Medical Advancements and its Impact on the Nurse in the 21st Century

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Reflect and ask yourself….

- What does the word “care” mean to you?
- Can you as a healthcare professional transform care in view of medical advancements today?
- If so, how?
- Is EBP the answer or panacea to transformation of care or is there something missing in the equation?
- Is the use of IT the answer?
- Or does the nurse in the 21st century need a different role?
- What do you think?
Challenges in Healthcare

- **Aging population** - By 2030, 1 in 5 Singaporeans over age 65 (three-fold increase)
- **Changing disease patterns** – chronic diseases and emerging infectious diseases, shift to preventive care
- **Increasing public expectations**
  - Educated and IT savvy public
  - Greater role of public managing their own health
- **Rising prices** of drugs and equipment
- Yet, **limited resources**
  - Global shortage of healthcare professionals;
  - Healthcare facilities

Impact on nursing

- **Clinical Practice**
  - Complex care
  - Net savvy patients - knowledgeable
  - Expect more from nurses
  - Average length of stay is shorter
- **Research and EBP**
- **Education**
  - E-learning
  - IVR
Outline

Focus is not on medical advances or ethical dilemmas
But on impact on nursing
- Delivering Care Based on Evidence
- Information Technology
- Diagnose & Rx vs predict & prevent – Role of APNs

Healthcare Today

Care Delivery Models Must

- Improve clinical practice
- Achieve efficiency
- Control Costs
Reflections

What is YOUR major goal in Nursing?

What does transformation of care mean to U?
- Quality care
- Cost-effective care
- Scientific care
- Improved patient outcomes

EVIDENCE-BASED PRACTICE
Reflections

Is Evidence Based Practice a PANACEA to transforming care in the 21st Century?

“The provision of outcome-oriented, cost-effective health care is no longer a goal. It is a mandate.”

(Gallagher & Rowell, 2003, p.274)
So ... what are outcomes of care?

Patients who received research-based nursing interventions can expect 28% better outcomes than patients who received non-research based care (Heater, Becker & Olsen, 1988)

What are the outcomes of EBP?
What is EBP?

• Broader term – encompasses the use of research findings & other types of knowledge (e.g. expert opinion, case reports) (Cook, 1998)
• Integrates… (Sackett et al., 2000)

Evidence-Based Practice

Best evidence from research
Clinical expertise
Patient preferences
Existing resources

EBP Process

Monitor Outcomes of Change in Practice
Implement Evidence into Practice
Identify Topic
Locate & Appraise Existing Evidence
Disseminate Evidence
Synthesise Evidence & Apply Conclusions
Why EBP?

90% of healthcare decisions will be evidenced based by 2020

- The IOM Roundtable on EBP
- Do U think this is possible?
- Are U ready for this in 10 years time???

Need a culture of evidence at every level

- IOM reported gaps in quality of health care
- The culprit was not poor clinicians, but poor systems
- As such the solution is to improve the entire health care system with patient-centered care that uses evidence to provide appropriate and effective care
- We need EBP to advance the nursing profession in the 21st century
How do we advance the nursing profession through evidence?

2010 - New Kid On The Block

The Joanna-Briggs Institute-Institute of Mental Health (Singapore) Centre for Evidence-Based Practices in Mental Health Care
Develop CPGs

Up to this point is the easy part.....

Translation of Evidence-Based Knowledge Into Practice
How to disseminate the evidence?

- Localise the evidence into your hospital setting
  - Need to integrate into policies, documentation, standards of practice, etc
  - e.g. hospitals integrate MOH CPG into P&P
- Use practice prompts
  - pocket cards,
  - algorithms

How to disseminate the evidence?

- Educational strategies
  - Organise roadshows - mass communication
  - Train-the-trainer
  - Posters/ notice boards

But education is not enough to change behavior…
How would you know whether EBP has changed and advanced nursing practice and improved patient outcomes?

Discuss
Is “GOOD” Enough for you? Or should you aim for “GREAT”? 

For EBN to work...

- Individuals who make evidence-based decisions
- Evidence-based organisation

- Identify specific question
- Search for evidence
- Appraise practice
- Assess quality of evidence
- Assess local applicability
- Understand evidence-based guidelines
- Interest & willingness to subject one’s practice & research to scrutiny by others

- Management commitment to EBN
- Facilitate conduct of systematic reviews, development of guidelines
- Resources & support structures
- Training to develop nurses’ skills
- System for managing the change in practice
“The provision of outcome-oriented, cost-effective health care is no longer a goal. It is a mandate.”

