Integrating Wound Care Research into Clinical Practice

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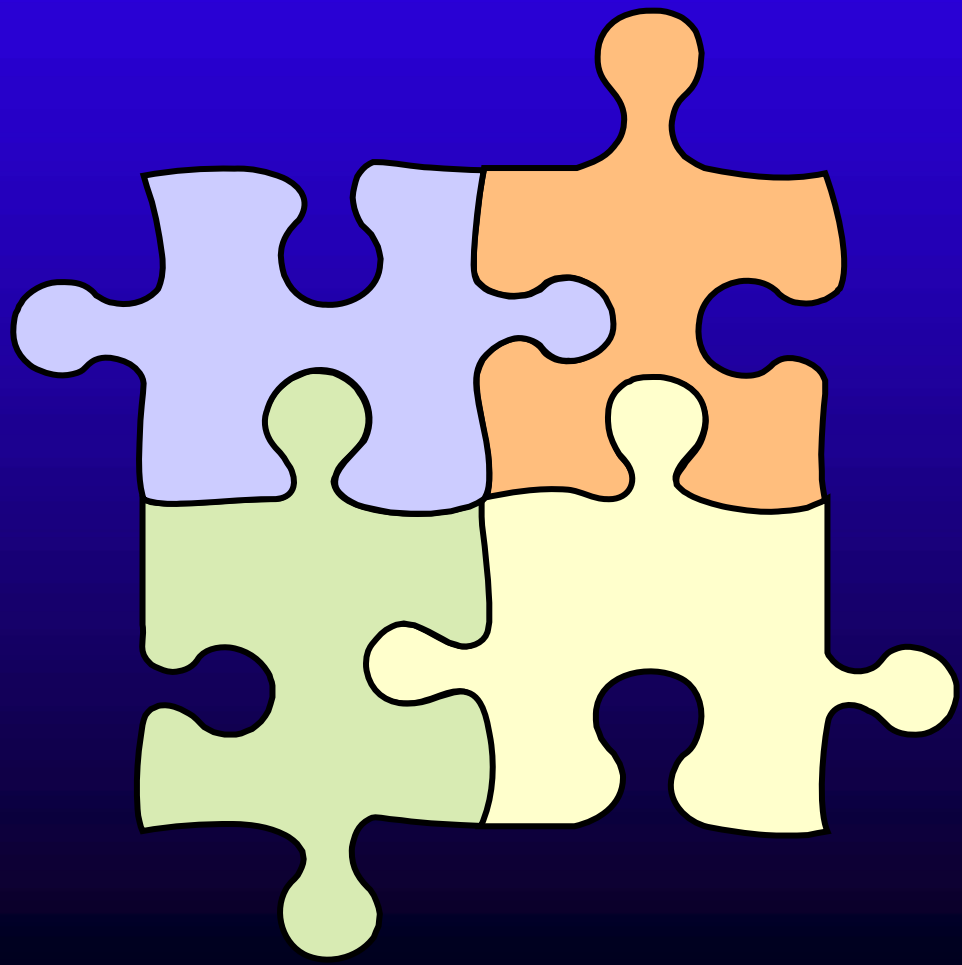
Putting The Pieces Together

