

# The New International Pressure Ulcer Guidelines

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## Background

- ▶ AHCPR guidelines 1992, 1994
- ▶ Various Wound Groups
  - WOCN, WHS, Medical Directors
  - Focus was narrow, not adding to evidence
- ▶ EPUAP on nutrition and prevention
- ▶ Determined a need to update and expand the guidelines
  - Multinational patient care issues of interest

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## Steps

- ▶ Meetings with EPUAP to establish potential roles
  - Prevention by EPUAP
  - Treatment by NPUAP
- ▶ Development of small working groups to review literature and draft statements
- ▶ Invitation to any interested person to respond to proposed statements
  - Responses from 6 continents
  - Refinement of statements based on input
- ▶ Presentation at NPUAP meeting February 2009

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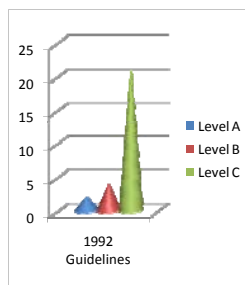
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## 1992 Prevention Guidelines

- ▶ 27 statements
  - Risk Assessment
  - Skin Care and Early Treatment
  - Mechanical Loading
  - Education




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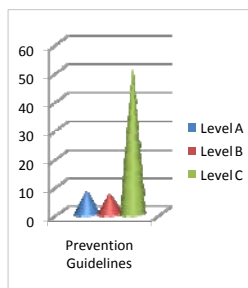
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## Level of Evidence

- Level A = RCT's with little room for error
  - N = 8
- Level B = less rigorous studies
  - N = 7
- Level C = little formal research and expert opinion
  - N = 51




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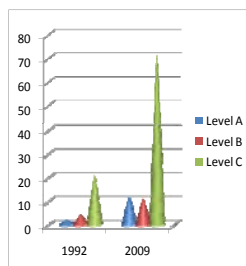
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## Progress in 17 years

- ▶ 4 categories in 1992
  - 27 recommendations
    - 7% Level A
    - 15% Level B
    - 78% Level C
- ▶ 6 categories in 2009
  - 66 recommendations
    - 12% Level A
    - 11% Level B
    - 72% Level C




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## 2009 Prevention Categories

- ▶ Risk Assessment
- ▶ Skin Assessment/Care
- ▶ Nutrition
- ▶ Repositioning
- ▶ Support Surfaces for Prevention
- ▶ Operating Room

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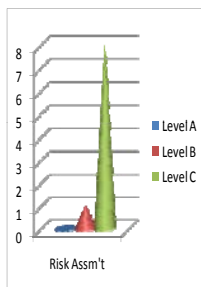
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## Risk Assessment Guidelines

- ▶ 11 statements
  - Have a risk assessment in every facility
    - Train nurses for accuracy and consistency
    - Repeat the assessment
  - Use a structured risk assessment
    - Use a scale that includes activity and mobility
    - Consider bedfast and chairfast persons at risk
  - Assess the skin
    - Skin impairments = risk




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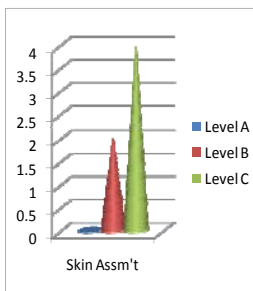
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## Skin Assessment Guidelines

- ▶ 6 statements
  - Have a skin assessment in every facility
    - Train nurses for identification of early skin problems
    - Repeat the assessment
  - Ask about pain as a sign of pressure injury
  - Inspect beneath medical devices
  - Skin care
    - Do not turn onto stage I
    - Do not massage or rub
    - Keep skin dry and apply moisturizers




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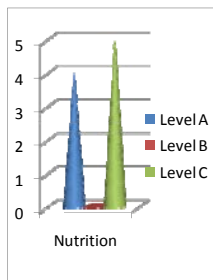
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### Nutrition Assessment Guidelines

- ▶ 9 statements
  - Assess nutritional risk for all at risk patients
    - Use a valid tool
    - Repeat the assessment
  - Refer at-risk patients to a dietician
  - Each day, feed at risk patients a minimum
    - 30-35 kcal per kg body wgt
    - 1.25-1.5 g/kg/day protein
    - 1 ml of fluid intake per kcal
  - Offer high protein supplements or tube feed between regular meals