(Gallagher & Rowell, 2003, p.274)

Healthcare in the 21st Century

Providing Patient Care through New Media and Interactive Multimedia
New Technologies for Healthcare Professionals

Providing Patient Care Through Social Media

- **Standard Social Media**: Facebook profile, healthcare blogs, and Twitter.
- **Enhanced Social Media**: YouTube commercial and podcast
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Blogs

Myths and Facts on mental illness

Myth: There’s no hope for people with mental illnesses.

Fact: With proper treatment and support, people with mental illnesses can lead fulfilling lives. They can work, go to school, and participate in their communities.

Mental illnesses are very common. They are also widely misunderstood. People with mental illnesses are frequently stigmatized by others who think they’re an uncommon condition. The truth is, mental illnesses can happen to anybody.

Arm yourself with the facts, then use your knowledge to educate others and reach out to those around you with mental illness. Understanding and support are powerful, and they can make a real difference in the life of a person who needs them.

Bipolar Disorder Community

By Nancie...

http://www.wellswp.com/mentalillness/bipolar

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• View Profile
• Send a message
• Write on Whiteboard

Search site for... Find

Join this community
• Add Bipolar Disorder to My Feeds
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National Strength And Conditioning Association
Generalized Muscle Weakness

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Video Podcast

Video summaries of Best Practice Information Sheets the Joanna Briggs Institute best practice series database

- Best Practice Information Sheets
  - 2009 Vol 13
    - The Psychosocial spiritual experience of elderly individual recovering from stroke [Watch] [Read]
    - Nurse-led interventions to reduce cardiac risk factors in adults [Watch] [Read]
    - The Management of Nipple Pain and/or Trauma Associated with Breastfeeding [Watch] [Read]
    - Music as an Intervention in Hospitals [Watch] [Read]
    - Strategies to reduce medication errors with reference to older adults [Watch] [Read]
  - 2008 Vol 17
    - Assessment and Management of Ovovagia In Children with Neurological Impairments [Watch] [Read]
    - Smoking Cessation Interventions and Strategies [Watch] [Read]
    - Management of Constipation in Older Adults [Watch] [Read]
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Mobile Healthcare

- The use of mobile devices to:
  - access and review patient records and test results,
  - enter diagnosis and billing information during patient visits
  - consult drug formularies and other reference material,
  - synchronize information with their organizations’ centralized systems

all without the need for wired network connections.

Mobile Devices

- PDA
- Tablet PC
- iPhone
- iPad
Tele - Healthcare

A cyber meeting place for healthcare professionals to establish global partnership and collaboration.

Virtual Hospital
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Electronic Health Records
The International Scene

Most industrialized countries have recognized the need to implement electronic health record solutions quickly to improve the quality and safety of patient care and system efficiency.

- Canada
- United Kingdom
- New Zealand
- Denmark
- United States

...and in Singapore

Where We Are Now
National Health IT & Related Initiatives

IN2015 Healthcare & Biomedical Sciences Goal: To accelerate sectoral transformation through a personalized healthcare delivery system to achieve high quality clinical care, service excellence, cost-effectiveness and strong clinical research.
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... IT Capabilities Supporting Cross-cutting processes

Connected Care
- E-Referrals
- Shared Care Plan (CCM)

Diagnostics
- Lab Reports
- Radiology Reports
- Procedure Reports
- Shared Image Repositories

Patient Self-Management
- Portal PHR (lifestyle, risk, etc)
- Screening
- Education / Information

Summary Care Record
- Patient demographics
- Event Summaries
- Discharge Summaries
- Diagnosis / Problem List
- Immunisations

Medication Management
- Medication List
- Drug Dispensing History
- Adverse Drug Events
- Reconciliation & Adherence Support

National EHR Platform & Related Capabilities

Clinical Quality and Performance Management
- Balanced Scorecards
- Monitoring National Program Effectiveness
- Surveillance and Response
- Research and Clinical Trials

Identity and Access Control
- Identification of Patients, Providers and Facilities
- Audit trails and treatment pathways

Advanced Capabilities
- Enterprise Scheduling
- Disease Surveillance
- Device Home Monitoring
- Data-linkages (National Registries)

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Digital Psychiatry 2009 (DP2009)

**Inpatient**
- Clerking
- "Paper-less" ward rounds
- Home Sweet Home
- Automated medications administration
- Tele-consult Tele-mentoring

