Hospital Acquired Conditions

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A hospital-acquired infection (HAI), also known as a nosocomial infection, is an infection that is acquired in a hospital or other health care facility

Hospital Acquired Conditions: HACs

- Adverse Drug Events
- Catheter Associated Urinary Tract Infections (CAUTI)
- Central Line Associated Blood Stream Infections (CLABSI)
- Falls
- PIVIE (Peripheral Intravenous Infiltrates and Extravasates)
- Patient Behavior Events
- Pressure Injuries
- Surgical Site Infections
- Unplanned Extubations
- Venous Thromboembolism

What are the HAC's and their bundle elements?

Adverse Drug Events	Catheter Associated Urinary Tract Infections	Central Line Associated Blood Stream Infections	Falls	IV Infiltrates and Extravasates	Patient Behavior Events	Pressure Injuries	Surgical Site Infections	Unplanned Extubations	Venous Thrombo-embolism
Correct home Med list	Wash hands & sterile technique for insertion	Wash hands & sterile insertion	Screen patients for risk of falls	Wash hands prior to insertion	Screen all patients on admission for behavioral risk	Daily full head to toe Skin Assessments	Pre-Op Bath	Airway Guardian	Screening for High Risk Patients
Correct Dose	Wash hands prior to daily catheter care	CHG for insertion scrub unless contraindicated	Identify patients at risk: sign posted on door, armband on patient	Wear gloves with placement	Document a patient-specific prevention plan.	Pressure Injury Risk Assessment	Appropriate timing of pre-op antibiotics	Standard Reference Point for ETT measurement	Documentation of Anti-coagulation decision making
Correct Route	Documented Reason for Use	Use CVL insertion kit or cart with Checklist Utilization	Ensure safe environment – clutter removed, call light within reach, non-skid footwear	CHG Scrub unless contraindicated	Assess and modify the environment to match patient risk. (In Progress)	Turn/reposition every 2 hours or with cares in neonates	No razor	Standard taping process for ETT securement	
Correct Frequency	Maintain Closed System	Daily Oral Cares and CHG Treatments	Parent education on fall risk	IV secured with approved method	Use of Behavioral PPE	Pulse Ox rotation every 4 hours		Optional: Chest X-ray annotation	
No Omitted Meds	Secured Catheter	Dressing is Clean & Intact		<u>Maintenance Bundle: Document Hourly</u> • Dressing clean, dry, and occlusive • TLC (Touch, Look, Compare) • Site visible		Moisture barrier with diaper changes– is skin clean, dry, and hydrated?			
	Daily assessment of catheter necessity	Hand Hygiene & Gloves To Touch Lines				implementation of Appropriate Bed Surface			
	Bag Below Bladder	Standardized Scrub the Hub							
	Unobstructed Flow	Daily assessment of line necessity							
		Standard dressing, cap, & tubing changes							
		Assess Environmental Cleanliness							

Adverse Drug Event

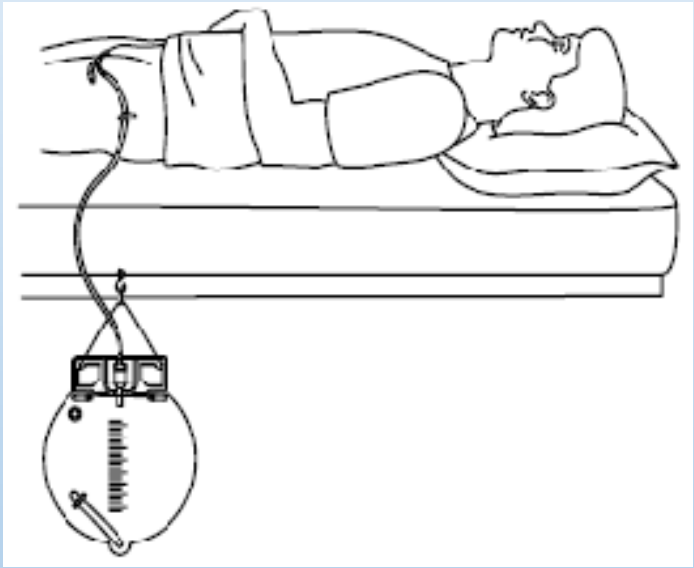
Number of ADE with significance of F,G,H or I

All home medications will be entered into Epic within 24 hours of admission with the following:

- Correct Dose
- Correct Medication
- Correct Route
- Correct Frequency
- No Omitted Meds

Catheter Associated Urinary Tract Infections (CAUTI)

- Hand hygiene (wash hands) and sterile technique for insertion
- Wash hands prior to daily catheter care
- Documented reason for use
- Maintained closed system
- Secured catheter
- Unobstructed flow
- Daily catheter care, daily bath
- Daily discussion with provider
- Bag remains below the bladder at ALL times



Catheter Associated Urinary Tract Infections by Month

Definition: (Number of patients with a confirmed CA-UTI by Infection Prevention using CDC criteria / Total number of foley catheter days during the time period) * 1000