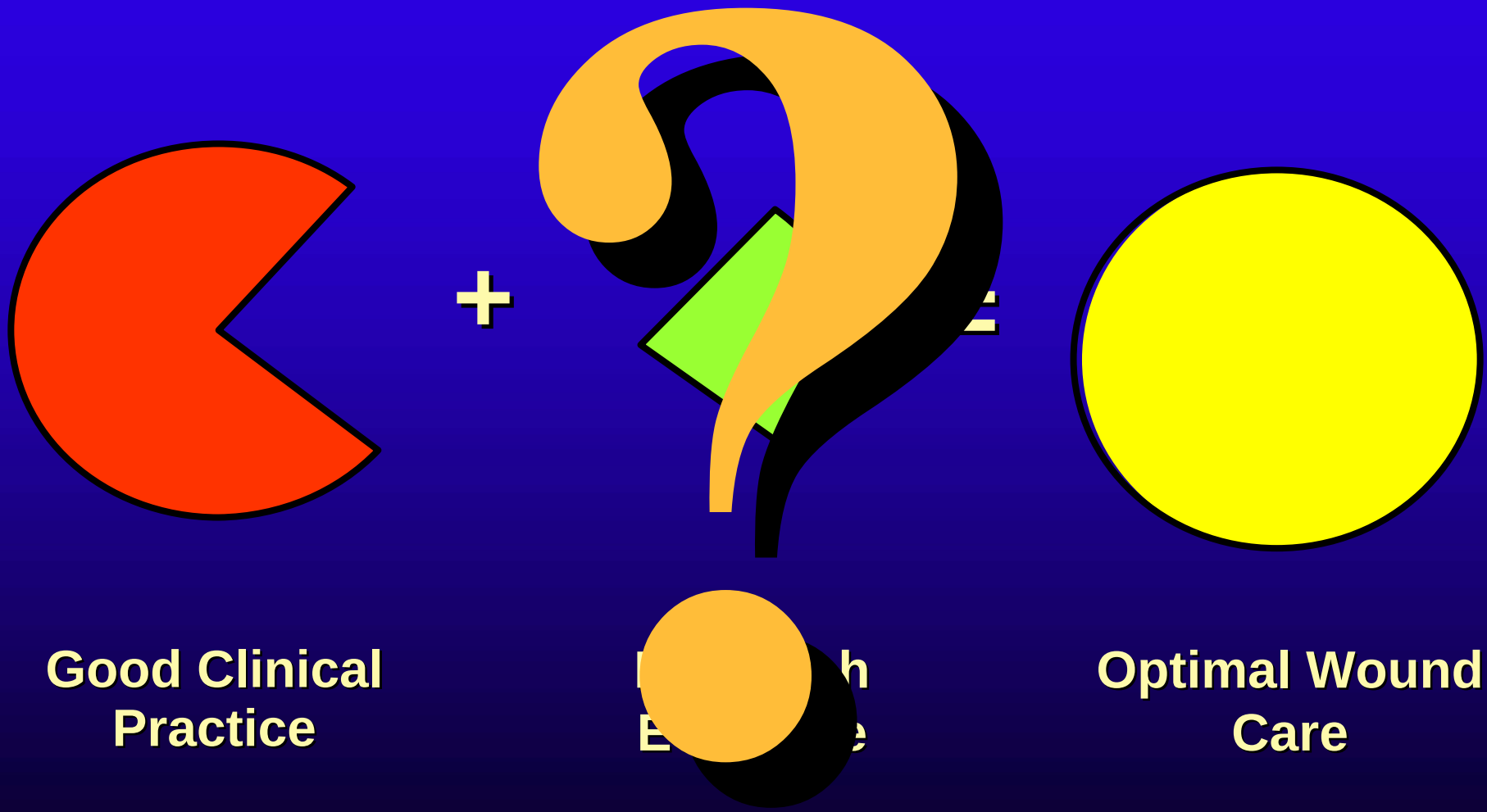


What does it mean?

- To integrate research methodology in clinical practice
- To integrate research evidence in clinical practice
- Assumption: doing so will improve clinical care

Discussion Points

- What research methodology and scientific evidence can be integrated in wound care?
- How much is our current practice evidence-based?
- Have we improved the outcomes of wound care?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Good Clinical Practice
Optimal Wound Care

Integrating Research Methodology in Wound Care Practice

Integrating Research Methodology in Wound Care

- Why should I think like a researcher with wound care?
  - To be methodological in treatment planning and implementation
  - To be able to critically assess the efficacy of a treatment (new or old)
  - To improve standard of care
  - To facilitate research in wound care

Integrating Research Methodology in Wound Care

- Aspects of wound care to consider:
  - Assessment of factors that affect wounds
  - Planning of treatment
  - Application of treatment
  - Outcome (wound size) evaluation
  - Documentation of wounds
  - Assessment of cost-effectiveness

Assessment of Factors that Affect Wounds

- Global assessment of factors important
- Multiple factors affect wound status, need to control for "*confounding variables*", in order to study the efficacy of one treatment
- Causative vs. correlational factors
  - Malnutrition ⇒ causative
  - Depression ⇒ correlational

Planning of Treatment

- Methodological planning
- Logical, progression of treatment strategy
  - e.g. negative pressure wound therapy to be used in chronic, difficult-to-heal wounds after the wound has been thoroughly debrided and is free of active, untreated infection* (e.g. cellulitis)

*Sibbald et al, Consensus report on the use of vacuum assisted closure in chronic, difficult-to-heal wounds. *Ostomy Wound Manage*. 2003 Nov;49(11):52-66.

Planning of Treatment

- Avoid blind selection of treatment – use objective data to help selection
  - e.g. the most expensive pressure relief cushion is not necessary the best seating surface for the individual. Consider using objective measurement such as pressure mapping to help selecting the most appropriate cushion
- Use of clinical guidelines

Application of Treatment

- Standardization of treatment application
- Education of staff/caregiver on standardized procedure for wound care
- Use of clinical guidelines
- Development of local procedures, practice guidelines and competencies may be necessary

“Clinical practice guidelines for pressure ulcer prevention can prevent malpractice lawsuits in older patients”

Goebel RH, Goebel MR. *J Wound Ostomy* Continence Nurs. 1999 Jul;26(4):175-84.

