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Significance
- IBM Watson can be useful in healthcare, especially oncology
- Enhancing patient care
- Used to accelerate research
- Combine research and clinical care
- Estimated 1.7 million new cancer diagnoses in the U.S. (American Cancer Society, 2014)
- Misdiagnosis rates around 28%; up to 44% with some cancer diagnoses (National Coalition on Health Care)
- Only 4% of clinical trials are completed on time

Aim and Purpose
Aim
- Introduce IBM Watson into an oncology ambulatory patient care setting to determine the impact on workflow and efficiency

Purpose
- Develop and design new workflows
- Coordinate and accommodate the use of IBM Watson into the site’s workflow
- Implement use of this tool for patient care in conjunction with the EHR

Methods
- Lean project charter and logic model
- Evaluated workflow in four areas
- Created timelines and action plans
- Program Evaluation: data analysis
- Pre and post work flow measurements
- Descriptive statistics
- Ensuring Success: sustainability, monitoring and review

Procedure
- Baseline workflows for the four areas
- Identified 22 points for use of IBM Watson
- Planned roll-out:
  - Week 1: 3 physician champions
  - Week 2: business center staff, physicians
  - Week 3: clinical nurses, MLPs, research nurses
  - Week 4: fellows

Re-evaluation should have occurred 60 to 90 days post implementation
- Data from only two of four areas
- Insufficient nursing or MLP champions
- Lack of understanding: technology and value
- Integration into practice: change theory

Results
- Post workflow measurements completed
- Two out of the four areas resulted in data
- Comparison of pre and post workflow time points
- Analysis of time points
  - Financial: data on 5 out of 6 (83%)
  - Clinical: data on 5 out of 10 (50%)
- Determined hourly salaries for various staff members for evaluation

Re-evaluation of workflows after 30 days
- Week 1: 3 physician champions
- Week 2: business center staff, physicians
- Week 3: clinical nurses, MLPs, research nurses
- Week 4: fellows

Cost savings and time efficiencies are some of the results from using this system

Limitations
- Ongoing re-education and training needs
- 9

References
- Cognitive computing systems do have a powerful impact on healthcare
- Cost savings and time efficiencies are some of the results from using this system
- Ultimately can improve patient outcomes
- Nursing leaders are poised to lead initiatives involving big data analytics
- Changing healthcare practices will result in challenges

Recommendations/Findings
- Demonstrated improvements in workflow
- Efficiencies and cost savings in at least two areas
- Identification/expansion for other uses
- Include nurses did not willingly participate

Conclusions
- Cognitive computing systems do have a powerful impact on healthcare
- Cost savings and time efficiencies are some of the results from using this system
- Ultimately can improve patient outcomes
- Nursing leaders are poised to lead initiatives involving big data analytics
- Changing healthcare practices will result in challenges

Cost Savings

<table>
<thead>
<tr>
<th>Component</th>
<th>Annual Savings (in Hours)</th>
<th>Annual Savings (in Dollars)</th>
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</thead>
<tbody>
<tr>
<td>Financial</td>
<td>724.58</td>
<td>$36,813.00</td>
</tr>
<tr>
<td>Clinical</td>
<td>252.50*</td>
<td>$31,337.00</td>
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<tr>
<td>TOTAL</td>
<td>724.58</td>
<td>$68,150.00</td>
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*Excludes Nursing