

4-2012

Planning and integrating tablet computing in an accelerated nursing curriculum.

Anthony J. Frisby, PhD
Thomas Jefferson University

Kellie Smith, EdD, RN
Thomas Jefferson University

Kathryn Shaffer, MSN, RN
Thomas Jefferson University

Mary Hanson-Zalot, MSN, RN, AOCN
Thomas Jefferson University

Beth Ann Swan, PhD, CRNP, FAAN
Follow this and additional works at: <https://jdc.jefferson.edu/nursfp>
Thomas Jefferson University

 Part of the [Education Commons](#), and the [Nursing Commons](#)

[Let us know how access to this document benefits you](#)

Recommended Citation

Frisby, PhD, Anthony J.; Smith, EdD, RN, Kellie; Shaffer, MSN, RN, Kathryn; Hanson-Zalot, MSN, RN, AOCN, Mary; and Swan, PhD, CRNP, FAAN, Beth Ann, "Planning and integrating tablet computing in an accelerated nursing curriculum." (2012). *College of Nursing Faculty Papers & Presentations*. Paper 53.

<https://jdc.jefferson.edu/nursfp/53>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in College of Nursing Faculty Papers & Presentations by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

PLANNING AND INTEGRATING TABLET COMPUTING TECHNOLOGY IN AN ACCELERATED NURSING CURRICULUM

ANTHONY J FRISBY PhD

KELLIE SMITH EdD RN

KATHRYN SHAFFER MSN RN

MARY HANSON-ZALOT MSN RN AOCN

BETH ANN SWAN PhD CRNP FAAN





Project Origin

- Educational Technologies Advisory Group
 - Includes one representative and one alternate from:
 - Library
 - Education Services
 - JeffIT
 - JCGS, JMC, JSHP, JSN, JSP, JSPH



Project Origin

- Educational Technologies Advisory Group
 - Charged with reviewing, evaluating and recommending new instructional technologies
 - Was considering how tablet computing could enhance student learning, access to information, and potential for assessment



Project Origin

- Educational Technologies Advisory Group
 - Went from everyone wanting to work with them...
 - Down to nursing alone once we asked for specifics on how it would be incorporated into the program



JSN Background

- Since 1891, Jefferson has educated women and men as highly respected nurse clinicians, educators, and researchers.
- Jefferson School of Nursing offers a distinguished educational program that combines research and technology with compassionate care. We are one of six colleges and schools dedicated to health sciences education and research at Thomas Jefferson University.
- Jefferson's patient-centered model of healthcare education brings future nurses, pharmacists, physicians, therapists and technologists into the same classrooms and simulated clinical settings. Training together using the latest technologies in realistic environments gives students the knowledge, experience, and mindset to be successful members – and leaders – of the integrated healthcare team.



Pilot Project: JSN FACT Cohort

- The Facilitated Academic Coursework Track (FACT) is for highly talented students who already hold a bachelor's degree in a field other than nursing. FACT students earn the BSN degree in 12 consecutive months of intensive full-time study.
- Students accepted into this program option are admitted to both the undergraduate and graduate programs. During the program's undergraduate phase, students earn 55-credits, and an additional 9 graduate credits at JSN. Students are scheduled for theory course content two days per week; and clinical practicum experience 24 hours per week. This schedule allows time to integrate theoretical concepts and constructs into clinical practice. Clinical hours may include evenings and weekends.
- At the end of the program, students take the state nursing licensing exam and if successful, select their specialty area in the MSN specialty they wish to pursue.



JSN: FACT

- Jefferson School of Nursing has included using a personal digital device (qualified smart phone, pda or iPod Touch) in its curriculum for several years.
- These devices are used in the classroom, simulation laboratories and clinical setting.
- The content made available on these devices was from Unbound Medicine – Nursing Central. It included:



Welcome



Premier Nursing Resource

Nursing Central™ is the premier source of disease, drug, and test information for nurses. Five trusted references, including a leading medical dictionary and literature searching, make finding answers and improving patient care easy. [Learn More...](#)

Search Nursing Central

Browse



Davis's Drug Guide



Davis's Lab & Diagnostic Tests



Diseases and Disorders



MEDLINE Journals, Selected



Taber's, 21st Edition

Nursing Central™ for Mobile Devices

Nursing Central, available for iPhone®, BlackBerry®, Android™ and Windows Phone® is optimized for each platform and features superior navigation, so answers are easy to find at the bedside or anywhere they're needed.