WOUND CARE

SECTION EDITOR: Barbara Pieper, PhD, RN, CS, CETN, FAAN

Clinical Practice Guidelines for Pressure Ulcer Prevention Can Prevent Malpractice Lawsuits in Older Patients

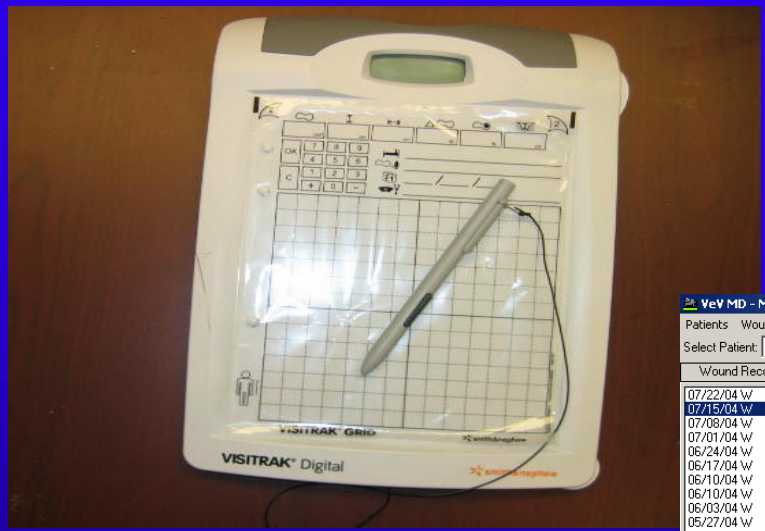
Robert H. Goebel, MD, JD, and Michael R. Goebel

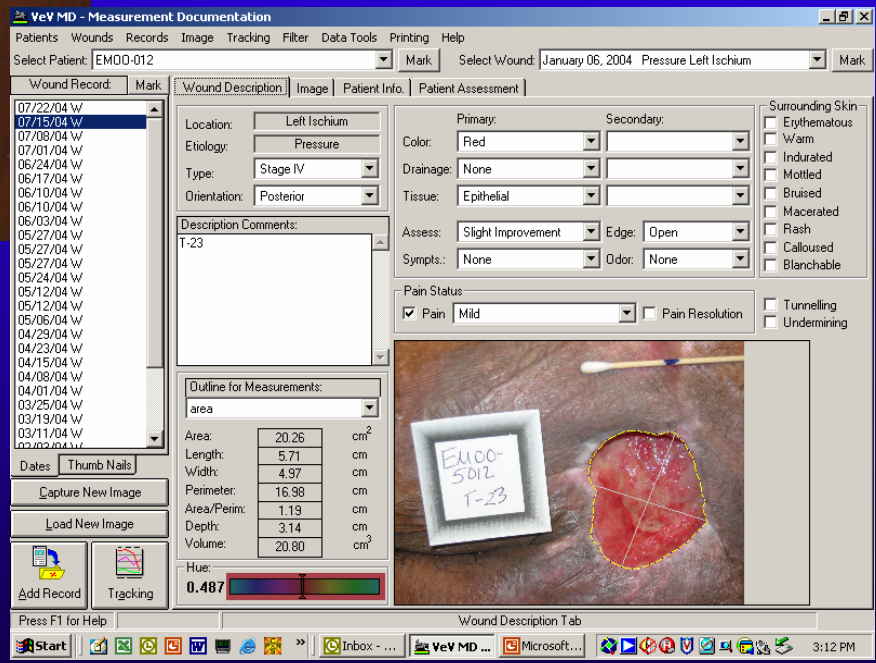
Objective: To evaluate the impact of implementation of and compliance with certain guidelines for pressure ulcer (PU) prevention using medical malpractice litigation data.
Setting and Subjects: Forty-nine plaintiffs whose respective compensations ($14,415,770 in 35 plaintiffs) or dismissals had been reported in 2 legal databases. PU verdicts and settlements for plaintiffs 60 years of age and older were evaluated using the American Geriatric Society's Clinical Practice Guidelines, "Pressure Ulcers in Adults: Prediction and Prevention."
Methods: Litigation analysis was used to identify the effect, implementation of, and compliance with PU prevention practice guidelines on malpractice awards in PU lawsuits. Data were obtained using fact patterns from 2 legal databases, LEXIS and WESTLAW. Potential decreases in plaintiff awards and prevention of disability were calculated assuming that health care defendants had modified their behavior to conform to the practice guidelines. Possible increases in defendant awards were used to estimate the added risks to health care professionals of adopting these guidelines as the standard of care.
Main Outcome Measures: Projected changes in verdicts, monetary awards expressed in dollars, and disability score.
Results: Had health care defendants followed these guidelines, $11,389,989 might have been saved in 20 lawsuits. Violations of guidelines appeared to "cluster" together, with many plaintiffs alleging breeches of several interrelated guidelines. It appears that improving the level of care required to remedy 1 guideline variation could improve the outcomes for the entire cluster. In contrast, the use of the guidelines in court as the standard of care against defendant health care professionals might have contributed to changing only 4 of 14 defense verdicts.
Conclusions: Use of clinical pathways in these settings can benefit both caregivers and patients by favorably modifying preventive practice patterns while decreasing vulnerability to litigation. Conversely, the continuing threat of fault-based litigation against substandard practitioners and facilities provides an ongoing safeguard of patient rights and reduces the risk of subsequent disability. (J WOCN 1999;26:175-84)

