

2014 Gage Awards

Reference #	7492178
Status	Complete
Name of hospital or health system	Metrohealth Medical Center
Name of project	Decreasing nosocomial transmission of Multi-drug resistant Acinetobacter
CEO name	Akram Boutros
CEO approval	Check here to confirm that your CEO approves of this project being submitted for a 2014 Gage Award
Submitter name (first and last)	Jennifer Conti
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Within which of the two categories does your application best align?	Quality
1. Provide a brief description of the project. (This section should resemble an abstract for a poster presentation or an abstract for a peer reviewed journal. Include an objective, data sources, study design, findings, and conclusions.)	<p>Multi-drug resistant Acinetobacter baumannii (MDRO ACIb) is known to be one of the most difficult gram negative organisms to manage and eradicate from the environment (Maragakis & Perl, 2008)</p> <p>This project was started due to an unusual increase in our nosocomial infection rates from MDRO ACIb.</p> <p>From late July of 2010 through August of 2010 we had 5 nosocomial cases of Acineobacter, and 4 of the cases were contained to one adult trauma intensive care unit, and the other was in intensive care unit. At our initial meeting regarding this matter nursing, environmental services, administration, physicians, and infection control staff gathered to devise a multi-disciplinary action plan. Our problem was very similar to other outbreaks throughout the world, starting in an intensive care area, and harming the most critically ill patients (Maragakis & Perl, 2008) we were focused on eliminating the nosocomial transmission of this organism throughout our institution. We felt this could not be done alone, and would require collaboration and practice changes including a hospital wide hand hygiene campaign using CDC evidence based guidelines.</p> <p>Maragakis, L., & Perl, T. (2008). Acinetobacter baumannii: Epidemiology, antimicrobial resistance, and treatment options. Clinical Infectious Diseases, (46), 1254-1263. doi:10.1086/529198</p>

<p>2. Describe the methods use in this project. Include where, why, and how the project was accomplished.</p>	<p>We utilized the PDSA model in a rapid cycle fashion for working through our improvement project. To support the process change we incorporated concepts from the CDC Guideline for Hand Hygiene in Health-Care Settings, and the Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007. We know that good hand hygiene techniques are imperative, and thus used the CDC guidelines/video for education on good technique. We also used The Joint Commission, Targeted Solutions Tools, they provided the structure and reporting data base to aggregate and stratify data. The TST tools provided a standardized educational model for the new hand hygiene observers. We incorporated the standardized data element collection tool.</p>
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3. Describe the results of the project. What data was used to support improvement results?

When we first began the project we gathered a small group and made assignments.

We made tip sheets and called huddles to re-educate strict isolation and to educate the staff regarding the nosocomial transmission of this MDRO ACIb.

We identified many items in the patient's environment which were not being cleaned by environmental services staff (EVS) nor assigned to any floor or nursing personnel. In many instances we found that nursing had expected that the EVS staff were cleaning the surfaces, but in fact they were not.

In response, a "who cleans what list" was developed in collaboration with EVS/nursing/infection prevention and made available to all and as a reference on the Infection Prevention home page. This eliminated any ambiguity.

EVS was charged with improving consistency. We rounded with the staff and performed numerous audits of cleaning practices. Some staff were improperly diluting the cleaning chemicals all together, this was easily recognized when auditing the color of the cleaning solutions in buckets. We also learned that as water pressures change in the hospital the equipment used to create these dilutions should be reviewed/recalibrated. Additionally, the importance of contact or dwell time must also be made known to EVS staff.

We also improved our hand hygiene compliance rates to greater than 95 % overall. We educated all employees and hired hand hygiene observers. The data that is collected by the observers is separated by unit and by job class and sent out. Before our program our data showed 55% compliance in medical surgical areas, and 69% compliance in critical care. We have changed the culture and it is reflective in our compliance rates.

Lastly and possibly the most unique implementation that helped stop this outbreak was our electronic medical record. We tag the patient header of all patients who have ever had a positive MDRO ACIb. This tagging is completed by putting the word MDRO before the patients name in there medical record.

- We asked the lab to identify all positive cultures for MDRO ACIb. This in turn would help staff easily identify these patients in the future and to initiate proper isolation more quickly.

- We set up a system in which the infection prevention staff is alerted by email whenever a previously positive MDRO ACIb patient is admitted to the hospital, or when microbiology identifies a new MDRO ACIb culture. This quick identification allows for faster communication with the nursing staff.

- A protocol was initiated which isolates all nursing home patients with open wounds or a tracheostomy. This was felt to be important because we identified many of our patients who were long term care residents.

- Daily a report is sent out to stakeholders identify

	patients in house with MDRO ACIb
3A. Attachment, if applicable (Only graphically displayed data such as charts will be accepted. Data should include baseline and improvement data)	MetroMDROACIBAUM.doc (92k)
4. Describe what happened as a result of the project. Was the improvement related to the intervention? Can the project be duplicated by other organizations?	<p>Our current process has evolved quite a bit since 2010. Organizational awareness about MDRO ACIb, its transmission and the methods to decrease the spread have improved our overall organizational hygiene and safety for patients. The standardization of cleaning practices and protocols has created a very strong quality program around environmental cleaning and hygiene. The effective use of the electronic medical record to easily identify these patients has been one of the most effective methods in communicating and insuring that the organization is on high alert and prepared to isolate patients when needed. Most importantly we have changed the culture at MetroHealth. All staff are cognizant of infection prevention practices and hand hygiene methods and expectations. We have had many visitors comment about our culture and attention to hand hygiene. The collaboration amongst all departments has allowed a process to evolve that not only makes patients safer but staff as well.</p> <p>We have recently added another tool to our MDRO arsenal which is that of UV light on all discharge rooms where a patient with MDRO ACIb was located. The collaboration of all of these multi-disciplinary teams has shown a tremendous improvement in our nosocomial transmission of MDRO ACIb. In 2010 we had 35 nosocomial infections from MDRO ACIb, in 2012 we had 13 and as of December 2013 we have had only 9. This is almost a 70% reduction in our nosocomial infection rate over this time period. . See chart attached—</p>
5. Describe how patients, families, and if appropriate, community was included in the work.	<p>By increasing organizational awareness, we have departments now engaging in improving the environment for patients and families. We have included hand hygiene products at elevators for visitors to use, and we have added the maximum (based on fire safety codes) amount of alcohol based systems in hall ways and easy to access locations to be used before entering patient rooms.</p> <p>We have partnered with nutrition services to improve hand hygiene for patients in preparation with receiving meal trays, this includes providing hand sanitizers and assisting those that are unable to perform independently the action of hand hygiene. In addition to this we provide handouts to families on washing hands upon entering and leaving patients rooms. In the neonatal intensive care unit, there is focused effort to educate parents on the infectious hazard of artificial nails in this high risk population. We also provide handout to patients and visitors regarding infections, and prevention methods while hospitalized or visiting a hospitalized patient.</p>
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