The Future of Critical Care Nursing

Ruth M. Kleinpell PhD RN FCCM
Rush University Medical Center
Chicago, Illinois USA;
President, World Federation of Critical Care Nurses
If you don’t know where you are going, you will wind up somewhere else.

Yogi Berra

http://www.quotationspage.com/quotes/Yogi_Berra/.
What Will the Future ICU Look Like?
“Critical care nursing is brutally hard work; it’s physically, emotionally, and spiritually grueling,”

“The challenge is keeping experienced nurses from leaving. We need to keep their knowledge and experience, possibly by creating new positions where their knowledge, experience, and accumulated wisdom can be used to benefit the next generations of patients and providers.”
The Future of Nursing Leading Change, Advancing Health
Future of Nursing

• 8 Recommendations centered on 4 main issues:
  – Nurses should practice to the full extent of their education & training
  – Nurses should achieve higher levels of education & training
- Nurses should be full partners, with physicians and other healthcare providers
- Effective workforce planning and policy making require better data collection and information infrastructure
The Future of Nursing
Leading Change, Advancing Health
Report Recommendations
Recommendations:
1. Remove scope-of-practice barriers.
2. Expand opportunities for nurses to lead and diffuse collaborative improvement efforts.
3. Implement nurse residency programs.
4. Increase the proportion of nurses with a baccalaureate degree to 80 percent by 2020.
Recommendations:
5. Double the number of nurses with a doctorate by 2020.
Growth in Doctoral Nursing Programs: 2006-2013

Doctor of Nursing Practice
- 2006: 120
- 2007: 130
- 2008: 120
- 2009: 126
- 2010: 92
- 2011: 120
- 2012: 53
- 2013: 20

Research-Focused Doctoral
- 2006: 133
- 2007: 124
- 2008: 116
- 2009: 111
- 2010: 103
- 2011: 111
- 2012: 120
- 2013: 133

Source: © American Association of Colleges of Nursing. All Rights Reserved
Recommendations:

6. Ensure that nurses engage in lifelong learning.
7. Prepare and enable nurses to lead change to advance health.
8. Build an infrastructure for the collection and analysis of interprofessional health care workforce data.
The future of critical care nursing will be built on the firm foundation of our past:

- Collaborative relationships with physicians & other healthcare professionals
- A commitment to furthering nursing education & certification
- A passion for research & practice that will improve outcomes for patients
Technology & the Future of Critical Care Nursing
In 2014 there were over 100,000 health and medical apps listed in the two major app stores, Apple App Store and Google Play, and new ones are being issued every day.
research2guidance: Fitness and Medical reference apps are the largest mHealth app categories

- Fitness: 30.9%
- Medical reference: 16.6%
- Wellness: 15.5%
- Medical condition management: 6.6%
- Nutrition: 7.4%
- CME: 2.1%
- PHR: 2.6%
- Diagnostics: 1.4%
- Compliance: 1.6%
- Reminders and alerts: 1.1%
- Others: 13.6%
- Remote consultation & monitoring: 0.6%

Source: research2guidance, 808 apps from Apple App Store, Google Play, BlackBerry App World and Windows Phone Store (March 2014)
mHealth apps will have an impact on how healthcare is going to be delivered.

mHealth app impact on healthcare in the next 5 years:

- 99.4% Impact
- 0.6% No impact

- Improve patient outcome 46.2%
- Improve prevention and education 43.4%
- Reduce or slow down increase of healthcare costs 42.8%
- Improve interaction between patients and doctors 42.6%
- Enable people to take better care of their own health 37.3%
- Provide (better) access to healthcare in remote locations 28.7%
- Improve data quality on diseases to develop improved medications or treatment plans 18.9%
- Increase health consciousness of the society 14.6%

Source: research2guidance mHealth App Developer Economics survey 2014, n=2032
Practitioner Responsibility

• Practitioners
  – Use mobile apps for patient care
    • Practitioner education
    • Decision support
    • Patient education

• To recommend or not to recommend to patients?
  – Risk vs. Benefit
  – Practitioner is responsible for knowing
    • How to use apps
    • Which apps are appropriate for patient use
Expansion of Use of Telemetry

- Use of Telemedicine
- eICU
- facility linked via telemedicine and computer monitors to hospital ICU rooms
- eICU center is staffed with an intensivist-led care team

Visicu:eICU; www.visicu.com
Virtual ICU – the eICU

> 50 Health Systems in U.S. covering > 6,000 patients
Functions of eICU

• Software alerts to avoid adverse events
• On-line decision support
• Video-conferencing
• Video-assessment
• Image Acquisition
• Remote Bedside Monitoring
• Dedicated Hot Phones
27% reduction in mortality
17% shorter ICU length of stay
64% reduction in cardiac arrests
• AACN Impact Research Grant
  – Aim 1: Conduct a national benchmarking survey of nurses working in telemedicine facilities in the U.S. to identify the impact of ICU telemedicine, including barriers and benefits
  – Aim 2: Using the Delphi technique, identify priority areas of care to form the foundation for developing competencies and standards for tele-ICU nursing
In what ways have you used tele-ICU?

- I am a remote tele-ICU nurse working in a tele-ICU monitoring center: 13.5%
- I am a bedside ICU nurse that interfaces with the tele-ICU: 100%
- I work in both areas: 10.5%

N=1213
3. Using tele-ICU in my job increases my productivity.

- Strongly Agree: 20.4%
- Agree: 20.5%
- Uncertain: 15.8%
- Disagree: 20.5%
- Strongly Disagree: 5.0%
6. I find tele-ICU useful in my job.
1. The use of tele-ICU improves patient care by giving the nurse more time with the patients.
Benefits of using Tele-ICU

- Arrhythmia detection: 13%
- Physiologic instability detection: 13%
- Enhance patient safety: 14%
- Prevent falls: 9%
- Prevent self extubations: 7%
- Medical management: 15%
- IV maintenance: 5%
- Watch patient when nurse is out of the unit: 9%
- Vital sign trending: 15%
Without critical care nurses, there would be no critical care

Joseph Nates MD FCCM USA
Contrary to what many people believe, the future does not just happen. Someone, whether it be a nurse, physician, or another professional determines by action or failure to act, what the future will hold.

Each nurse needs to accept responsibility for the current state of nursing. We each own a piece of nursing’s future practice.

I want to be sure that my piece of the future matches my vision for critical care nursing. I challenge each of you to acknowledge your vision and begin to take action to place that vision into critical care nursing’s future.
“Your future is created by what you do, not {today} tomorrow”