Robert H. Goebel is with the Los Alamitos Medical Center, Los Alamitos; Long Beach Community

Outcome Evaluation

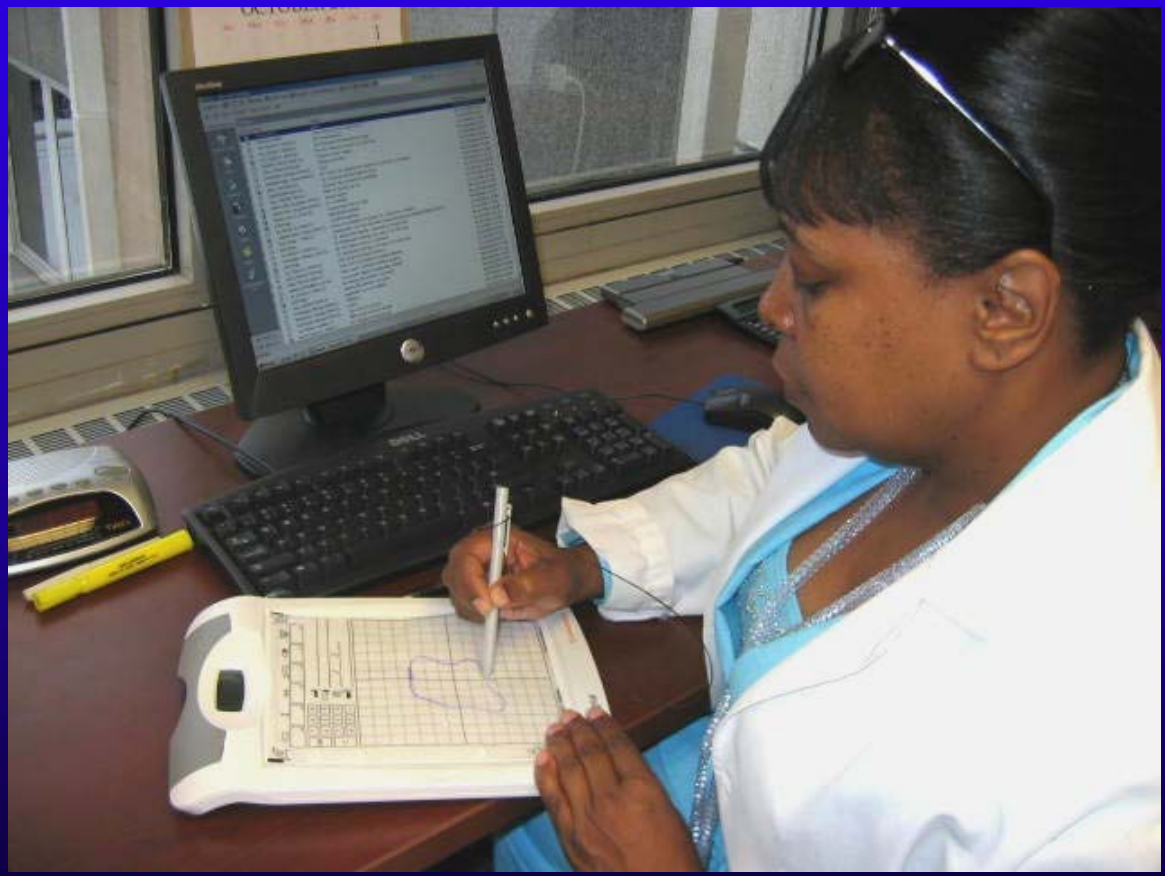
- Primary outcome measurement – wound size/volume
- Need standardized outcome measurement tool, ideally with high intra-rater and inter-rater reliability
- Standardize manual measurement method
- Use of digital measurement tools





