More Innovative Teaching Strategies: The Nuts and Bolts for Nurse Educators
NSNA, April 13, 2012
Loretta Manning, MSN, RN, GNP

What is Your Ninety-Second Elevator Ride To Successful Learning?

Successful Learning
- Create partnerships with the learner
- Have structure; filter out fluff
- Active learning, engagement, evidence; analyze from different perspectives
- Note: Linking Concepts to Real World
- Go Beyond Projection to Reflection
- Exchange Trepidation for Celebration

The GOLDEN Link for Nursing Students’ Success

Faculty are

M Motivation
A Activities – NCLEX Update
S Structure “SAFETY”/Active Learning
T Trigger Memory
E Explain New Information
R Reflection
Meet Our Students

Generation X and Generation Y

Students Disengaged

…But Students are Engaged Outside The Classroom!

The Goal - Create Partnerships that build on the Strengths of Each Generation!

Education Must be Learner Centered!

- Relationships are very important!
- Engage during learning
- Show by modeling
- Practice what you preach
- Elicit ownership
- Collaboration versus competition
- Try loving them by high expectations

“ It’s not the strongest of the species that survives, nor the most intelligent, but those who are most responsive to CHANGE.”

– Darwin
METAMORPHOSIS:
Transforming is making room for that which is most important!

MOTIVATION

“The best way to inspire people to a superior performance is to convince them by everything you do and by your everyday attitude that you are wholeheartedly supporting them.”

Harold H. Green,
Former Chairman of ITT

Power in Partnering with Our Students

What we do not say, Impacts how our Students Learn from us!

- Verbal Content 7%
- Vocal Influence 38%
- Nonverbal Influence 55%

COMPASSION is the
Students do NOT care how much teachers know until they know how much teachers CARE!

Erica Manning, age 16
David Cho, age 18

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Connections… Required for Learning

• Structural changes in the brain are required for learning.

• Change occurs only when the brain is alert and motivated!

Neural Networks

Knowledge Nodes (Memory Traces):
Knowledge learned from lecture, reading & memorizing

Connections: Knowledge learned from experience, stored in the form of interconnections among memory traces

Connections Required for Learning

• More connections formed; the greater number can be formed

• "Neurons that fire together, wire together" (Donald Hebb)

• Initial learning is temporary
Repetition is critical for learning

• Brain re-contouring can be positive or negative

Novices Overwhelmed with Data

Unable to Distinguish Relevant From Irrelevant Data

Novice Critical Thinkers

• Low tolerance for ambiguity – Novices want it perfectly clear

They just want someone to tell them what to do!!!

Novice Anxiety

• For Novice Students, each test, each clinical
  * Can cause apprehension
  * Presents as a set of tasks that must be accomplished
  * Is perceived as a test of personal capabilities
Memory Trace Categories Are Small in Number

There Are Few Linkages

Challenges for Nursing Educators

- Acquire knowledge
- Make connections
- Inter-connect the connections
- Turn off the Toggle Switch

Links are needed to understand, remember, and apply information.

While assessing cranial nerve 11, which part of the body would the nurse ask the client to move?

Question based on memorization!

Which of these is an example of the ninth cranial nerve?

a. Glossopharyngeal.
b. Olfactory.
c. Spinal accessory.
d. Trigeminal.

Question based on Application of Information!

Which assessment finding would be a priority to report to the provider of care for an eighty-year-old client?

a. Decreased sensitivity in cranial nerve 1.
b. A change in cranial nerve 8 resulting in presbycusis.
c. Depressed cranial nerves 9 and 10.
d. A slight weakness of cranial nerve 11 following a CVA.
The Role of the Faculty is to provide Structure for learning

ACTIVITIES: NCLEX®

Aspects of Teaching

**Curriculum** = *WHAT* to teach

**Instruction** = *HOW* to teach

**COMPARISION OF 2007–2010**

- Safe Effective Care
  - Management: 13-19 16-22
  - Infection Control: 8-14 8-14
- Health Promotion: 6-12 6-12
- Psychosocial: 6-12 6-12
- Physiological Integrity
  - Basic Care: 6-12 6-12
  - Pharmacology: 13-19 13-19
  - Risk Reduction: 13-19 10-16
  - Physiological Adaptation: 11-17 11-17

**PRACTICE ANALYSIS POINTS OF INTEREST**

- 89.2% work in hospitals
- 39.5% work in medical/surgical settings
- 34.5% work in critical care
- 6.1% work in pediatrics or nursery
- 5.0% work in long term care