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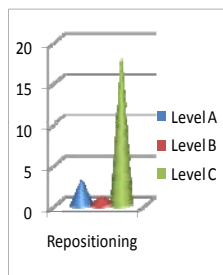
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### Repositioning Guidelines

- ▶ 22 statements
  - Reposition all at-risk persons
    - If patient cannot be moved, change the mattress
  - Frequency of turning is based on need
    - Lift don't drag
    - Keep HOB low at 30 degrees or less
    - Use side lying 30 degrees
  - Maintain posture in a chair
    - Use cushions, limit time in one position




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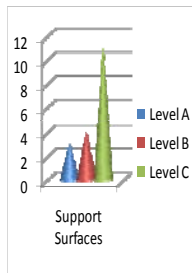
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### Support Surface Guidelines

- ▶ 18 statements
  - Prevention begins at the time risk begins
    - Turn patient regardless of surface
  - Choose the surface based on
    - Needs of the patient
    - Care setting compatibility
    - Avoid synthetic sheep skin
  - Check that the surface is working
    - Know its life span
  - Use higher specification foam mattress
  - Use alternating pressure for patients who cannot move
  - Float heels
  - Use pressure-redistributing seat cushion for chair bound




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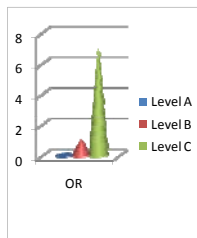
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## OR Guidelines

- ▶ 8 statements
- ▶ Refine risk assessment
  - Procedures over 4 hours
  - Intraoperative hypotension
  - Low core temperature in surgery
  - Limited mobility on post op day 1
- ▶ Use special support surfaces
  - Several have been studied, no strong preferences
- ▶ Prevent ulcers during operations
  - Pad bony prominences
  - Off load heels
- ▶ Following surgery
  - Place on pressure redistributing mattress
  - Do not place patient in same position as he was during surgery




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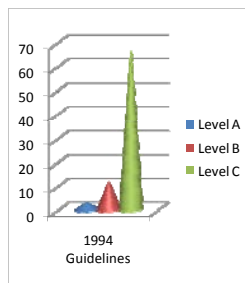
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## 1994 Treatment Guidelines

- ▶ 82 statements
  - Assessment
  - Tissue Loads
  - Ulcer Care
  - Infection
  - Surgery
  - Education




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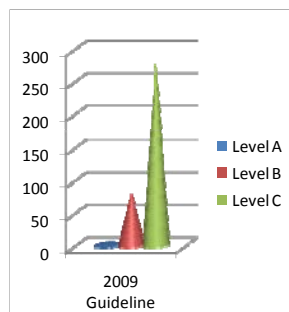
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## Levels of Evidence In Treatment Guidelines

- ▶ Greater majority are Level C evidence
- ▶ Important to guide care even when no research is available or could even be conducted




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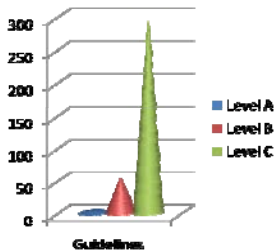
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### Level of Evidence in Treatment Guidelines

- Level A = RCT's with little room for error  
– N = 2
- Level B = less rigorous studies  
– N = 55
- Level C = little formal research and expert opinion  
– N = 239




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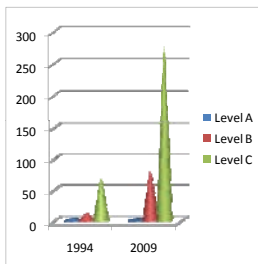
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### Progress in 15 years

- ▶ 6 categories in 1994
  - 82 recommendations
  - 3.5 % Level A
  - 14.5 % Level B
  - 81% Level C
- ▶ 12 categories in 2009
  - 359 recommendations
  - .01% Level A
  - 13 % Level B
  - 77% Level C