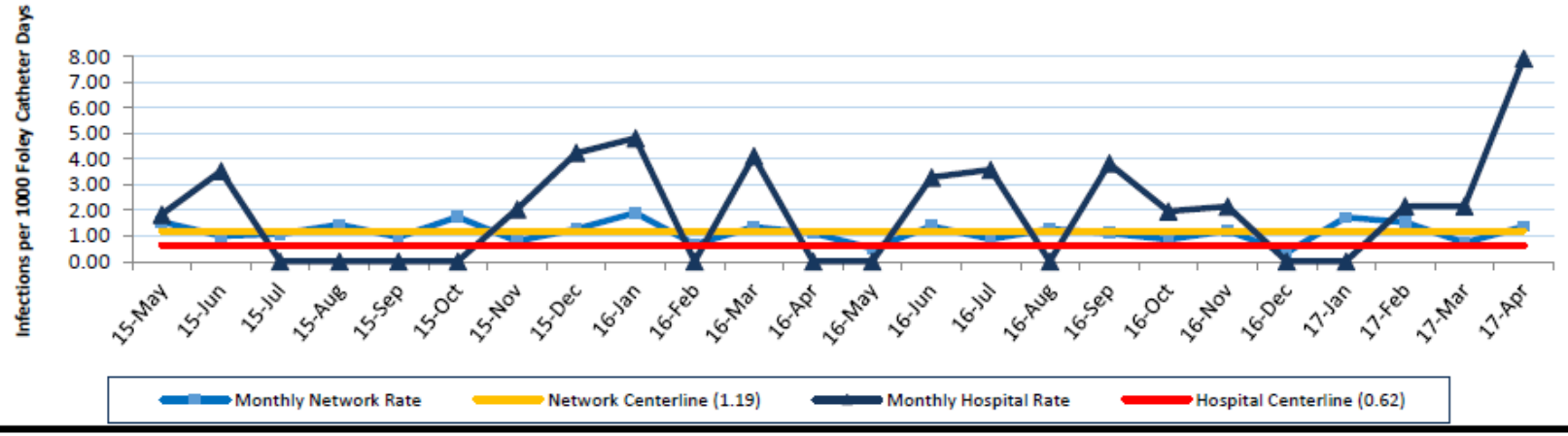
Data Source: Solution for Patient Safety (SPS)

CHW Data Source: Manual Surveillance (entered into Midas);Epic

Old Data: FYI-CW does track current information

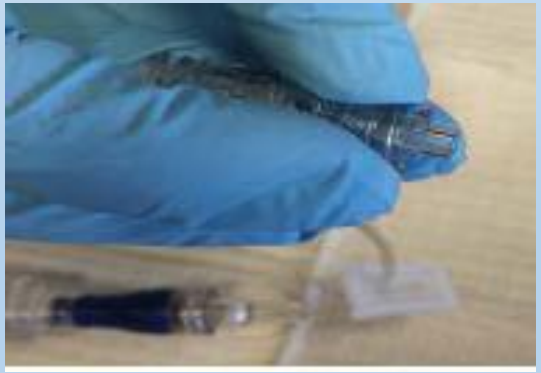
Data Pull Date: 6/19/2017

Children's Hospitals' Solutions for Patient Safety
Every patient. Every day.



	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17
Number of CA-UTI Events	0	0	2	2	0	2	1	1	0	0	1	1	4
Foley Cath Days	494	692	610	559	584	523	512	467	415	382	465	463	506
Monthly Hospital Rate	0	0	3.28	3.58	0	3.82	1.95	2.14	0	0	2.15	2.16	7.91
Monthly Network Rate	1.1	0.6	1.38	0.87	1.27	1.11	0.85	1.2	0.34	1.72	1.53	0.73	1.36

CLABSI



Maintenance bundle

- Wash hands and sterile insertion
- CHG for insertion scrub unless contraindicated
- Use CVL insertion kit or cart with checklist utilitzation
- Daily oral cares and CHG treatment
- Dressing is clean and intact
- Hand hygiene and glove to touch lines
- Standardized scrub the Hub
- Daily assessment of line necessity
- Standard dressing, cap, & tubing changes
- Assess Environmental Cleanliness
- CVL dressing clean, dry and intact
- Dual caps on every access point

- https://www.cdc.gov/HAI/bsi/bsi.html

Central Line Associated Blood Stream Infections by Month

Definition: (Number of patients with a confirmed CLA-BSI by Infection Prevention using CDC criteria / Total number of central line days during the time period) * 1000
Data Source: Solution for Patient Safety (SPS)
CHW Data Source: Manual Surveillance (entered into Midas);Epic
Data Pull Date: 6/19/2017

Old Data: FYI-CW does track current information

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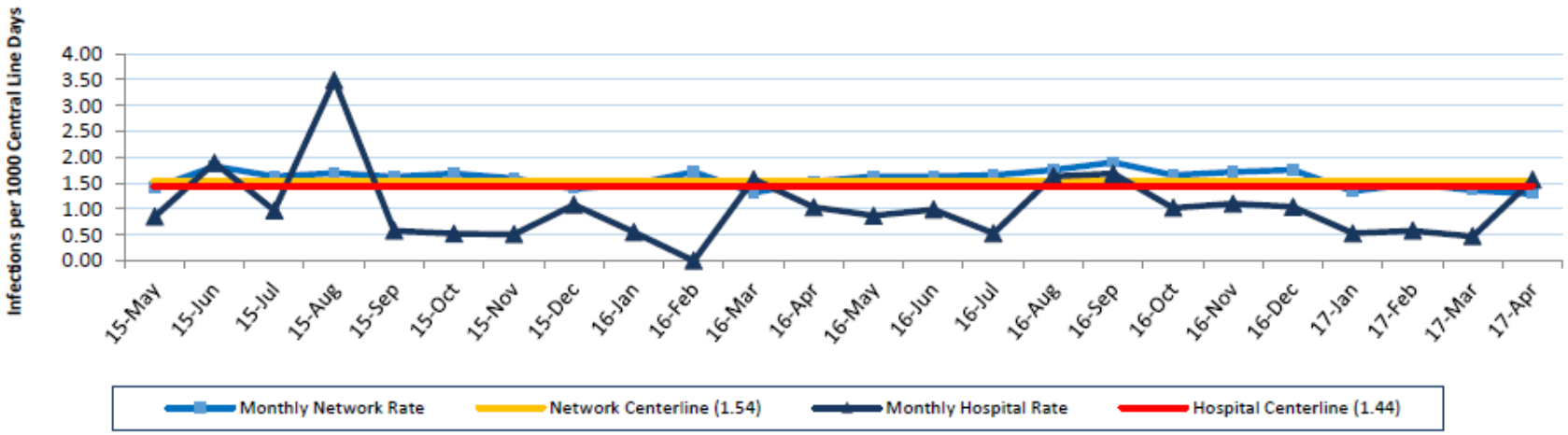