Reference

*NCSBN RESEARCH BRIEF*, Volume 36, January 2009

2008 RN Practice Analysis: Linking the NCLEX-RN® Examination to Practice
Top 5 NCLEX Activities

- Principles of infection control (e.g., hand hygiene, room assignment, isolation, etc.)
- Provide care within legal scope of practice
- Ensure proper identification of client when providing care
- Prepare and administer meds, using rights of medication administration
- Practice in a manner consistent with a code of ethics for RNs

Connections to Standards are Required

Standards Are the Foundation for:
- Curriculum
- Classroom instruction
- Classroom testing
- Clinical practice
- Clinical evaluation

Refer to Handouts

Standards for Classroom & Clinical

- NCLEX RN Standards
- Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
- Institute for Safe Medication Practices (ISMP)
- Institute of Medicine Report
  “The Compass for Transformation of Clinical Education” (Benner, 2010)
- QSEN – Quality and Safety Education for Nurses
- AACN Essentials for Education
- NLN Standards for Education
- Standards of Practice

The “Why” in What We Do

1.5 million preventable adverse drug effects (ADEs) occur annually in the U.S.A. (Institute of Medicine (IOM) Committee)
Most frequent source of healthcare errors
Cost $29 billion
Contribute to 98,000 deaths, many more injured
6th Leading Cause of Death
CDC estimates that clients acquire 1.7 million infections in hospitals per year
Contributes to 99,000 deaths a year / 270 a day

The 8 Preventable Injuries:
(No Pay by Medicare & Medicaid & Other Insurers)

- I Infection of blood
- N No falls
- J Just check blood incompatibility
- U Urinary tract infections
- R Remove objects left during surgery
- I Infection after cardiac surgery (mediastinitis)
- E Embolism
- S Sores (Pressure ulcers)
Competencies

- Patient Centered Care
- Teamwork and Collaboration
- Evidenced Based Collaboration
- Quality Improvement
- Safety
- Informatics

What Does It Take to Transform?

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Transformation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Separation of Class &amp; Clinical</td>
<td>- Integrate classroom with clinical</td>
</tr>
<tr>
<td>- Just “critical thinking”</td>
<td>- Multiple ways of thinking</td>
</tr>
<tr>
<td>- Socialization of role - Learning the knowledge</td>
<td>- Formation: Shaping of learning; skills, habits, relationships, perceptions, Interpreting the meaning of the practice of nursing</td>
</tr>
</tbody>
</table>


STRUCTURE and STRATEGIES

- C Capacity (finite)
- A Anxiety
- L Lasts a few seconds
- L Lists

Working Memory!

- Links are needed to understand, remember, and apply information.

Long Term Memory!

- F File to add to new content
- I Information transfer - memory techniques
- L Learner links / explains aspects of new info.
- E Evaluate after explaining

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**HMG CoA REDUCTASE INHIBITORS**

**B (Traditional Strategy)**

- **Action:** Decrease manufacture of LDL cholesterol, decrease manufacture of very low-density lipoproteins (VLDL), increase manufacture of high-density lipoproteins (HDL).
- **Indications:** Hypercholesterolemia
- **Undesirable Effects:** Hepatotoxicity
- **Interventions:** Administer in evening, increase fluids, monitor liver enzymes
- **Examples:** Simvastatin (Zocor), atorvastatin (Lipitor)

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**“ACTIVE”**

**Activity name:** Fatten your “STATIN Facts”

**Content description:** (Refer to handout)

**Tips for Success:**
- Identify courses for use:
- Value of the activity + NCLEX standards:

**Evaluation and Expected Outcomes:**

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**PHYSIOLOGICAL INTEGRITY:**

*Pharmacology*

- Ensure proper identification of client when providing care
- Prepare and administer medications, using rights of medication administration
- Prioritize workload to manage time effectively
- Use approved abbreviations and standard terminology when documenting care
- Review pertinent data prior to medication administration (e.g., vital signs, lab results, allergies, potential interactions)
- Evaluate therapeutic effect of medications
- Perform calculations needed for medication administration
- Assess and respond to changes in client’s vital signs
- Recognize signs and symptoms of complications and intervene appropriately when providing care
- Evaluate appropriateness/accuracy of medication order for client per institution policy including reconciling orders
- Titrate dosage of medication based on assessment and ordered parameters (e.g., giving insulin according to blood glucose levels and titrating medications to maintain a specific blood pressure)

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**Spoon Full of Lipitor**

Tune: Spoon Full of Sugar

In every job that must be done,
There is an element of fun!
You find the fun and SNAP!
The job is a game!

And every task you undertake
Becomes a piece of cake;
Pushing fluid;
A special diet, it’s very clear to see!

