Evaluation of a Quality Improvement Initiative to Determine Effectiveness of Provider-Patient Communication in a Wound Clinic

Presented by Stacy E. Usher, DNP, CRNP
Disclosure

- Author
  - Stacy Usher, Department of Defense

- Contributors
  - DNP chair, co-chair, content expert, FBCH statistician

- Learner objectives
  - Verbalize effects of poor and good communication
  - Recite PCCCI principles and PEARLS
  - Discuss results and impact of study

- Conflict of interest statement
  - The views of this presentation are those of the author and do not reflect the official policy of the Department of Defense

- No sponsorship or commercial support
Introduction

- Provider-patient communication at Fort Belvoir Community Hospital (FBCH) Wound Clinic

- Project purpose
  - *Improve provider communication skills and thereby improve patient health outcomes*

- Significance of the project
  - *Deaths related to medical errors*

- Implications for current practice
  - *Good versus poor health outcomes*
Needs Assessment

■ Why improve provider-patient communication in the Military Health System?
  - *Improve quality of care and patient satisfaction*
  - *Quadruple Aim*
    ■ Readiness, Population Health, Experience of Care, Per Capita Cost

■ Why assess the Patient Centered Caring Communication Initiative at the FBCH Wound Clinic?
  - *Its effectiveness has not been evaluated*
Synthesis of Evidence

Search strategy
- Medline, Cochran, Pubmed

Articles found
- 52 evaluated

Articles used
- 25 selected
Synthesis of Evidence

- Effect of good communication between the provider and the patient
  - Increased patient satisfaction, improved health status, recall of information and adherence (Zolnierek & DiMatteo, 2009)
  - Increased psychological and physical health outcomes, adherence, patient satisfaction (Jordis et al., 2014)
  - Increased quality of care and patient compliance (Ammentorp, Sabroe, Kofoed, & Mainz, 2009)
Effect of good communication between the provider and the patient

- *Positive medical outcomes, patient adherence, control of symptoms and pain, patient satisfaction* (Weir, 2011)

- *Improves compliance, decreases mistakes and malpractice suits* (Choudhary & Gupta, 2015)

- *Interpersonal skills of provider are linked to clinical outcomes and patient clinical experience* (Kennedy, Fasolino, & Gullen, 2014)
Effects of poor communication between provider and patient

- **Potential and actual adverse results** (Britten, Stevenson, Barry, Barber, & Bradley, 2000)

- **High medical costs and public health problem** (Vermeire, Hearnshaw, Van Royen, & Denekens, 2001)

- **Adverse medication outcomes** (Lapane, Dube, Schneider, & Quilliam, 2007)
Synthesis of Evidence (continued)

- Effects of poor communication between provider and patient
  - *Miscommunication is complex and frequent* (Morgan, 2013)
  - *Anxiety, pain, psychological distress, poor adherence, and lack of symptom relief* (Chesanow, 2013)
Patient centered communication

- Improves patient adherence and health outcomes (Hirono, Hidecki, & Takahiro, 2013)

- Decision aids assist in patient-centered partnership (Tieje et al., 2013)

- Helped the patient and family cope with cancer, make informed decisions, and effectively manage their care (Mazor et al., 2013)

- Reduces litigation and improves patient care (ACOG, 2014)
Patient centered communication

- *Improved health outcomes, patient satisfaction, treatment adherence* (Levinson, Lesser, & Epstein, 2010)

- *Improved patient satisfaction, treatment adherence, few malpractice suits* (Suarez, 2004)

- *Good health outcomes* (Fink, Prochazka, & Wu, 2006)
Plan of Action

- Setting, sample, criteria
  - *Fort Belvoir Community Hospital*
  - *Face to face visit*

- Intervention
  - *Use of PCCCI, measured across three visits*

- Evaluation
  - *Research evaluation form*

- Visit 1
  - *Use of PEARLS, measure retention of instructions*

- Visit 2 and 3
  - *Similar to visit 1 with evaluation of wound healing*
Visit #1

- Project explanation form
- Demographics form
- Researcher evaluation form
- PCCCI provider communication checklist
Visit 1, Explanation form

Fort Belvoir Community Hospital (FBCH) Wound Clinic Provider Communication Project Explanation

Welcome to the FBCH Wound Clinic. The Wound Clinic Nurse Practitioner, Ms. Usher, is looking for ways to improve her communication in order to help you understand your wound care better. She will be evaluating her own communication during your visits when teaching you how to care for your wound. Please complete the demographic information form on the back of this form if you would like to assist Ms. Usher with her research on improving provider-patient communication. This will not require any extra time or visits. If you do not wish to participate, we understand and appreciate your honesty. Your decision will not affect your care. Should you have any questions before agreeing to participate, please ask Ms. Usher during your visit.

Please answer the following questions:
1. Do you have a wound VAC? Yes/No
   If yes, you do not meet the criteria for the study.