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### 359 Recommendations on

- ▶ Staging
- ▶ Assessment
- ▶ Nutrition
- ▶ Pain
- ▶ Support Surfaces
- ▶ Cleansing
- ▶ Debridement
- ▶ Dressings
- ▶ Infection
- ▶ Biophysical Agents
- ▶ Surgery
- ▶ Palliative Care




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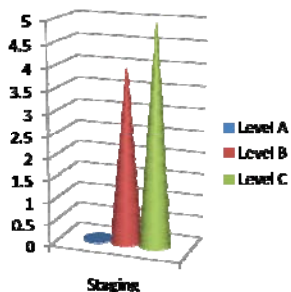
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### Staging Guidelines

- 9 statements
- Evidence to teach proper ulcer identification by photos
- Need to teach how to identify pressure ulcers in persons with dark skin




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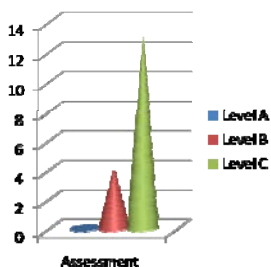
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### Assessment Guidelines

- ▶ 18 statements
- ▶ Need for complete assessment of person and ulcer
- ▶ How to monitor healing
- ▶ Need to adjust expectations of healing/closure
- ▶ Consider photographs




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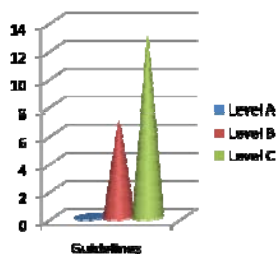
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### Nutrition Guidelines

- ▶ 19 statements
- ▶ Assess adequacy of diet
- ▶ Revise and liberalize diet
- ▶ Offer vitamin and mineral supplements only when diet is poor




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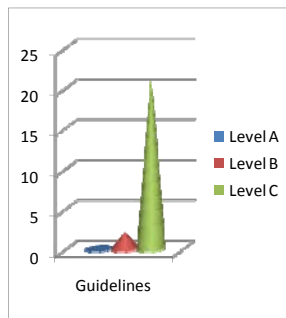
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### Pain Guideline

- ▶ New section
  - ▶ 23 statements
- ▶ Assess all patients for pain
- ▶ Allow "time out" during painful procedures
- ▶ Prevent and manage persistent pain and pain with debridement or dressing changes




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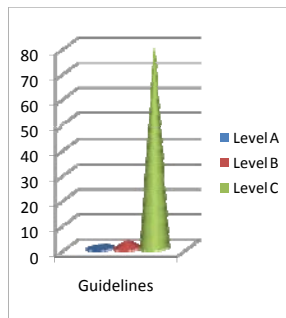
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### Support Surface Guideline

- ▶ 83 statements
- ▶ Many new recommendations
  - Bariatric
  - OR
  - ER
  - ICU
- ▶ Wheelchair seating




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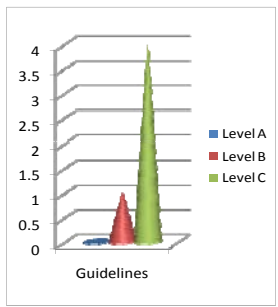
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### Cleansing Guideline

- ▶ 6 statements
- ▶ OK to cleanse with drinkable water
- ▶ Cleanse periwound skin




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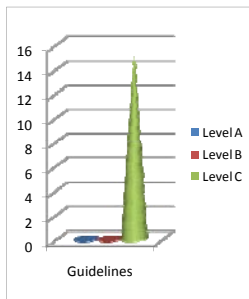
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### Debridement Guideline

- ▶ 15 statements
- ▶ New information on "water knife"
- ▶ Do not débride stable heel eschar in ischemic limbs
- ▶ Maintenance debridement



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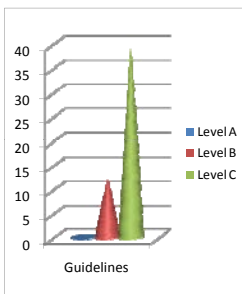
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### Dressings Guideline

- ▶ 51 statements
- ▶ Specific guidelines on dressings and in which wounds they would work
- ▶ Antiseptics
  - Honey
  - Silver
  - Iodine



