Legionella
- Neutropenia – Strep species, GNR's

Patient Education and Engagement :

Recognition of SIRS/Sepsis

- It is incumbent upon medical providers to educate patients, families and caregivers regarding the important features to be aware of in cases of possible infections that MAY proceed to sepsis upon leaving the office.
- With SIRS criteria being met, and a potential site of infection considered, a host of signs and symptoms must be reviewed if the decision is made not to admit the patient to an acute care setting

Signs and Symptoms of Impending Sepsis, and Severe Sepsis: What the Patient and Family Need to Know

- Decrease, or darkening (concentrating) of urine output.
- Increase in finger stick blood glucose in diabetics.
- Ongoing fevers, chills, rigors despite treatment.
- Cool extremities or mottling of skin.
- Altered mental status (recognized by others)

Next Steps:

- **IPRO performing Beta test of training materials**
 - SNF
 - Home Health
 - Physician Practice
- **Regional Train the Trainer Meetings (all care settings)**
 - Identify key staff member(s) within your organization who will be the lead for staff training – all levels of staff
 - **Please contact Eve Bankert at eve.bankert@area-l.hcqis.org by 03/01/16 with:**
 - **Name and contact information of the staff member(s) to lead training for your facility**
- **IPRO organizing venues for senior outreach programs & public education**
 - Your recommendations for venues within your region are greatly appreciated!

Participation Agreement Form



Quality Improvement Organizations
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IPRO Regional Office
20 Corporate Woods Boulevard
Albany, NY 12211-2370
(518) 426-3418
www.atlanticquality.org

IPRO COMMUNITY BASED SEPSIS INITIATIVE

Our organization has volunteered for participation in the CMS Special Innovation Project: Community Based Sepsis Initiative with IPRO from January 2016 – September 2017. We agree to ongoing communication with the IPRO Special Innovation Project Team regarding the development of our community wide approach to increasing Sepsis awareness.

ADMINISTRATOR'S NAME: (PRINT) _____

ADMINISTRATOR'S SIGNATURE: _____ DATE: _____

ORGANIZATION'S KEY CONTACT FOR SPECIAL INNOVATION PROJECT ACTIVITIES:

FULL NAME: _____

TITLE: _____

PHONE # AND EXTENSION: _____ FAX #: _____

IPRO will....

- Assist in facilitating cross-setting teams and partnerships within your local community.
- Provide sepsis educational materials for clinical and non-clinical staff and facilitate train-the trainer programs within your organization.
- Provide recognition of participating providers and successes at the state and/or national level (e.g. Web site, press releases, certificate of participation).
- Maintain and safeguard the confidentiality of privileged data or information in accordance with all applicable standards.

Our Organization will....

- Provide ongoing senior leadership support and resources as appropriate and according to the strengths of the organization in an effort to develop a community wide approach to increasing Sepsis awareness.
- Establish an interdisciplinary team and designate a team leader and an alternate leader/contact person.
- Actively participate in cross-setting teams, in-house education of clinical and non-clinical staff and partnerships within the local community to implement a community-based approach to increasing Sepsis awareness.

PLEASE RETURN COMPLETED FORM

NO LATER THAN MARCH 2, 2016 TO:

EVE BANKERT

IPRO

20 CORPORATE WOODS BOULEVARD, FIRST FLOOR

ALBANY, NEW YORK 12211

Fax: (518) 426-3418

Email: eve.bankert@arca-lhcqis.org

Thank you!

If your organization ***is not*** currently a member of an IPRO Care Transition Coalition, please complete the IPRO Participation Agreement and fax to Eve Bankert at 518-426-3418 no later than **03/01/16**

QUESTIONS

COMMENTS

FEEDBACK



For more information

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IPRO Sepsis Initiative
<http://atlanticquality.org/initiatives/sepsis-initiative/>

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