Digital Measurement Tools

VeV MD



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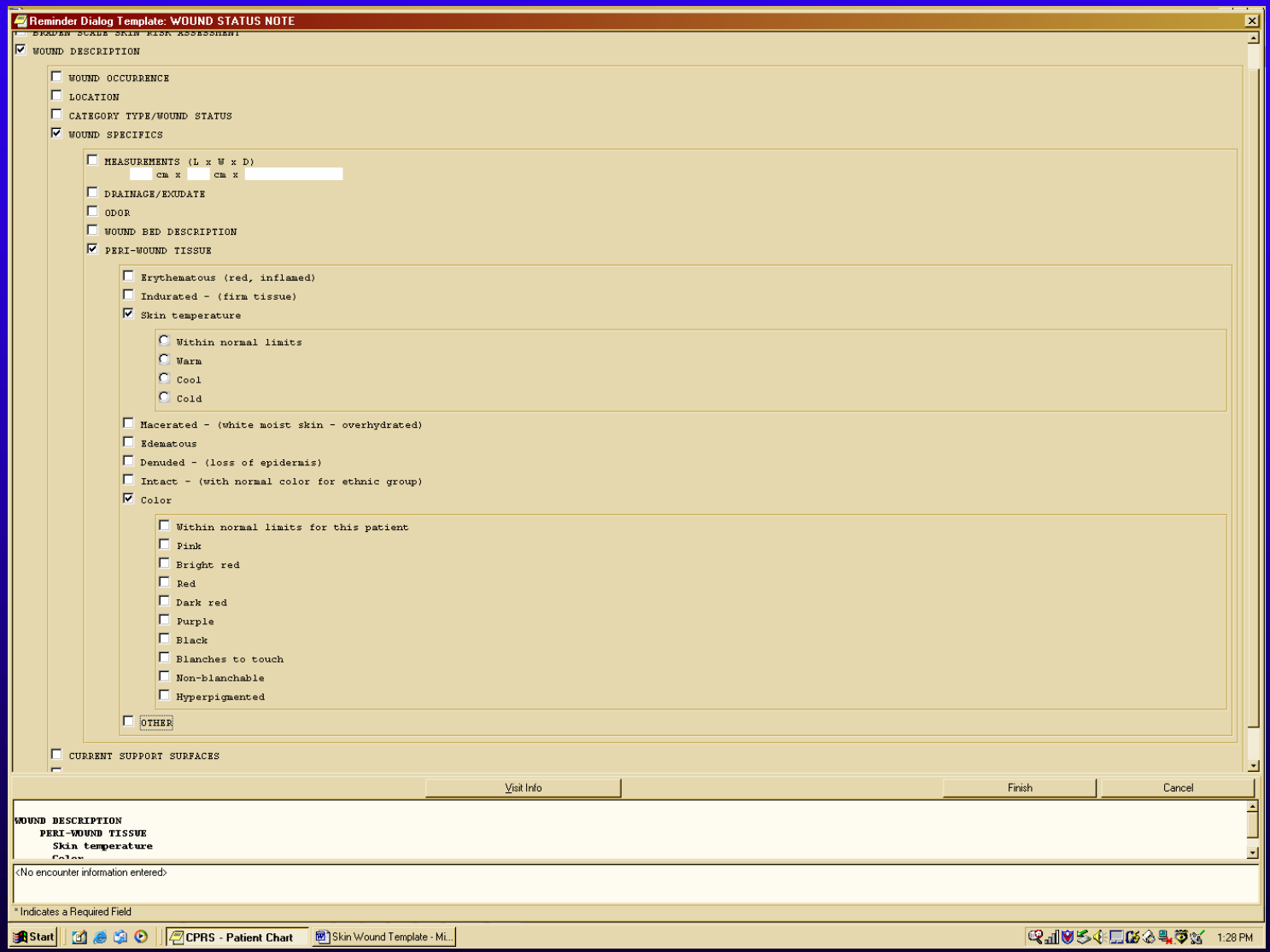
Documentation of Wounds

- Data collection (documentation of wound size, description) to be standardized
- Use of wound data template for collection of standardized parameters
- Data collection on a regular basis
- Standardized data may allow retrospective study of wound progress