Just a spoon full of Lipitor makes the cholesterol go down, the cholesterol go down, the cholesterol go down! Just a spoon full of Lipitor makes the cholesterol go down, In the therapeutic range!
STRUCTURE

“SAFETY”

“SAFETY” Model
Connecting Classroom to Clinical:
Standards in Action

SAFETY - System Specific Physiology - Hypoxia

Inadequate levels of oxygen in the blood from complications such as hypovolemia, hypoventilation, and interruption of arterial flow.

Structure for Teaching, Testing and Thinking!

S System Specific Physiology, Assessments, Labs / Diagnostic Procedures
A Analysis of Assessments, Nursing Concepts
F First-prioritize Interventions / Pharmacology
E Evaluate expected outcomes / trends / change
T To Reduce Potential “RISK”
room assignments, recognize limitations of staff, restraints, risk for falls, infection, identification of client, identify trends, safe equipment skin breakdown, scope of practice for delegation, know Standards of Practice, knowledge (teach)
Y (Why?) Ask questions when you don’t know (Accuracy / Appropriateness of orders)!

Concept: Oxygenation

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**SAFETY – Trend Potential Complication: Risk for infection**

<table>
<thead>
<tr>
<th>System Specific Assessment – TEMPS</th>
<th>Analysis Nurs DX</th>
<th>First do Priority Interventions “HANDS”</th>
<th>Evaluation -Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature, HR</td>
<td>Risk for Infection</td>
<td>Hand washing, PPE, HR, T, WBC – monitor &amp; report changes &amp; trends to HCP.</td>
<td>No “TEMPS”</td>
</tr>
<tr>
<td>Evaluate WBC</td>
<td></td>
<td>Appropriate suctioning, appropriate</td>
<td>No drainage, no odor, healing</td>
</tr>
<tr>
<td>Mucous (thickness, quantity, color odor), Monitor incision site; redness, excessive tenderness, purulent drainage, monitor wound drains</td>
<td></td>
<td>Antibiotics as ordered; Auscultate BS q 2-4 hrs.</td>
<td>WBC WNL</td>
</tr>
<tr>
<td>Pulmonary – BS, for adventitious sounds, RR, O₂ sat</td>
<td></td>
<td>Report changes /trends to HCP</td>
<td>Lungs clear</td>
</tr>
<tr>
<td>Signs of infection at peripheral IV site or central lines, etc.</td>
<td></td>
<td>Diet - 1 calories, protein, vitamin C</td>
<td>IV sites without s/s of infection</td>
</tr>
</tbody>
</table>

**SAFETY – First Priority Nursing Interventions: Medication Administration – Congestive Heart Failure**

<table>
<thead>
<tr>
<th>Afterload – Reducing</th>
<th>Vasodilators</th>
<th>Anticoagulants</th>
<th>Diuretics</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ace Inhibitors – p50</td>
<td>• Nitrates p40</td>
<td>• Coumadin p78</td>
<td>(Loop, Thiazide, K- Sparing)</td>
</tr>
<tr>
<td>• Angiotensin 2 receptor blockers (ARB) p52</td>
<td>• Human B-Type Natriuretic Peptides (hBNP)</td>
<td>• Heparin p80</td>
<td><strong>Digitalis (Digoxin) p28</strong></td>
</tr>
<tr>
<td>• Beta- Adrenergic Blockers p56</td>
<td>• Natrecor (Nesiritide) p30</td>
<td>• clopidogrel (Plavix) -p90</td>
<td><strong>(Loop, Thiazide, K- Sparing)</strong></td>
</tr>
<tr>
<td>• Calcium Channel Blockers p60</td>
<td><strong>Intropin</strong></td>
<td><strong>(Loop, Thiazide, K- Sparing)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Intropin</strong></td>
<td><strong>(Loop, Thiazide, K- Sparing)</strong></td>
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<td><strong>(Loop, Thiazide, K- Sparing)</strong></td>
<td></td>
</tr>
</tbody>
</table>

**The PRIL Sisters**

<table>
<thead>
<tr>
<th>Cough</th>
<th>Hypotension / poor perfusion</th>
<th>Blood urea nitrogen</th>
<th>Fasting glucose</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVR = systemic vascular resistance</td>
<td>PVR = peripheral vascular resistance</td>
<td>LVD = Left Ventricular Dilatation</td>
<td></td>
</tr>
</tbody>
</table>

The nurse is caring for a client with a history of hypertension. The client is being treated with metoprolol (Lopressor), hydrochlorothiazide (Hydrodiuril), and captopril (Capoten). The client’s B/P is 120/80 and pulse is 48. Which of the following is the best action by the nurse?

a. Administer the metoprolol (Lopressor) & the hydrochlorothiazide (Hydrodiuril), and hold the captopril (Capoten).
b. Administer the captopril (Capoten) and the hydrochlorothiazide (Hydrodiuril) and hold the metoprolol (Lopressor).
c. Administer all of the medications and notify the physician.
d. Withhold all the medications and notify the physician.

