Improving Population Health through Wound Management

National Association for Home Care
2014 Annual Meeting

Presenters:
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Lois Glanz, BSN, RN – Health IT Manager, UnityPoint at Home
Karen S. Martin, MSN, RN, FAAN – Health Care Consultant, Martin Associates

Agenda

• Wound Management within a Population Health framework
• UnityPoint at Home’s Wound Management program overview
• Case study examples
• Program success
• Future vision
Learning Objectives

- Measure the positive impact on clinical quality and financial outcomes of moving from a paper-based to an electronic wound care management program.
- Describe how automation improves processes and reduces waste in managing the home care of post-surgical and diabetes patients.
- Identify how automation changes the practice of the wound specialists and improves clinical outcomes, patient engagement and employee satisfaction.
- Summarize how wound management can serve as a model for further program and software development.

Population Health Vision

Key Processes

Risk Stratification
- Clinical
- Financial

Population Identification

Risk Stratification
- Low Risk
- Moderate Risk
- High Risk

Health Management Interventions
- Health Promotion & Wellness
- Assessment
- Care Coordination
- Care Management

Organizational Interventions
- (Cultural/Environment)

Tailored Interventions
- (Condition State/Guidelines/Gaps)

Operational Measures
- Patient Activation
- Behavior Change
- Improved Clinical Status
- Increased Satisfaction, QoL
- Reduced Total Cost of Care

Adapted and Modified by project team from Care Continuum Alliance: Outcomes Guidelines Report Volume I, 2010
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UnityPoint at Home

Services
- Adult & Senior Home Care
- Pediatric Home Care
- Nursing Care
- Rehabilitation Therapy
- Palliative Care
- Hospice Care
- Infusion Therapy
- Home Medical Equipment Services

10 Locations in IA and IL

750-850 Wound Patients Daily Census

11,041 Pediatric Billable Visits

18,860 Annual Public Health Units of Service

224,126 Annual Home Care Billable Visits

269 Home Hospice ADC
Why Electronic Wound Management?

<table>
<thead>
<tr>
<th>Without technology</th>
<th>With technology</th>
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<tbody>
<tr>
<td><strong>Annual CWON Salary</strong></td>
<td><strong>$75,000</strong></td>
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<tr>
<td>Encounters/Yr</td>
<td>784</td>
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<tr>
<td>Cost/Encounter</td>
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<tr>
<td>Mileage Cost / Encounter</td>
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<tr>
<td>Total Cost / Encounter</td>
<td><strong>$101.53</strong></td>
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</tbody>
</table>

| **Annual CWON Salary** | **$75,000** |
| Encounters/Yr | 3136 |
| Cost/Encounter | **$23.92** |
| Mileage Cost / Encounter | N/A |
| Total Cost / Encounter | **$23.92** |

Electronic Documentation Workflow

1. Nurse in field enters wound description, measurements, attaches picture to documentation in Electronic Health Record
2. Nurse in field transfers laptop information to server using secure network via iPhone
3. WOCN reviews documentation and picture in Wound Manager
4. WOCN sends follow-up Note to field nurse regarding any recommendations
Implementation

- Four months
- Testing, process development

- One site for one month
- Process refinement

- Train the trainer
- CWON’s combine clinical and technology instructions

Overall Results of Formalized Program

Better utilization of 3 Wound Ostomy Continence Nurses (WOC Nurse)
Enhanced patient satisfaction
Improved patient outcomes
Better management of resources
- Staff
- Supplies
Opportunities for Homecare

Consistent documentation
- Photos (a picture is worth a thousand words)
- Wound Specialist able to SEE all the wounds

Nurses use as a tool for patient education

Collaboration with hospital’s Wound Management program
Each Wound Specialist manages care of approx. 250-275 patients
Management includes review of: OASIS data, diagnosis, treatment orders and visit frequency

Efficiencies gained include expansion of wound specialist support with hospice patients

More wound specialist time available for staff education and supply management initiatives

Case Study

Admit Patient A. Very active patient who was attending exercise program. Suffered injury to leg. Endured massive skin tear to left lower leg.

Treatment ordered was to cleanse wound, apply Silvadene cream daily and cover with Telfa.

WOC nurse reviewed chart via Wound Advisor and recommended Standard protocol of Adaptic and every other day nursing visits.
Patient A—Progress

Admission

8 days later
Wound progressing as expected

22 days later
Wound nearly healed

Estimated Costs (2 weeks)

* Silvadene/Telfa
  * Supplies: $ 27.19
  * Nursing visits $1820.00

* Adaptic protocol
  * Supplies $ 22.01
  * Nursing visits $ 910.00
Healing Time Comparison Case Study

Patient B. Active patient with similar trauma to leg.