Computerized wound care template

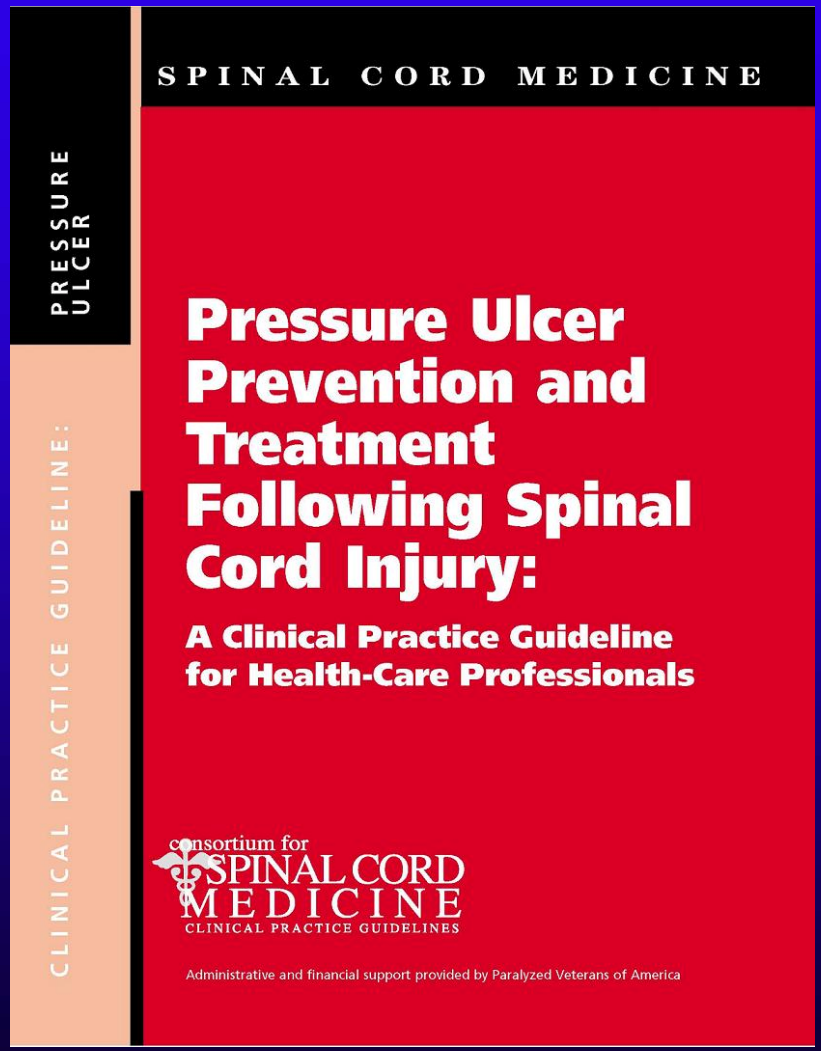
Assessment of Cost-effectiveness

- Maybe especially important when assessing new treatments
- Probably beyond scope of practice for most wound care providers
- Standardized practices and documentation may provide appropriate data for study by outcomes scientists

How Much is Our Current Practice Evidence-based?

How Much is Our Clinical Practice Evidence-based?

- Clinical practice guidelines are a good resource for evidence-based practice recommendations
- Some excellent guidelines include:
  - Consortium for Spinal Cord Medicine Clinical Practice Guidelines
  - European Pressure Ulcer Advisory Panel
  - Agency for Health Care Policy & Research

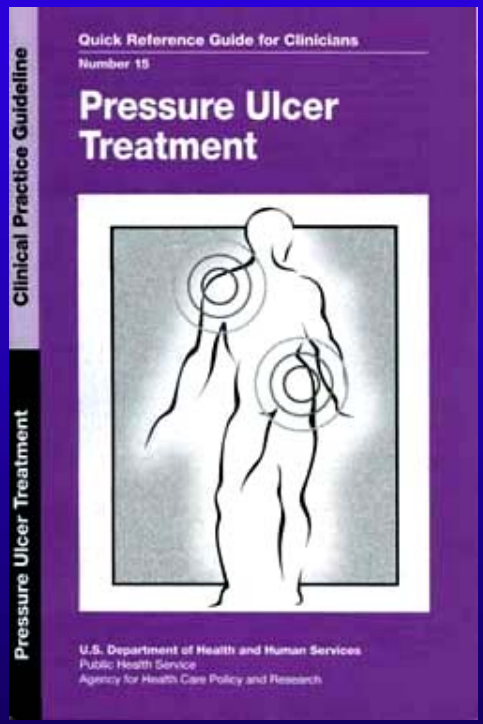

SPINAL CORD MEDICINE
PRESSURE ULCER
CLINICAL PRACTICE GUIDELINE:
Pressure Ulcer Prevention and Treatment Following Spinal Cord Injury:
A Clinical Practice Guideline for Health-Care Professionals
consortium for SPINAL CORD MEDICINE
CLINICAL PRACTICE GUIDELINES
Administrative and financial support provided by Paralyzed Veterans of America

www.pva.org

EUROPEAN PRESSURE ULCER ADVISORY PANEL

Pressure Ulcer Treatment Guidelines

http://www.epuap.org/gltreatment.html



AHCPR Supported Clinical Practice Guidelines

15. Treatment of Pressure Ulcers

Clinical Guideline Number 15
AHCPR Publication No. 95-0652:
December 1994

How Much is Our Clinical Practice Evidence-based?

- So how well are we doing with evidence-based practice?
- Are we following clinical practice guidelines?

How Much is Our Clinical Practice Evidence-based?

- We probably are not doing very well with evidence-based practice
  - Helberg et al (2006) – pressure ulcer prevalence survey in 51 hospitals and 15 nursing homes in Germany between 2001 and 2002
  - Comparison of wound care practices to current evidence-based practice recommendations

How Much is Our Clinical Practice Evidence-based?

– Percentage of treatment consistent with current evidence

	Stage I	Stage II	Stage III & IV
Acute care 2001	38.5%	51.5%	43.7%
Acute care 2002	21.6%	40.2%	48.3%
Nursing homes 2002	6.8%	27.8%	43.8%

Helberg et al (2006). Treatment of Pressure Ulcers: Results of a Study Comparing Evidence and Practice. *Ostomy/Wound Management*. 2006 Aug;52(8):60-72

How Much is Our Clinical Practice Evidence-based?

- Other studies also show that evidence-based practice is not always followed:
  - Sharp et al* (2000) found “a range of inconsistencies within and across nursing practice domains. Nurses generally do not use a tool to assess pressure ulcer risk potential, but rely on a range of practice procedures and risk indicators to determine risk potential of developing pressure ulcers”

*Pressure ulcer prevention and care: A survey of current practice. *Journal of Quality in Clinical Practice*. December 2000;20(4):p150

How Much is Our Clinical Practice Evidence-based?

- So why is it difficult?
- Different studies provide several reasons – namely it is difficult to implement clinical guidelines

How Much is Our Clinical Practice Evidence-based?