	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17
Num of CLABSI Events	2	2	2	1	3	3	2	2	2	1	1	1	3
Central Line Days	1949	2300	2011	1872	1836	1791	1960	1823	1929	1892	1722	2114	1923
Monthly Hospital Rate	1.03	0.87	0.99	0.53	1.63	1.68	1.02	1.1	1.04	0.53	0.58	0.47	1.56
Monthly Network Rate	1.55	1.63	1.63	1.65	1.75	1.9	1.65	1.71	1.73	1.34	1.49	1.36	1.29

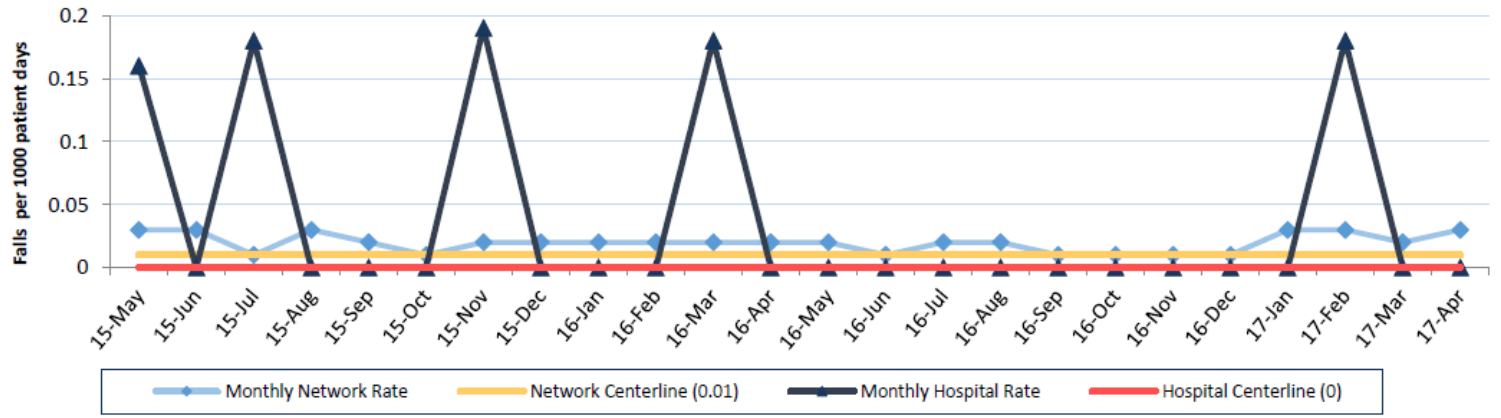
Falls

- Screen patients for risk of falls
- Identify patients at risk: sign posted on door, armband on patient
- Ensure safe environment- clutter removed, call light within reach, non-skid footwear
- Patient education on fall risk

Falls Rate by Month

Definition: (Number of falls with injury of moderate or above as defined by NDNQI / Total number patient days) * 1000
Data Source: Solution for Patient Safety (SPS)
CHW Data Source:Midas Incident Report
Data Pull Date: 6/19/2017

Old Data: FYI-CW does track current information



	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17
# of Falls Events	0	0	0	0	0	0	0	0	0	0	1	0	0
Patient Days	4988	5625	5316	5151	5481	5195	5706	5580	5774	5554	5413	6676	6154
Monthly Hospital Rate	0	0	0	0	0	0	0	0	0	0	0.18	0	0
Monthly Network Rate	0.02	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.03	0.03	0.02	0.03

PIVIE

- Insertion
  - Wash hands
  - Wear clean gloves
  - Scrub with CHG
  - Appropriate securement

All need to be documented within the PIV LDA upon insertion

PIVIE

- Maintenance
  - **HOURLY** assessment of
    - TLC (Touch, Look, Compare)
    - Insertion site visible
    - Dressing clean, dry, and intact

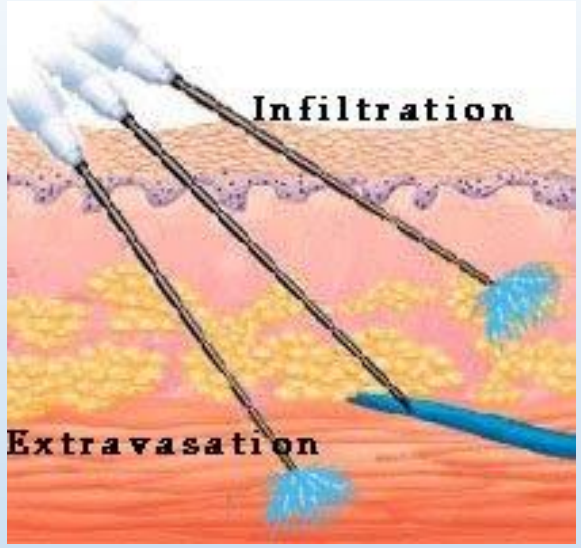
PIV's can infiltrate in a matter of minutes. Hourly assessments are crucial to reduce harm caused by PIV infiltrates.

Here are some infiltrates that have occurred here at CHW…


DURA-CUF®
REF 2201

10
20
30
40

If an infiltrate occurs…



- Remove the PIV immediately
- Attempt to aspirate
- Elevate the arm
- Complete measurements
- Consult the P&P to determine proper treatment
  - Heat pack versus cold pack, etc.
- For moderate and severe infiltrates, consider the use of hyaluronidase
  - See JIT *PIVIE: Hyaluronidase*

Administer within 1 hour (though you can give it over 1 hour)

Hyaluronidase will come supplied as 5 separate fixed needle syringes. Each syringe will contain 0.2 ml which can be given simultaneously by multiple nurses or in immediate succession by the bedside nurse.

Do NOT wait 5 minutes in between each dose as timing indicates on the Medication Administration Record (MAR).