Download Nursing Central





Project Objectives

1. Evaluate the usability of the iPad as single tool for accessing instructional materials used in the nursing curriculum.
2. Measure student and faculty satisfaction with using the iPad.
3. Measure student satisfaction with wireless access in the lecture hall, simulation laboratories, library and clinical sites.
4. Evaluate use of the iPad as an audience response tool, compared to the use of the handheld "clickers" used the previous year.
5. Evaluate the use of the iPad as a clinical reference tool, compared to the use of the PDD used the previous year.
6. Evaluate the use of the iPad as an assessment tool for exams in Blackboard.
7. Evaluate the usability of the iPad as single tool for accessing instructional materials used in the nursing curriculum.



Project Support

- Chief Information Officer provided funding to help offset the student cost of purchasing ipad2.
- School of Nursing Dean provided funding to purchase faculty devices.
- Education Services and University IT provided support services for faculty and student training and development.



Campus Support Services

- Classroom and library support are provided by AISR (Academic & Instructional Support & Resources)
- JeffIT is our infrastructure group responsible for wireless network, desktop computers, enterprise systems, etc.
- Together this group tested the wireless availability in the classrooms and identified where increases in services would be needed (everywhere!)
- Additional access points were installed in the classrooms and a support team of personnel from both groups would be available on the first and second days to help make sure students were able to get the iPads onto the network, sign into the email and Blackboard accounts, and provide help with any apps the students were having trouble with.

Faculty Support

- Timing – iPad2 just released
- User Manual
- Setup (campus wifi network, e-mail, calendar, etc) and ongoing support/troubleshooting
- Meaningful Use – everybody hopes for it
 - Instant access to text books
 - Include searching web in class activities
 - TurningPoint for interaction and
 - Drug dosing calculations
 - Heart sounds
 - Testing
 - Clinical companion resource



Student Support

- iPad distribution with the bookstore
- Orientation workshop and User Manual
- Getting onto the wireless network
- Setting up email
- Configuring the TurningPoint and Nursing Central applications





There's an app for that...

- Required
 - Nursing Central (purchased by students)
 - Kaplan (via Safari)
 - Elsevier's Vital Bookshelf (for ebooks, app is free)
 - TurningPoint ResponseWare (paid for by JSN)



There's an app for that...

- Recommended by us
 - Find my iPhone/iPad (free)
 - DropBox (free)
 - NCLEX-RN Quiz Cards (\$2.99)
 - Blackboard Mobile Learn (free)
 - MedLab Tutor (free)
 - Mnemonics (\$1.99)
 - Pages (\$9.99)
 - Keynote (\$9.99)
 - iStethoscope Pro (\$.99) or iAuscultate (\$.99)
 - iAnnotate (\$9.99) or Noterize (free)




Also Required/Recommended

- Passcode Lock (required)
- Wallpaper image with name and contact information (recommended)
- Erase Data on 10 failed passcode attempts (required)

iPad Launch Site






Student Organization



 **Jefferson.**



Home Help Logout

My Pulse Banner Courses Organizations JeffMail Library/JEFFLINE JeffShare PeopleSoft Campus News Index System Admin


Announcements
Information
Documents
Required and Suggested Apps
Other App Favorites
Discussion Board
Nsg skills video link
Video
Demonstrations


Tools
 Communication
 Organization Tools
 Organization Map

 Control Panel
 Quick Unenroll

 Refresh
 Detail View


[JSN FACT 2011 \(JSN-FACT-2011\)](#) > ANNOUNCEMENTS

 **Announcements**




VIEW TODAYVIEW LAST 7 DAYSVIEW LAST 30 DAYSVIEW ALL

February 10, 2012 - February 17, 2012

 **Mon, May 16, 2011 -- Welcome to FACT Class of 2012!**

Posted by: Karen Papastrat




Video Demonstrations



 **Jefferson™**



Home Help Logout

My Pulse Banner Courses Organizations JeffMail Library/JEFFLINE JeffShare PeopleSoft Campus News Index


Announcements
Information
Documents
Required and Suggested Apps
Other App Favorites
Discussion Board
Nsg skills video link
Video Demonstrations