Answer B
CMS Guidelines for reimbursement for CHF

- HF-1 Heart Failure Patients Given Discharge Instructions
- HF-2 Heart Failure Patients Given an Evaluation of Left Ventricular Systolic (LVS) Function
- HF-3 Heart Failure Patients Given ACE Inhibitor or ARB for Left Ventricular Systolic Dysfunction (LVSD)
- HF-4 Heart Failure Patients Given Smoking Cessation Advice/Counseling

SAFETY - Suctioning

<table>
<thead>
<tr>
<th>S - System Specific Assessment</th>
<th>A - Analysis of Patient Data &amp; Concepts</th>
<th>F - First / Priority Interventions</th>
<th>I - Evaluation of Expected Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Pulse &amp; VS, SaO₂ - assess ABGs</td>
<td>- Altered gas exchange (c)ylinder (s)uction (a)s (p)osition (i)n Fowler’s or semi-Fowler’s</td>
<td>- Assess position &amp; suction setup before using. Tube must be cleared after suctioning.</td>
<td>- Cyanotic; no cyanosis; secretions clear &amp; AIRWAY PATENT.</td>
</tr>
<tr>
<td>- Inspirations &amp; Expirations (breath sounds)</td>
<td>- Position in Fowler’s or semi-Fowler’s</td>
<td>- Assess pulse &amp; VS, WNL, SaO₂, WNL.</td>
<td>- WNL, SaO₂, WNL.</td>
</tr>
<tr>
<td>- Assess LOC, restlessness</td>
<td>- Position in Fowler’s or semi-Fowler’s</td>
<td>- Assess respiratory rate &amp; effort</td>
<td>- Respiratory rate &amp; effort.</td>
</tr>
<tr>
<td>- Secretions for amount, color, consistency, etc.</td>
<td>- Position in Fowler’s or semi-Fowler’s</td>
<td>- Assess secretions for amount &amp; color</td>
<td>- Secretions for amount &amp; color.</td>
</tr>
</tbody>
</table>

SAFETY Invasive Procedure: Angiography, Cardiac Catheterization

<table>
<thead>
<tr>
<th>Indications</th>
<th>Pre-Procedure – “ACT NOW”</th>
<th>Post-Procedure – “AFTER”</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Determines blood flow in areas of suspected blockage.</td>
<td>- Assess for all allergies (i.e. shellfish, iodine, anesthetic agents &amp; any prior experience with sedation)</td>
<td>- Assess if q 15 min x 4, 30 min x 2, q hour x 4</td>
</tr>
<tr>
<td>- Angiography can be done in lower extremities.</td>
<td>- Consent required</td>
<td>- &amp; then q 4 hours per protocol: VS, Groin site for bleeding hematoma, pedal pulses &amp; compare, &amp; color &amp; temp of extremities</td>
</tr>
<tr>
<td>- Cardiac catheterization used to evaluate the presence and degree of coronary artery blockage</td>
<td>- Teach, give explanation</td>
<td>- C - First position supine with leg straight, Maintain bed rest per protocol</td>
</tr>
<tr>
<td>- Cyanotic; no cyanosis; secretions clear &amp; AIRWAY PATENT.</td>
<td>- Need to assess baseline VS, pulses, BUN/Creatinine</td>
<td>- R – Trend clinical findings, I &amp; O give pain meds as needed &amp; anticoagulants per order</td>
</tr>
</tbody>
</table>

SAFETY – Risk of Injury R/T Equipment Use

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Purpose of Equipment</th>
<th>Nursing Management /Safety Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxygen</td>
<td>Deliver O₂ to tissues &amp; vital organs</td>
<td>Q - Oxygen is combustible “No Smoking”</td>
</tr>
<tr>
<td>Cardiac monitoring</td>
<td>Detect new and changing abnormal heart rhythms and to trend data R/T frequency and durations of dysrhythmias</td>
<td>K - Know &amp; maintain proper lead placement, verified each shift &amp; document lead used</td>
</tr>
</tbody>
</table>

SAFETY – Yes, Management is a MUST in Reducing RISK to Clients!