Inject 0.1 to 0.2 ml subcutaneously into the leading edge of the infiltration/extravasation. Aim needle toward center of edema. Gently massage as tolerated by patient to help fluids leak out of injection sites. Use moistened gauze to wick more fluid if possible. Seeing a little bleeding is normal.

Children's Hospital of Wisconsin

Just in time teaching

PIVIE: Hyaluronidase Administration

What is hyaluronidase?

Hyaluronidase is an enzyme that breaks down hyaluronic acid, a compound best described as the "glue" which holds cells together.

Why is it given?

Hyaluronidase minimizes the local damage caused by the infiltration/extravasation by increasing the absorption of injected medications or fluids. Hyaluronidase causes the cells to separate allowing the medication to distribute through a larger area by breaking down the walls that keep it localized.

Is it ever contraindicated?

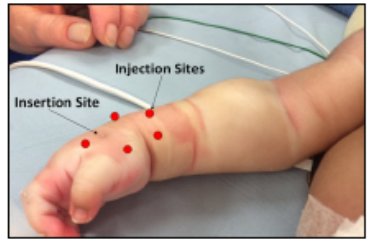
It is only contraindicated for those with an allergy to hyaluronidase. Treatment is not effective when the infusing medication is a vasopressor. See P&P for other options.

How do I know if my patient's PIV infiltration/extravasation needs hyaluronidase?

- It is recommended for most moderate and severe infiltrates.
- It may not be compatible with infusing medication or fluid infusing at the time of the infiltration/extravasation. Call pharmacy to determine compatibility.
- It requires an order. Collaborate with the provider to determine treatment options.

How do I administer it?

1. Administer within 1 hour of recognizing the infiltrate/extravasate whenever possible.
2. Hyaluronidase will come supplied as 5 separate fixed needle syringes. Each syringe will contain 0.2 ml which can be given simultaneously by multiple nurses or in immediate succession by the bedside nurse. Do **not** wait 5 minutes in between each dose as timing indicates on the Medication Administration Record (MAR). Be sure to scan each syringe given on the MAR.
3. Locate the leading edge, also known as the perimeter, of swelling and identify where you will inject the medication. Medication is given in a circle fashion around the leading edge of swelling.
4. Clean area with alcohol swab.
5. Aspirate before each injection to prevent injection into the blood stream.
6. Inject 0.1 to 0.2 ml subcutaneously into the leading edge of the infiltration/extravasation. Aim needle toward center of edema. Gently massage as tolerated by patient to help fluids leak out of injection sites. Use moistened gauze to wick more fluid if possible. Seeing a little bleeding is normal.



7. Repeat **step 6** using the remaining syringes scanning each one on the MAR. Do not wait 5 minutes in between each dose.
8. Continue to monitor site. If the severity worsens, collaborate with the provider and pharmacy to determine if additional doses are needed.

Can hyaluronidase be given after the 1 hour recommendation?

It is most effective when given within an hour of the infiltration/extravasation, but can still be administered after that time.

References

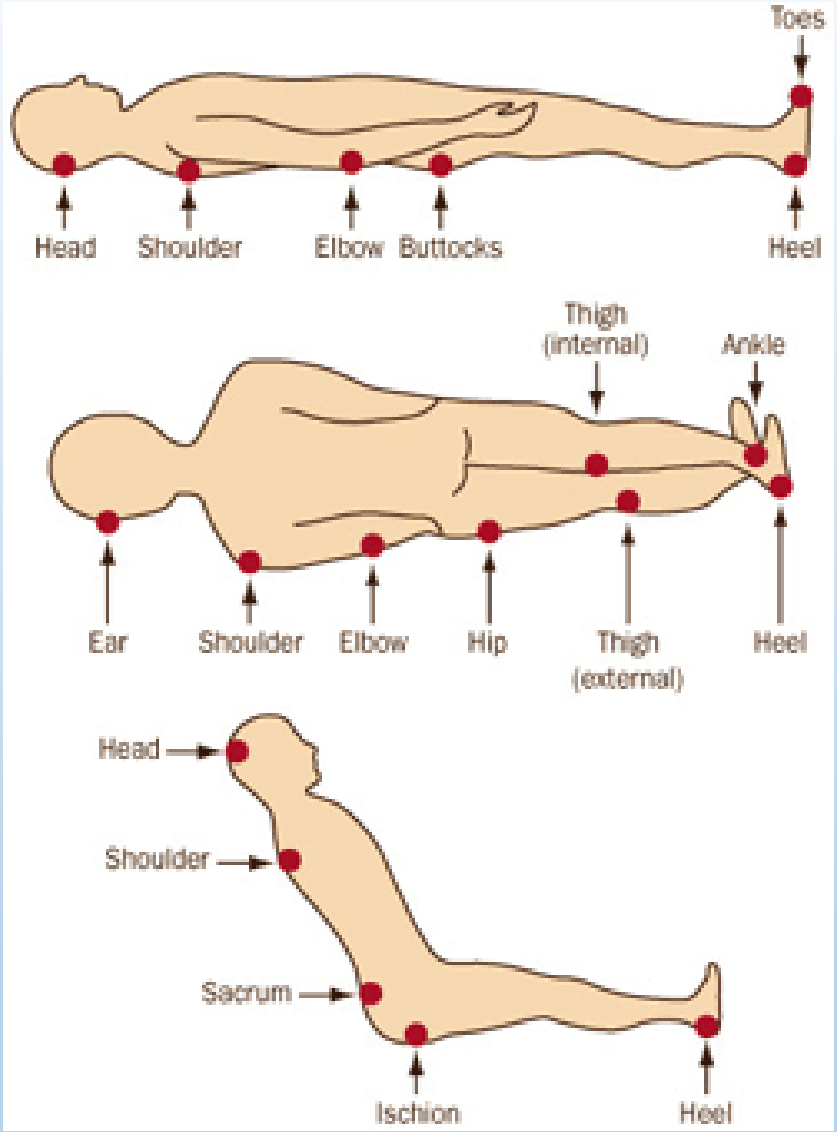
- *Peripheral Intravenous Insertion and Therapy* Policy and Procedure
- Pharmacy
- Unit Based Clinical Nurse Specialist