The upper layer of the wound was not kept viable prior to homecare admission.

Patient B—Progress

Admission

8 days later
WOCN involvement: No program

15 days after admit
Wound still requires treatment

46 days after admit
Wound healed
Results

Wound Specialist
* 21 Days
* Supplies: $33.00
* Nursing visits: $1,365

No Wound Specialist
* 46 Days
* Supplies: $71.00
* Nursing visits: $2,990

Case study #3: Background Information

**Patient C:** hospitalized several months
Multiple co-morbidities
Underwent multiple complex abdominal surgeries during those months
Past medical history of bowel resections and hernia repairs
Short stay in Long Term Acute Care
Short stay in nursing home
Home with spouse as primary caregiver and home care services
TPN, open abdominal wound, ileostomy
Patient C: Progress

**Admission**

8 Weeks after admission
- Wound VAC applied
- Multiple issues with leaking
- Compromised ostomy pouch integrity
- Wound bed painful
- Back to surgeon

4 weeks after admission

4 months after admission
- Admitted to acute care with IV line infection
- Discharged with IV fluids and antibiotics
- Home care restarted with WOC nurse and wound advisor program

After Hospital Discharge

Sent home to make decisions for future
Not a surgical candidate
High risk for line re-infection and other complications
Long term TPN/NPO
Palliative care involved
Goal drainage management and comfort
10 Months After Initial Home Care Admit

- Able to discontinue all IV’s, eating orally
- Discharged from home care with healed surgical incisions

Measuring Success

- Wound Specialists evaluations increased 5X since implementation
- Cost savings for visits and supplies
- Patient satisfaction and increased motivation – able to see wound healing on laptop via pictures
- Increased compliance with care plan
- Increased productivity for wound specialists (CWON)
- Improved OASIS accuracy focusing on pressure ulcers, venous ulcer and surgical wounds
Partners in Managing Wound Population

Strong relationship with wound healing centers at each hospital.

Having a home care wound management program does not remove the necessity of having a wound healing center.

- Patients continue to visit wound healing center (e.g., home visit 1 x week and wound healing center visit 1 x week).
- Home care is the eyes and ears in the home and can reinforce wound healing center instructions.

Lessons Learned

- Provide cost / benefit analysis to executive team
- Clinical wound education for field nurses continues to be important
- Value of the Wound Specialist to manage the entire wound population
- Importance of planning
  - Develop processes
  - Collaboration with IT partners
    - Picture storage
    - Picture attachment
Summary: Benefits Realized for the Value of Automated Wound Management

<table>
<thead>
<tr>
<th>Value Category (STEPS) and Subtypes</th>
<th>Documented Examples</th>
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</thead>
<tbody>
<tr>
<td>S S Satisfaction</td>
<td>• Improved communication with patients</td>
</tr>
<tr>
<td></td>
<td>• Improved internal communication</td>
</tr>
<tr>
<td>T Treatment/Clinical</td>
<td>• Improved patient safety</td>
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<td></td>
<td>• Reduction in medical errors</td>
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<td>E Electronic Information/Data</td>
<td>• Increased use of evidence-based guidelines</td>
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<td></td>
<td>• Increase population health reporting</td>
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<td>• Improved quality measures reporting</td>
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<tr>
<td>P Prevention and Patient Education</td>
<td>• Improved disease surveillance</td>
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<td></td>
<td>• Longitudinal patient analysis</td>
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<td></td>
<td>• Improved patient compliance</td>
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<tr>
<td>S Savings</td>
<td>• Increased volume</td>
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<td></td>
<td>• Lower cost of medical supplies</td>
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http://www.himss.org/ValueSuite

October 2014
Themes

• More accurate problem identification
• More consistent, evidence-based practice patterns
• Increased interprofessional practice
• More consistent documentation
• Improved quality of care
• Lower cost

Omaha System

A standardized terminology
• Problem Classification Scheme (assessment);
  Intervention Scheme (care plans/services); and
  Problem Rating Scale for Outcomes (evaluation)
• Wound Management: Problem—Skin
• Modifiers: Individual, Family, or Community
• Modifiers: Health Promotion, Potential, or Actual
Future Vision

- Consider using Wound Management as a model to develop similar programs for frequently associated problems such as Nutrition (obesity) and Circulation (hypertension)
- Ensure that software supports the practice, documentation, and information model in EHRs

Big Data and Data Exchange:
Opportunities with standardized terminologies

- Newer approach to research; n=thousands
- Analyze data for an individual across several conditions, across a group of individuals with the same co-morbidities, and across diverse populations
- Share data within one vendor and across vendors (interoperability at population level)
Thank You!

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• Barb Rozenboom, BSN, RN, CWON

Questions?