- R - Room assignments, Recognize limitations of staff, Restraint safety, Risk for falls, Receive or give report
- I - Infection, Identification, Identify trends, Identify accuracy of orders
- S - Skin breakdown, Safe equipment, Scope of Practice for delegation
- K - Know Standards of Practice, Know how to document
SAFETY: Reflecting on a Teaching Moment

A client with a history of heart failure suddenly exhibits shortness of breath, respiratory rate of 30, crackles auscultated bilaterally and frothy sputum. After calling the MD for orders, which of the following orders could the nurse delegate to the LPN?

- Insert a urinary catheter.
- Monitor vital signs every 15 minutes.
- Administer morphine sulfate 2mg IV push immediately.
- Start an intravenous line and cap it with a saline lock.

Answer: a (Management of Care – Delegation, Scope of Practice)

SAFETY: Reflecting on a Teaching Moment

Which of these nursing actions performed by the LPN indicates a need for intervention and corrective measures by the RN for a client who has been in respiratory distress?

1. Assists the UAP in positioning client upright after AM care.
2. Administers the corticosteroid inhaler before the albuterol (Ventolin) inhaler.
3. Collaborates with the RN in planning a room transfer.
4. Reinforces the teaching about the incentive spirometer.

SAFETY: Reflecting on a Teaching Moment

What would be the priority of care for a confused client who has no ID bracelet on for proper identification prior to drawing the blood gases?

1. Ask client to shake head yes or no in response to name.
2. Ask roommate to state client’s name.
3. Look on chart for a photograph.
4. Use the arm band that is in the drawer.

SAFETY: Reflecting on a Teaching Moment

Which of these medications should the nurse question?

1. Carvedilol (Coreg) for a client with COPD.
2. Digoxin for an adult client with a heart rate of 64.
3. Enalapril (Vasotec) for a client being discharged post MI.
4. Hydrochlorothiazide (HCTZ) for a client with hypertension.

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Connections Require Structure

TRIGGERING RECALL
You can remember any new piece of information if it is associated to something you already know or remember!

Harry Lorayne and Jerry Lucas in The Memory Book

TRIGGERING RECALL

M
MNEMONICS

A
ACTIVE

P
PICTURES

S
SONGS

CEF THE GIANT

G: nausea, vomiting, diarrhea

I: increase in glucose values

A: naphylaxis may occur; alcohol may cause vomiting

N: ephrotoxicity

T: thrombocytopenia

ACTIVE
When the body isn't moving, the brain isn't grooving!
OUTCOMES FOR ACTIVE!
- Pharmacodynamics vs. Pharmacokinetics
- Absorption Times for various routes

ACTIVITIES
The 8 P’s:
- Place learning tips in a log
- Pictures
- Points that are muddy
- Priority information – lecture
- Put in 10 words or less
- Put challenge questions on ppt
- Prior experience / courses - recall activities
- Put newly learned facts on a concept map

Refer to Handouts

PICTURES
It is impossible even to think without a mental picture.
Aristotle

DROOPY DEUTERONOMY
Pg. 251

PERKY PERKOLATOR
NARCAN
Pg. 253

Pain Scale:
1 – 3 Mild
4 – 6 Moderate
7 – 10 Severe

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RUDOLPH THE RED-NECK REINDEER

Rudolph the red-neck reindeer
Had an adverse side effect
From the drug Vancomycin,
Must keep all labs in check.

Caution with renal failure,
Hearing loss and allergies,
Take a temp and blood cultures,
'Specially a CBC!!!
**S I A D H**
*(sung to the tune of “Bingo”)*

**Chorus**

S I A D H, S I A D H, S I A D H
This hormone stops the pee pee.

**Verse 1**

Brain tumors, trauma, and bad bugs
A complication might be—
S I A D H, S I A D H, S I A D H
This hormone stops the pee pee.

**Verse 2**

Low output, sodium; gained weight
And high specific gravity
S I A D H, S I A D H, S I A D H
This hormone stops the pee pee.

**Verse 3**

But, diabetes insipidus
the opposite you’ll see—
Pee pee, give IV’s—pee pee, give
IV’s—pee pee, give IV’s
Vas-o-pressin they need.

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**Innovative Teaching Strategies**

Structure “SAFETY”
U Can do it!
Critical Standards
Create “ACTIVITIES”
Engage
Show by modeling
Songs, images, FUN!

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**“MAKING THE SIMPLE COMPLICATED IS COMMONPLACE; MAKING THE COMPLICATED SIMPLE, AWESOMELY SIMPLE, THAT IS CREATIVITY!”**

Charles Mingus,
Legendary jazz musician

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**Questions**
It is not the mountain that gets moved that makes a difference, it is the little steps taken one at a time.

Loretta Manning, MSN, RN, GNP President, I CAN Publishing®, Inc. Regional Director, Sylvia Rayfield Associates