Patient Behavior Events

- Screen all patients on admission for behavioral risk
- Document a patient- specific prevention plan
- Assess and modify the environment to match patient risk (In progress)
- Use of Behavioral PPE

Pressure Injuries

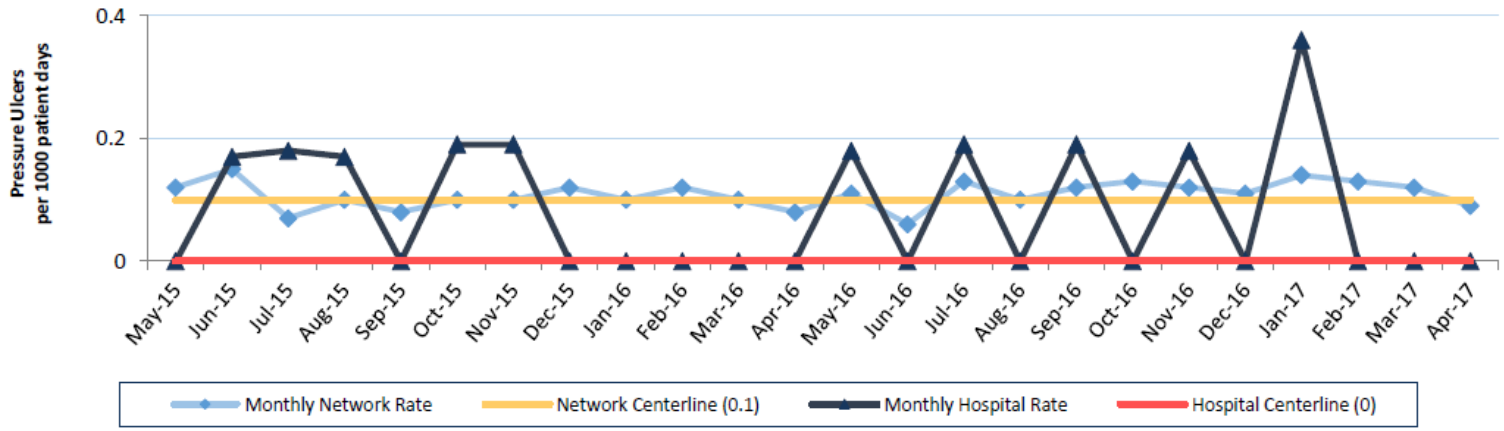
- Daily full head to toe skin assessments
- Pressure injury risk assessment
- Turn and reposition every 2 hours or with cares in neonates
- Pulse ox rotation every 4 hours
- Moisture barrier with diaper changes- is skin clean, dry, and hydrated?
- Implementation of appropriate bed surface



Pressure Injury Rate by Month

Definition: (Number of deep tissue injuries (DTI) prior to 2015, Stage III, IV, and unstageable pressure injury confirmed by skin champion / Total number patient days) * 1000
Data Source: Solution for Patient Safety (SPS)
CHW Data Source: Midas, Pressure Injury Prevention Team (PUP)
Data Pull Date: 6/19/2017

Old Data: FYI-CW does track current information



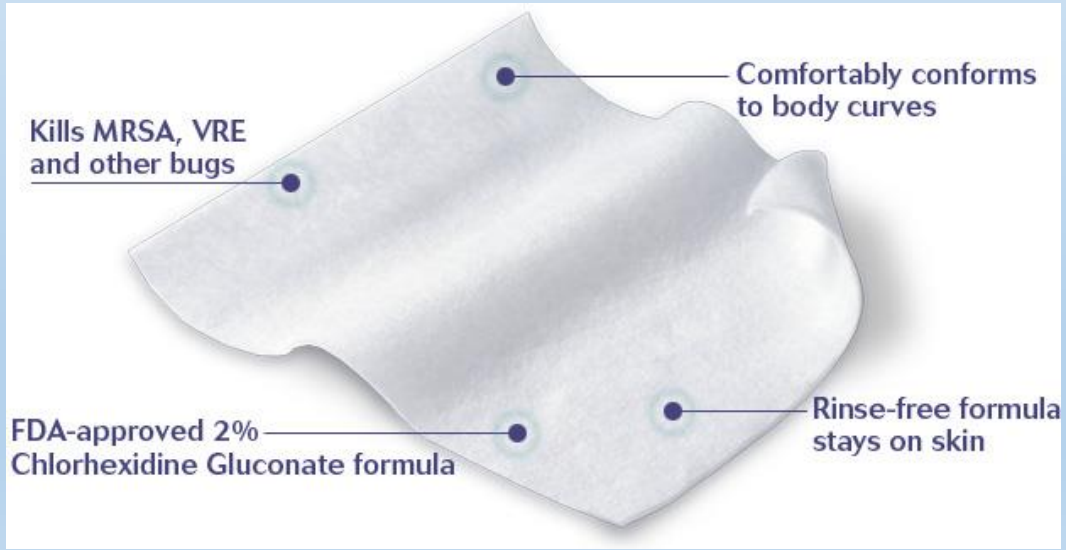
	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17
# of PU Events	0	1	0	1	0	1	0	1	0	2	0	0	0
Patient Days	4988	5625	5316	5151	5481	5195	5706	5580	5774	5554	5413	6676	6154
Monthly Hospital Rate	0	0.18	0	0.19	0	0.19	0	0.18	0	0.36	0	0	0
Monthly Network Rate	0.08	0.11	0.06	0.13	0.1	0.12	0.13	0.11	0.11	0.14	0.13	0.12	0.09