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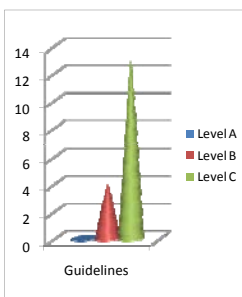
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### Infection Guideline

- ▶ 17 statements
- ▶ Use of antibiotics and antiseptics
- ▶ Signs of chronic infection



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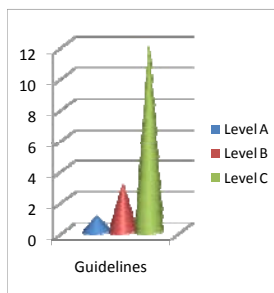
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### Biophysical Agents Guideline

- ▶ 16 statements
- ▶ Electrical stimulation, ultrasound
  - Level A on E stim
- ▶ NPWT with specifics on care of device and patient



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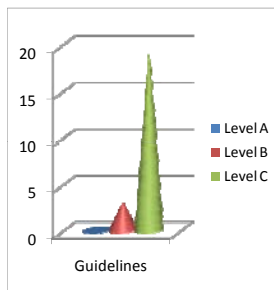
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### Surgery Guidelines

- ▶ 22 statements
- ▶ What to do before considering surgery
- ▶ Postoperative care to prevent flap loss



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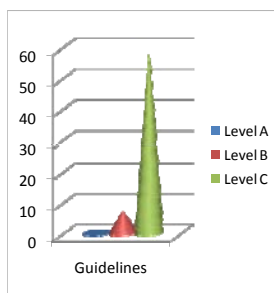
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### Palliative Care Guidelines

- ▶ New section
- ▶ Guidance on support surface and dressing choices for patients in whom healing is not the goal



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### Gaps that Remain

- ▶ Guidelines based on research in pressure ulcers only
  - Could further evidence be found in other wounds?
- ▶ RCTs few and far between
  - What wound outcome measure is preferred?
  - Many studies sponsored by industry
- ▶ Pediatrics not addressed
- ▶ Homeopathic and natural remedies not addressed
- ▶ Psychosocial issues not addressed
- ▶ System issues could not addressed

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### Public Policy Needs

- ▶ Government sponsored health care prefers to:
  - Base decisions on research
  - Base payment on efficacy
  - Work with experts to understand principles of practice
- ▶ The problem with pressure ulcers
  - Few RCTs
  - Poor outcome measures
  - Industry sponsored programs
    - No formal funding in US

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### Payment for Pressure Ulcers

- ▶ In US, pressure ulcers considered a “never event”
  - No payment to hospital when ulcers develop after admission
  - What conditions lead to “unavoidable” pressure ulcers?
- ▶ Can professionals determine what clinical conditions lead to unavoidable pressure ulcers?

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## Comparisons of Like Treatments

- ▶ Are all dressings the same?
- ▶ Are all forms of NPWT the same?
- ▶ Are all low air loss beds the same?
  
- ▶ What else is needed to heal an ulcer?

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## Education Needs

- ▶ Can nurses stage pressure ulcers accurately?
- ▶ Do nurses identify risk the same?
- ▶ Is a prevention plan based on risk?
- ▶ Education on guidelines
  - NPUAP slides almost complete!

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**The Nebraska Medical Center**  
Algorithm to Promote and Maintain Skin Integrity



**Skin data collection**

- Complete on all newly admitted patients and document findings.
- Complete upon transfer of all patients and document findings.
- Complete every shift and document findings.

**Skin data collection to include:**

- All pressure points. (i.e. sacrum, heels, etc.)
- All skin folds.
- Both anterior and posterior skin surfaces.
- Under medical devices. (i.e. O2 tubing, splints, Foley's, etc.)

**Risk for Skin Breakdown**

- Calculate Braden score every shift.

**Patients with a pressure ulcer, implement:**

- The "Pressure Ulcer" care plan.
- The "Risk for Skin Breakdown" care plan.
  - ▶ Care plan interventions based on sub-scale scores.
- A Wound Consult.
- A Nutritional Consult for any open pressure ulcer.