2. Do you have someone to help you with wound dressing changes? Yes/No
   If yes, is that individual with you today?

3. Would you and your caregiver both be willing to participate within the study? Yes/No
   If yes, please turn the form over to fill out the demographic form.
Demographics form

- Age
- Gender
- Education level
- Type of wound
- Medical conditions
- Medications (antibiotics)
- Tobacco use
- Primary language
- Assistance with dressing changes
Visit 2, 3

- Researcher evaluation form
- PCCCI provider communication checklist
### Patient and/or caregiver verbalizes how to change the dressing:

<table>
<thead>
<tr>
<th>Action</th>
<th>MET (1)</th>
<th>NOT MET (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;I gather supplies&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I wash my hands and remove the old dressing&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I clean the wound with gentle soap and water (can be during a shower)&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I pat the area dry with gauze&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I assess for signs of infection&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I apply a moisture barrier&quot; (if ordered)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I apply the primary dressing&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Patient verbalizes frequency of dressing change

"I apply the secondary dressing"

### Patient and/or caregiver demonstrates how to change the dressing:

<table>
<thead>
<tr>
<th>Action</th>
<th>MET</th>
<th>NOT MET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gathers supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Washes hands, removes old dressing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleans wound with gentle soap and water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pats wound dry with gauze</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assesses for infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applies moisture barrier if ordered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applies primary dressing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applies secondary dressing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### The wound has improved since last visit:

<table>
<thead>
<tr>
<th>Improvement</th>
<th>MET</th>
<th>NOT MET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wound decreased 1 of 3: (length, width, depth)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wound bed has granulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are no signs of infection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The wound edges are flat and pink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is no tunneling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is no undermining</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Patient and/or caregiver states four out of the seven signs of infection:

<table>
<thead>
<tr>
<th>Signs of Infection</th>
<th>MET</th>
<th>NOT MET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever, foul odor from wound, cloudy or green discharge, redness, edema, warm to the touch, pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technique</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td><strong>Patient centered:</strong> relationship building, information gathering, patient education</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Reflective listening:</strong> Curious, does not interrupt, nonjudgmental, patient perspective</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Active listening:</strong> ask open ended questions, focus on what the patient is saying and not on internal thoughts, summarize patient's statements, listen to gain patient's trust</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relationship building:</strong> recognize patient emotions such as anger, fear, sadness, anxiety, uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PEARLS:</strong> partnership, empathy, apology, respect, legitimization, and support</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Information gathering:</strong> Elicit data efficiently and accurately, seek patient's agenda, set agenda jointly, negotiate priorities together</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evaluation of Project

- **Data Analysis**
  - *Frequencies*
    - Demographics and modifying factors
    - Ability to verbalize instructions
    - Signs of infection
  - *Independent t-test*
  - *Chi-square test of independence*
Results

- **Demographics (N = 35)**
  - Age (20-94 yrs; mean 57)
  - Gender (51% male; 49% female)
  - Education (60% were college graduates)

- **Modifying factors**
  - Acute or chronic wound (80% acute; 20% chronic)
  - Antibiotic use (oral = 71.4%; both = 5.7%; none = 22.9%)
  - Tobacco history (current = 11.4%; past = 5.7%; no = 82.9%)
  - PMH (51.4% had no significant PMH)
  - Language (97.1% English; 2.9% other)
  - Assistance (85.7% had help; 14.3% did not)
Demographics: Education

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>14</td>
<td>40.0</td>
</tr>
<tr>
<td>Graduated college</td>
<td>15</td>
<td>42.9</td>
</tr>
<tr>
<td>GS/PGS</td>
<td>6</td>
<td>17.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table showing the distribution of education levels.
<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>5</td>
<td>14.3%</td>
</tr>
<tr>
<td>Cancer</td>
<td>1</td>
<td>2.9%</td>
</tr>
<tr>
<td>PVD</td>
<td>5</td>
<td>14.3%</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>17.1%</td>
</tr>
<tr>
<td>Nothing</td>
<td>18</td>
<td>51.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>
## Independent-samples t-test

<table>
<thead>
<tr>
<th>Comparison</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistance versus no assistance</td>
<td>3.944</td>
<td>24</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Male versus female patients</td>
<td>.273</td>
<td>24</td>
<td>&gt; .05</td>
</tr>
<tr>
<td>Tobacco use versus no tobacco use</td>
<td>-1.583</td>
<td>22</td>
<td>&gt; .05</td>
</tr>
</tbody>
</table>
## Wound Healing

<table>
<thead>
<tr>
<th></th>
<th>Wound</th>
<th>PMH</th>
<th>Education</th>
<th>Medication</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>10.87</td>
<td>20.129</td>
<td>7.114</td>
<td>7.355</td>
<td>5.770</td>
</tr>
<tr>
<td>Df</td>
<td>4</td>
<td>16</td>
<td>8</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Sig.</td>
<td>&lt;.05</td>
<td>.214</td>
<td>.5</td>
<td>.499</td>
<td>.221</td>
</tr>
</tbody>
</table>
Results (continued)

- **Positive outcomes**
  - Enhanced communication skills
  - Confidence in communication skills
  - High scores in verbalization of instructions and signs of infection

- **Negative outcomes**
  - Lack of control of other variables
  - Delivery of written instructions not consistent
  - Exclusion criteria
  - Military culture of discipline
Impact on Healthcare Outcomes

- Wound Improvement
- No Infection
- Wound Resolution
Conclusion

- Effective communication does lead to good health outcomes
- Lack of patient understanding leads to poor health outcomes
- PCCCI gave the researcher the confidence and skills to communicate consistently, efficiently, and compassionately
- More research is needed
- Assistance with wound care was significant for healing
References


- Weir, K. Improving patient-physician communication: With their expertise in communication, psychologists are identifying new ways to help people become more involved in their own care. American Psychological Association, 43(10), 36-38.