Wound Measuring Guide


graphic

SSI

- Pre-op bath
  - For every patient going to OR
  - 3 min scrub time



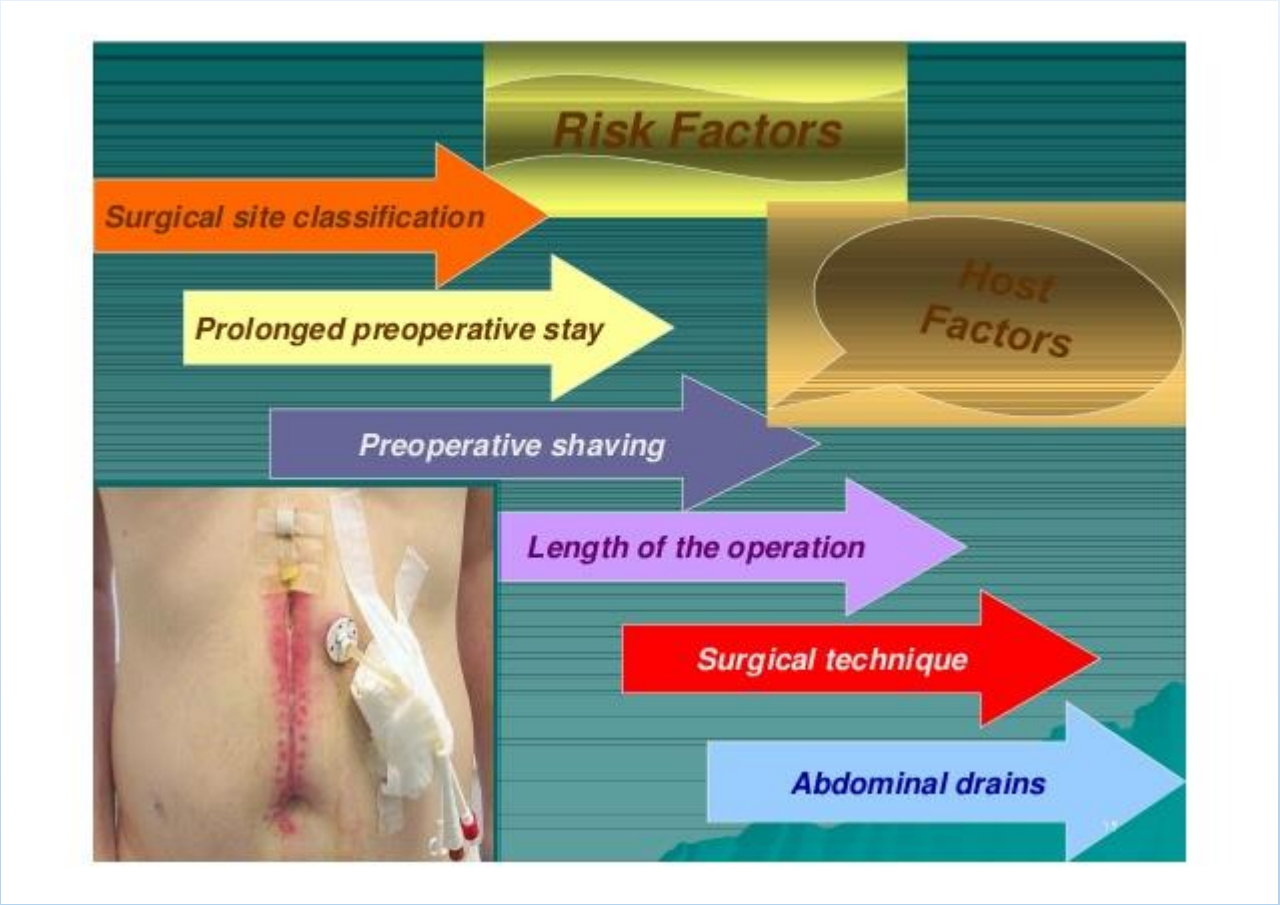
SSI

Follow up on Spinal fusions, VP Shunts and cardiac procedures that have resulted in SSI as defined by the CDC criteria

Pre-op Chlorohexidine Gluconate (CHG) bath

No Razor

Prophylaxis antibiotics administration within one hour of incision



Surgical Site Infection Rate by Month

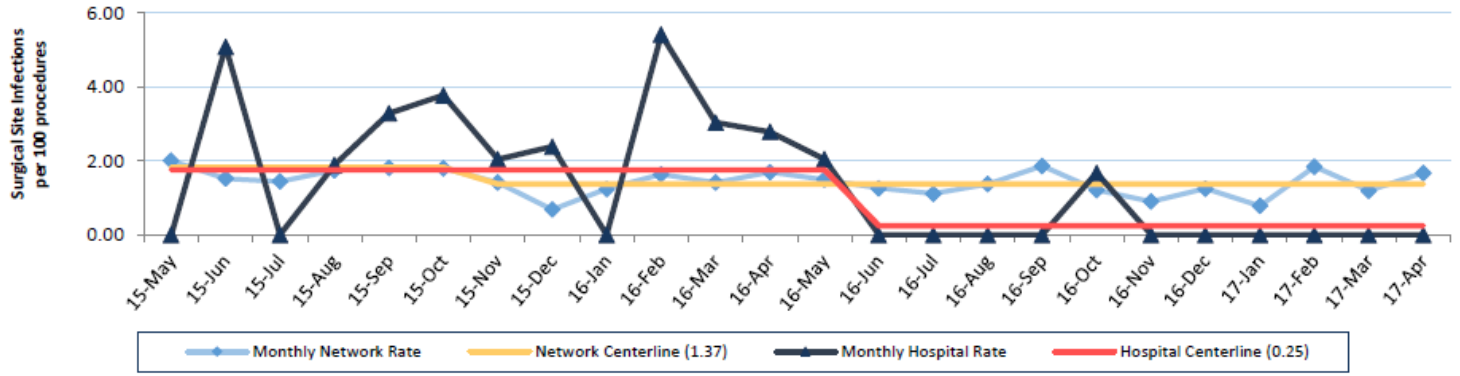
Definition: (Number of SSIs related to designated cardiac, spinal fusion and VP shunt procedures / Number of patient trips to the operating room for designated cardiac, spinal fusion and VP shunt procedures during the applicable reporting period) * 100