**Community-based**
- CMHT
- Nursing Homes
- Satellite clinics
- Schools, Patient’s home
- Wireless handhelds
- Patient’s Portal
- Partner’s Portal
- Tele-consult
- WAN
- Paper-less
- GP Partners
- Institute of Mental Health
- Make It Right
- Community
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Summary of IT initiatives supporting DP2009

**PATIENT’S PORTAL**
- Web-based educational material, patient support Group
- Remote monitoring
- Patient Self-assessment Tool
- Patient Health Folder
- Online Patient Self-management Tool
- Telemedicine

**INSTITUTION**
- eClinical Doc/ EMR integrated with CDMS
- Pharmacy Automation
- Patient Identification
- eOrder & Med Admin

**PARTNER’S PORTAL**
- Telemedicine
- Referral & Case Management
- Call centre, CRM, triaging & case management
- Integrated Mental Healthcare
- Patient Health Folder

**Imagine**
- Use of PDAs
- E-Triage & RFID
- E-Dashboard
- Paperless ICU
ICU CIS (CareVue)

ICU CIS CareVue Overview

A point-of-care system
- support the patient care delivery process
- facilitate documentation & management of patient medical records

A network facility interfaces with
- bedsides devices
- hospital information systems (lab, SAP)
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Bedside PC at outside each room

Nursing Documentation

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Jan 06</td>
<td>24 Jan 07 0431 HST. NO SUSPICION MRS. NO SIGN OF ORGANIC INTRUSION.</td>
</tr>
<tr>
<td></td>
<td>MOVING ALL LIMBS DEFEASIBLE.</td>
</tr>
<tr>
<td></td>
<td>ON VM 40%, MIL DEEP, DISTRESS SEEN.</td>
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<td></td>
<td>ON IV 154.</td>
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<td>SMALL SWEAT SPOT NEAR RIGHT MOLE SWEAT.</td>
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<td></td>
<td>NO OTHER PRESSURE RELATED SIGN SEEN.</td>
</tr>
<tr>
<td></td>
<td>NOIL CARE AND TURNOVERS DONE.</td>
</tr>
<tr>
<td></td>
<td>Signed: Patricia Flinders, RN</td>
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24 Jan 07 1233 HST. AN IMPROVE MRS. NO PROTECTIVE CLOTHING. ABLE TO OBEY COMMANDS AND INFORME SEPTEMBER. MOVING ALL LIMBS WELL. RISE OUT OF BED FROM 110001. COMFORTABLE ON VENTILATOR TO 100 60%. MAINTAINED ON 1.5 HM. STARTED ON CLEAR ORAL FEEDS. TAKES TABLET WELL. ALLOWED SOMMART, KTV TO START ON LIQUID IN THE EVENING. TURNOVER DONE. MOIST SKIN OVER SHOULDER SIDE OF MOLE SWEAT. WET ON WOUND INTACT. MIL KERATIN RELATED ULCER NOTED. OFF DRAIN DORE AS ORDEAS.

Signed: Guo Woon Ling, RN
Wireless Temperature Monitoring

Automated Medication Cabinet
Are we there yet?
Informatics Competencies Redq For The 21st Century

- Computer Skills
- Informatics Skills
- Informatics Knowledge

Informatics Competencies

Information Management Competencies

Human Information Processing Skills

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Nursing Informatics In Education

E-Learning
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Classroom Teaching/Lecture → E-learning

Example of Web Features
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DIMs on a PDA for students

Simulation Learning with High Fidelity Simulator
Immersion Virtual Reality Simulation

- For patient treatment e.g. treatment of anxiety disorders, phobias etc.
- For healthcare professional education

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Online Games

A game aimed at helping children to cope with anxiety.
WHY DO WE NEED APNs in the 21st Century?

Need For APNs

• Manage common chronic stable conditions like diabetes, hypertension and stroke;
• Manage patients with high acuity;
• Manage patients who have been discharged early into the community;
• Coordinate care in response to the aging population;
• Provide “right site” care;
• Expand nurses’ role;
• Establish a clinical career path for nurses;
• Stabilise the clinical environment during change of Housemen and Medical Officers postings
What outcomes are most affected by your interventions as an APN?

↓ Length of stay  ↑ Patient access to care
↓ Health care costs  ↑ Patient satisfaction
↓ Readmission rates  ↑ Staff education
↓ Complications  ↑ Continuity of care
↓ Resource education  ↑ Patient & family utilization

Class of 2004
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Future of HC is SOCIAL?

Thank You