- Clark et al* (2005) identified the following barriers in implementing evidence-based clinical practice guidelines:
  - Lack of visible senior nurse leadership
  - Time required to acquire computer skills and to implement new guidelines
  - Difficulties with the computer system

*Pressure ulcers: implementation of evidence-based nursing practice. *Journal of Advanced Nursing.* 2005:49(6), 578–590

How Much is Our Clinical Practice Evidence-based?

- Saliba et al* (2003) studied the adherence to Agency for Healthcare Quality and Research pressure ulcer prevention guidelines on 834 nursing home residents in 35 VA nursing homes. Their results showed:
  - Low adherence to practice guidelines recommendations
  - Highly variable adherence from one nursing home to another

*Adherence to Pressure Ulcer Prevention Guidelines: Implications for Nursing Home Quality. *J Am Geriatr Soc* 51:56–62, 2003

How Much is Our Clinical Practice Evidence-based?

- Xakellis et al* (2001) studied between 1994 and 1997 the effects of the implementation of a guideline-based pressure ulcer prevention program in 1994. Results showed:
  - Initial decrease in incidence of pressure ulcers, but this effect did not last over time
  - Decrease in cost of treatment of pressure ulcers over the study period

*Translating pressure ulcer guidelines into practice: it's harder than it sounds. *Adv Skin Wound Care.* 2001 Sep-Oct;14(5):249-56, 258

How Much is Our Clinical Practice Evidence-based?

- Barriers in the implementation of clinical practice guidelines include:
  - Difficulty in changing current practice
  - Variability in clinical practice
  - Variability in readiness to learn new skills
  - Time needed to learn and implement new skills
  - Leadership support
  - Availability of equipment (e.g. computer)

How Much is Our Clinical Practice Evidence-based?

- What can be done to help implementation of evidence-based practice?
  - Sinclair et al* (2004) evaluated an evidence-based education program for prevention of pressure ulcers for RN's and LPN's
    - They found the program to be effective in increasing the awareness and knowledge base of RN's and LPN's in pressure ulcer practice standards

*Evaluation of an evidence-based education program for pressure ulcer prevention. *J Wound Ostomy Continence Nurs*. 2004 Jan-Feb;31(1):43-50

How Much is Our Clinical Practice Evidence-based?

- Implementation of evidence-based clinical practice necessitates more than just changes in nursing practice
- Interdisciplinary changes necessary
  - Knowledge
  - Attitude
  - Behavior

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Advances in SKIN & WOUND CARE

Nursir

 Volume 14(5), September/October 2001, pp 249-258

Translating Pressure Ulcer Guidelines into Practice: It's Harder than It Sounds

[Features: Original Investigation]

Xakellis, George C. Jr MD, MBA; Frantz, Rita A. PhD, RN; Lewis, Anne MA, RN; Harvey, Pam DO, MHA, MA

Have we improved the Outcomes of Wound Care?

Have We Improved the Outcomes of Wound Care?

- In order to integrate research into clinical practice, the weekly interdisciplinary wound care round was started at the Cleveland VA Medical Center Spinal Cord Injury Unit
- All SCI patients with wounds would be seen by the same team every week, regardless of who the attending physician is
- Recommendations for wound care would be made to the care team after the round

Have We Improved the Outcomes of Wound Care?

- Team round include:
  - Wound care physician
  - Wound care clinical nurse
  - Wound care research nurses
- These are only some of the members of the Cleveland VA Wound Care Team
- We invite participation by the patient's own attending physician and caregivers
- Patients are also evaluated for eligibility for wound care research studies on the round


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Have We Improved the Outcomes of Wound Care?