Data Source: Solution for Patient Safety (SPS)

CHW Data Source: Manual Surveillance (entered into Midas)

Old Data: FYI-CW does track current information

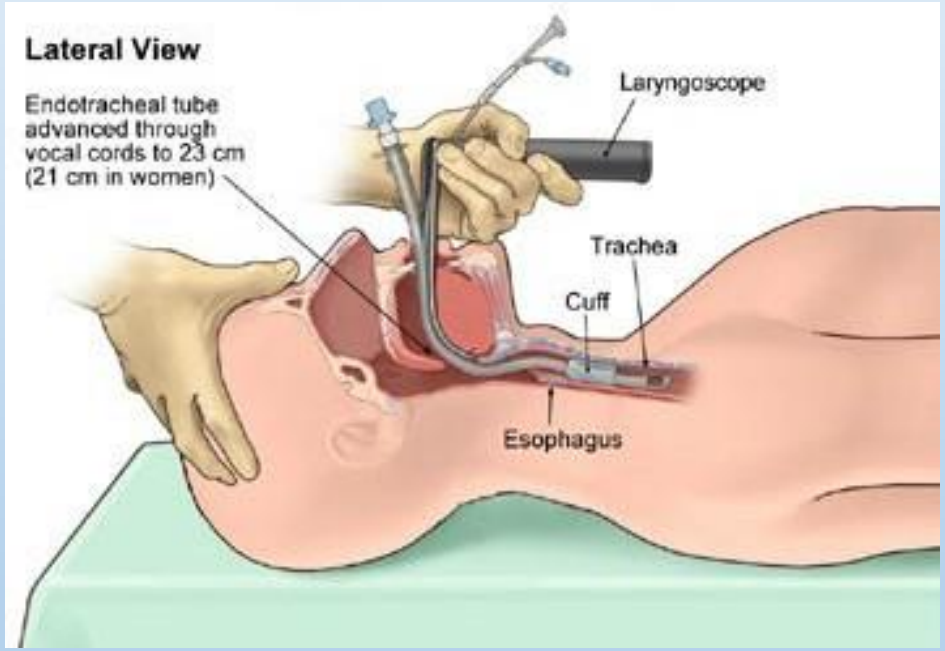
Data Pull Date: 6/19/2017



	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sept 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17
# of SSI Events	1	1	0	0	0	0	1	0	0	0	0	0	0
Surgeries	35	49	52	64	47	50	60	45	37	39	29	29	54
Monthly Hospital Rate	2.78	2.04	0	0	0	0	1.67	0	0	0	0	0	0
Monthly Network Rate	1.69	1.49	1.26	1.11	1.38	1.86	1.21	0.9	1.23	0.78	1.84	1.19	1.67