GO	CAUTION	DANGER
<p><b>Braden Score 19 to 23</b></p> <ol style="list-style-type: none"> <li>Initiate and document nursing interventions according to Braden sub-scale scores.</li> <li>Monitor all skin surfaces every shift.</li> <li>Consider the "Risk for Skin Breakdown" care plan.</li> <li>Follow "Pressure Ulcer Prevention Protocol."</li> </ol>	<p><b>Braden Score 17 to 18</b></p> <p><b>Perform all tasks in Go plus</b></p> <ol style="list-style-type: none"> <li><b>Initiate</b> the "Risk for Skin Breakdown" care plan with interventions based on sub-scale scores.</li> <li><b>Initiate</b> "Pressure Redistribution" interventions and document:                             <ol style="list-style-type: none"> <li>a. Turn every 2 hours.</li> <li>b. Suspend heels off bed.</li> <li>c. HOB at lowest safe elevation.</li> <li>d. Proper chair positioning and reposition every 15 minutes when indicated.</li> </ol> </li> <li><b>Consider</b> the need for a Wound Consult.</li> </ol>	<p><b>Braden Score 16 or less</b></p> <p><b>OR</b></p> <p><b>Any sub-scale score of 2 or 1 three consecutive times in the same sub-scale category.</b></p> <p><b>Perform all tasks in Caution plus</b></p> <ol style="list-style-type: none"> <li><b>Assess</b> the need for a Wound Consult.</li> <li>Nutrition subscale score is 2 or 1 three consecutive times, <b>consult</b> a Nutrition Consult.</li> <li>Mobility subscale score is 2 or 1 three consecutive times, <b>consult</b> a PT/OT Screen.</li> </ol>

Developed by: SWAT 12/05  
Revised by: SWAT 1/07

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### Braden Risk Assessment Scale (abridged version)

	4 Completely limited	3 Very limited	2 Slightly limited	1 No impairment
<b>Sensory Perception</b>	4	3	2	1
<b>Moisture</b>	4 Constantly moist	3 Very moist	2 Occasional moisture	1 No moisture
<b>Activity</b>	4 Underpads that wick moisture. Increase activity as tolerated. OT? PT?	3 Assess frequency of movement. Protect extremities. Check skin under medical devices.	2	1
<b>Nutrition</b>	4 Moisture barriers.	3 Reposition q 2h. ROM. Support	2	1
<b>Friction &amp; Shear</b>	4 Nutrition consult.	3	2	1

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- ### Research Needs
- ▶ Impact of guidelines on pressure ulcer incidence
    - Levels of risk
    - Patient groups
    - Systems of care
  - ▶ Improved research designs to answer the questions that can be answered by research
    - Less industry sponsored research

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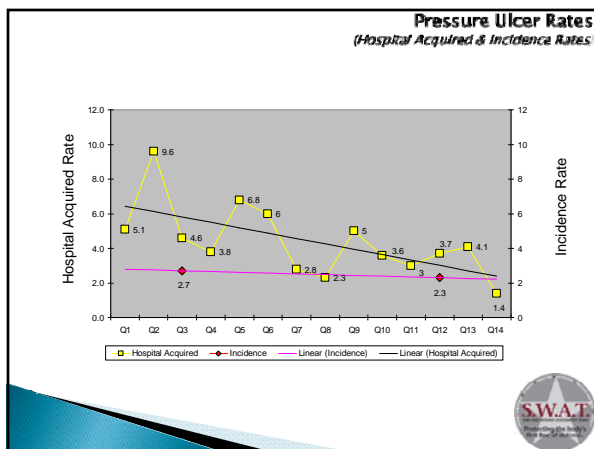
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**Guidelines Identify Current State of the Science**

Research is needed to advance the science

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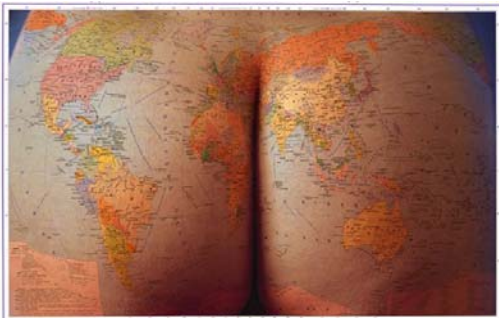
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Advancements will come from international collaboration

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