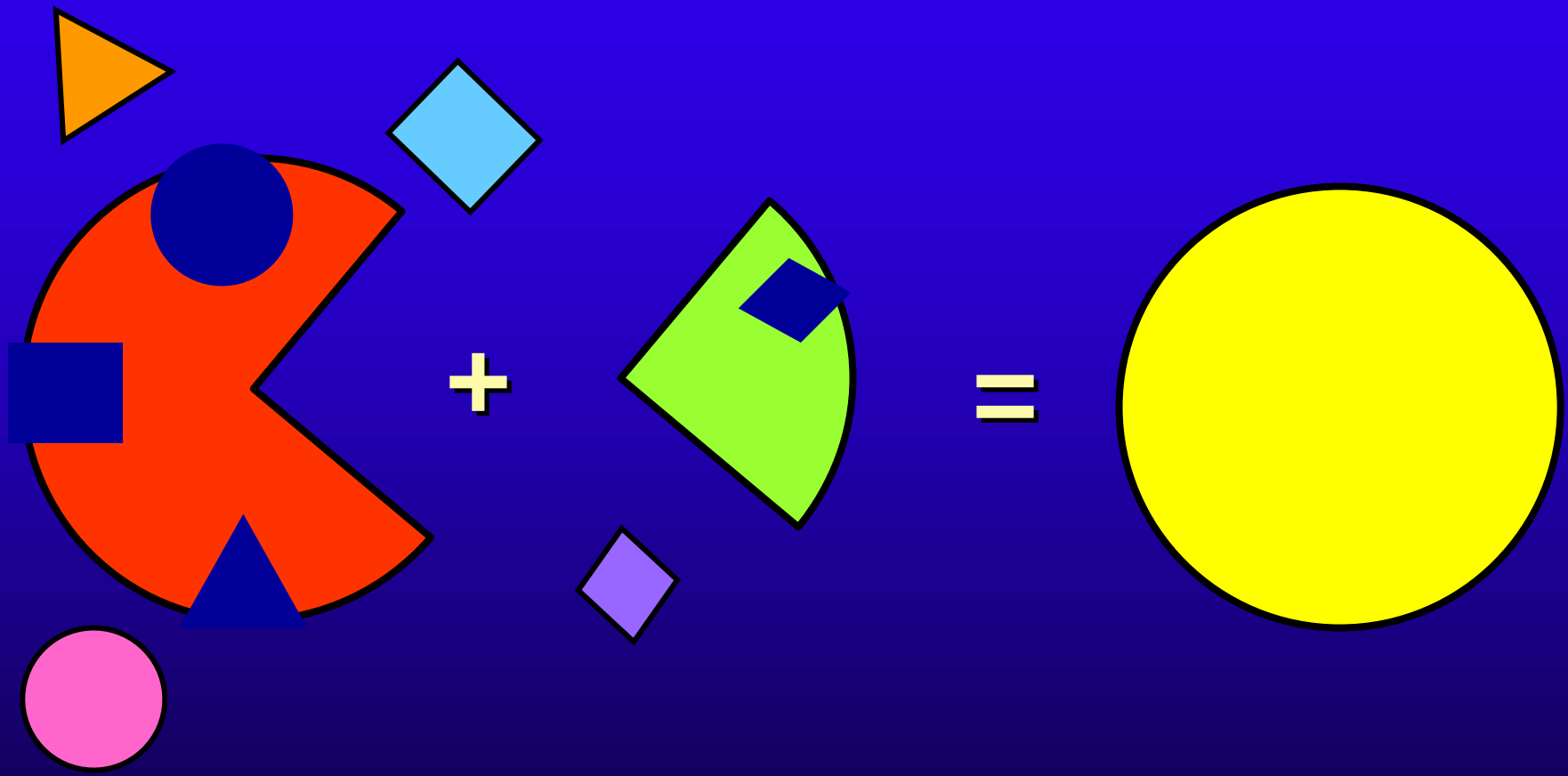
- As a result of this initiative:
  - Wound measurements now standardized
  - Wound documentation now standardized
    - Wound note template
    - Digital imaging part of weekly documentation
  - Treatment recommendations standardized
  - Wound care research programs now integrated
  - Direct interaction between clinical and research staff

Have We Improved the Outcomes of Wound Care?

- Though not formally studied, we believe that our wound care standard has improved
- Satisfaction of patients also improved
- Objective data will be obtained and evaluated empirically (retrospective cohort study)

Have We Improved the Outcomes of Wound Care?

- Does it mean that if we integrate research and follow clinical practice guidelines, wound care outcomes will necessarily improve?



Good Clinical Practice

Research Evidence

Optimal Wound Care

Have We Improved the Outcomes of Wound Care?

- Still no clear answer
- Outcomes of wound care are more than just the surface area and volume of the wounds

Have We Improved the Outcomes of Wound Care?

- Outcomes to be considered:
  - Decreased healing time?
  - Decreased incidence of pressure ulcers?
  - Decreased co-morbidity from treatment, e.g. deconditioning due to bed rest?
  - Increased functional independence of patient?
  - Increased patient satisfaction with treatment?
  - Decreased cost of treatment?

Have We Improved the Outcomes of Wound Care?

- Challenges in wound care research:
  - Wound care research is difficult! Need to critically review the research and its outcome
  - Paucity of wound care research – not all clinical practice guideline recommendations are strongly evidence-based
  - Outcome measurement tools yet to be refined

Have We Improved the Outcomes of Wound Care?

- Challenges in clinical practice:
  - Wound care is so complex and involves so many variables and factors that addressing one area with evidence-based treatment may not necessarily have a significant impact on the overall outcome

Have We Improved the Outcomes of Wound Care?

- Does it mean that we should still try our best to integrate research and follow evidence-based practice in wound care?

Absolutely *YES!!!*

Acknowledgment

- Cleveland VA SCI Wound Care Team:
  - Kath Bogie, DPhil
  - Patricia Banks, MSN/Ed, RN
  - Monique Washington, MS, RN
  - Sharon Geeter-Foster, BSN, RN
  - Deirdre Johnson-Jennings, BSN, RN
  - Terry Langdon, RN
  - Jonathan Sakai, MME
  - Christine Woo, MS
  - Gary Wu, MS

Thank you!