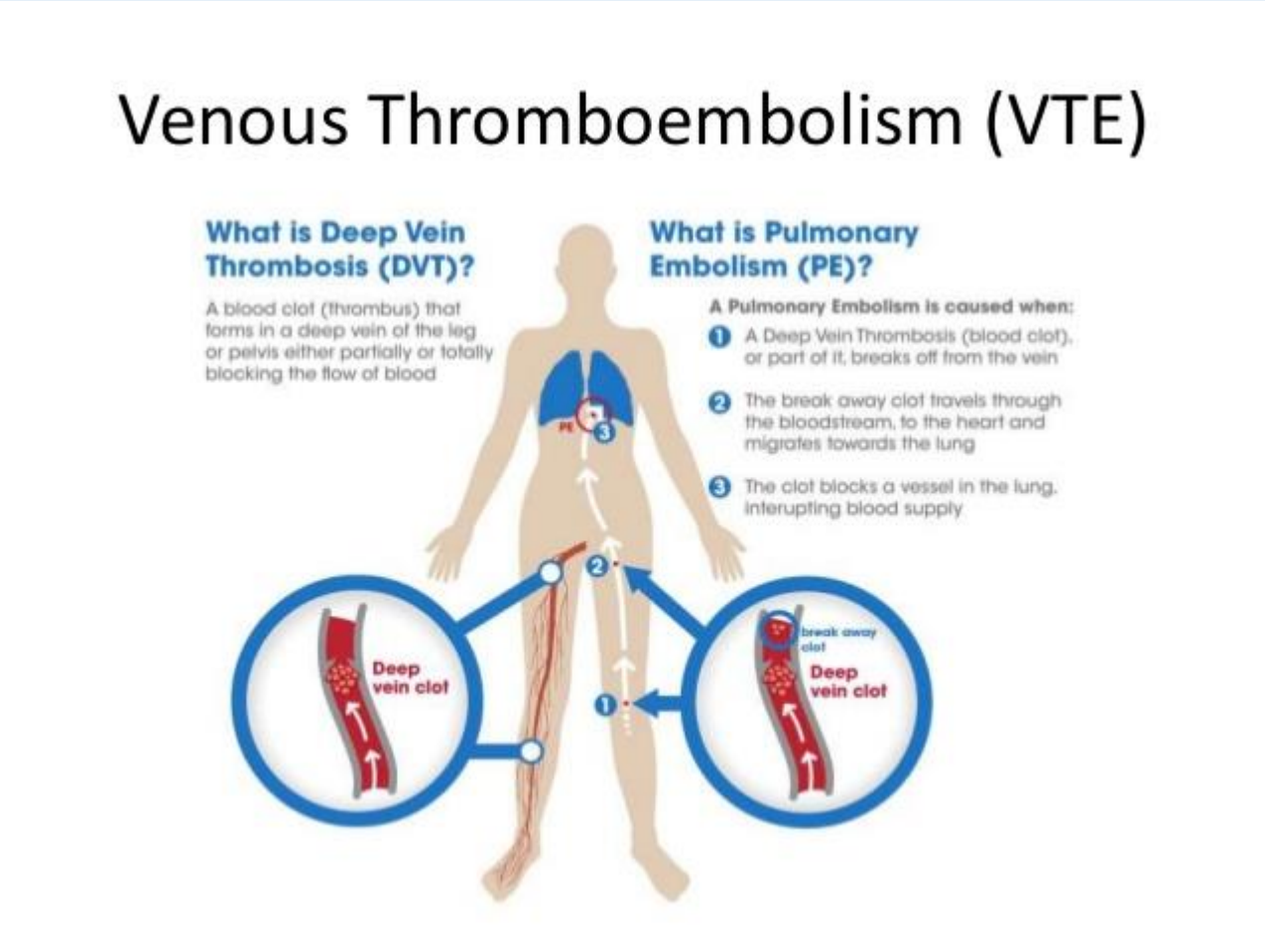
Unplanned Extubations

- Airway Guardian
- Standard Reference Point for ETT measurement
- Standard taping process for ETT securement
- Optional: Chest X-ray annotation



Venous Thromboembolism (VTE)

- Screening for high risk patient
- Documentation of Anti-coagulation decision making



Hospital Infections Now Cost Billions

$9.8 Billions in Hospital-Acquired Infection

- 33.7% SSI ($20,785/case)
- 31.6% VAP ($40,144/case)
- 18.9% CLABSI ($45,814/case)
- 15.4% *Clostridium difficile* ($11,285/case)
- 1.0% CAUTI ($896/case)

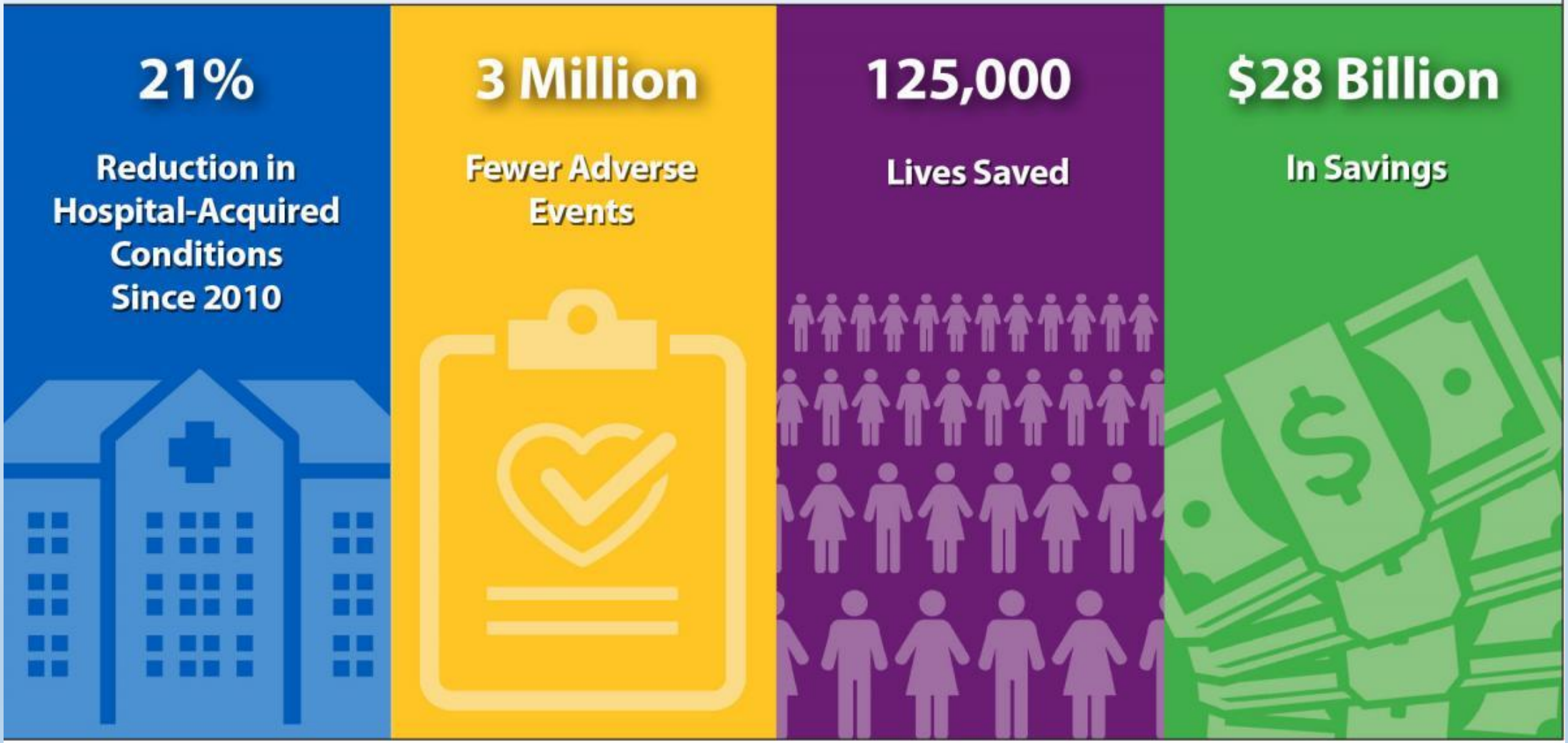
Risk Factors That May Compromise Healing

Aged >65 years
Wound infection
Pulmonary disease
Hemodynamic instability
Ostomies
Hypoalbuminemia
Systemic Infection
Obesity
Uremia
Hyperalimentation

Ascites
Malignancy
Hypertension
Length &depth of incision
Anemia
Jaundice
Diabetes Mellitus
Nicotine use
Type of Injury
Radiation therapy

Corticosteroid use
Malnutrition
Peripheral vascular disease

From 2010–2015, more than 3 million hospital-acquired conditions (HACs) were prevented, saving approximately 125,000 lives and more than $28 billion in health care costs.



Source: National Scorecard on Rates of Hospital-Acquired Conditions 2010-2015: Interim Data from National Efforts to Make Health Care Safer.