Tools
 Communication
 Organization Tools
 Organization Map


 Control Panel
 Quick Unenroll


 Refresh
 Detail View


JSN FACT 2011 (JSN-FACT-2011) > VIDEO DEMONSTRATIONS


 **Video Demonstrations**


 **Installing iTunes**

 **Launching iTunes**


 **Editing a photo for your lock screen wallpaper**


 **Setup your lockscreen**

 **How to setup Find my iPad**

 **Registering your ResponseWare Device**
[RegisteringTPResponseWare_demo.zip](#) (Package File)


Discussion Groups: Support









 **Discussion Board**




 **Forum**


| Display Order | Forum |
|---------------|---|
| 1 | <p>iPad student-to-student support Welcome FACT Class of 2012,</p> <p>Post your questions here!</p> <p>Need an answer to your questions? Post questions here and read through the postings for more valuable information! This iPad student-to students support site offers you an opportunity to use the discussion board format to help you to become familiar with iPad technology, and get quick answers and information from your colleague related to the iPad, electronic information, e-books, app, resources and more for your iPad.</p> <p>How to post to the DISCUSSION BOARD:</p> <p>Select the highlighted word link "FORUM", which will launch you into the discussion board. To submit your answer, select "ADD A NEW THREAD" and then, type in your response and then, be sure to click on "SUBMIT". To view your fellow student responses click on the response and read. You may chose to reply to their response by selecting the "Reply" tab at the bottom of the screen and then "SUBMIT" to post it or cancel.</p> <p>How to send a group or individual EMAIL:</p> <p>Go the the "Communication Tab," left hand side, under tools. Select "send emial" to all users or to selected users.</p> <p>A special recognition and thank you to the FACT student "super-users" who volunteered to assist and help guide their fellow students!</p> <p>Rick McEwan Amber Tran Tony Pinto Chamaio Cheyenne-Rindge Eric Elcenko Christina Furia Tiffany Fearone</p> <p>Karen Papastrat, Asst. Dean Senior Level</p> |

Discussion Groups: Apps

 **Organization Discussions: Share new apps** Tree View List View

 Thread  Remove  Collect  Flag  Clear Flag  Mark Read  Mark Unread  Search

| | | | |
|--------------------------|--|-----------------|------------------|
| <input type="checkbox"/> |  Love Notarize | Jillian Bird | 5/24/11 9:27 PM |
| <input type="checkbox"/> |  RE: Love Notarize | Anne Spiegelman | 6/4/11 9:18 PM |
| <input type="checkbox"/> | RE: Love Notarize | Jillian Bird | 6/5/11 10:36 PM |
| <input type="checkbox"/> | RE: Love Notarize | Jillian Bird | 6/5/11 10:37 PM |
| <input type="checkbox"/> | RE: Love Notarize | Jillian Bird | 6/5/11 10:37 PM |
| <input type="checkbox"/> |  Applications that may peak your interest | Amber Tran | 5/30/11 12:23 PM |

 Refresh Expand All Collapse All



Evaluation

- Student Demographic and Orientation Surveys
- Student and Faculty Satisfaction Surveys
- Student and Faculty Focus Groups
- Classroom Observation
- Course Evaluations

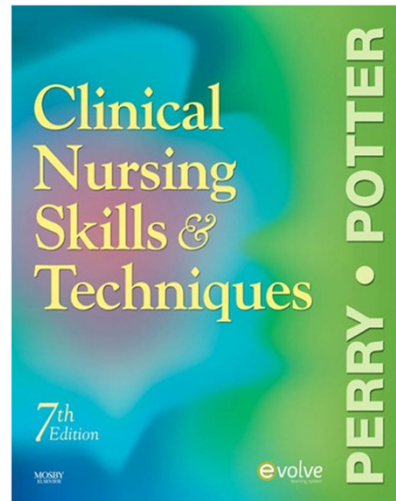


Next...

- We are continuing with the FACT program again this year – new ebook provider.
- We are expanding to the traditional undergraduate program (entering students, not required for seniors)
- We are expanding to the DNP
- And we're moving to an alternative eBook source, Kno.

Next: Changing from Elsevier Vital Source Bookshelf to Kno

Bookshelf Clinical Nursing Skills & Techniques, 7th Edition Clinical Nursing Skills & Techniques Aa



Clinical Nursing Skills & Techniques

7th ed.

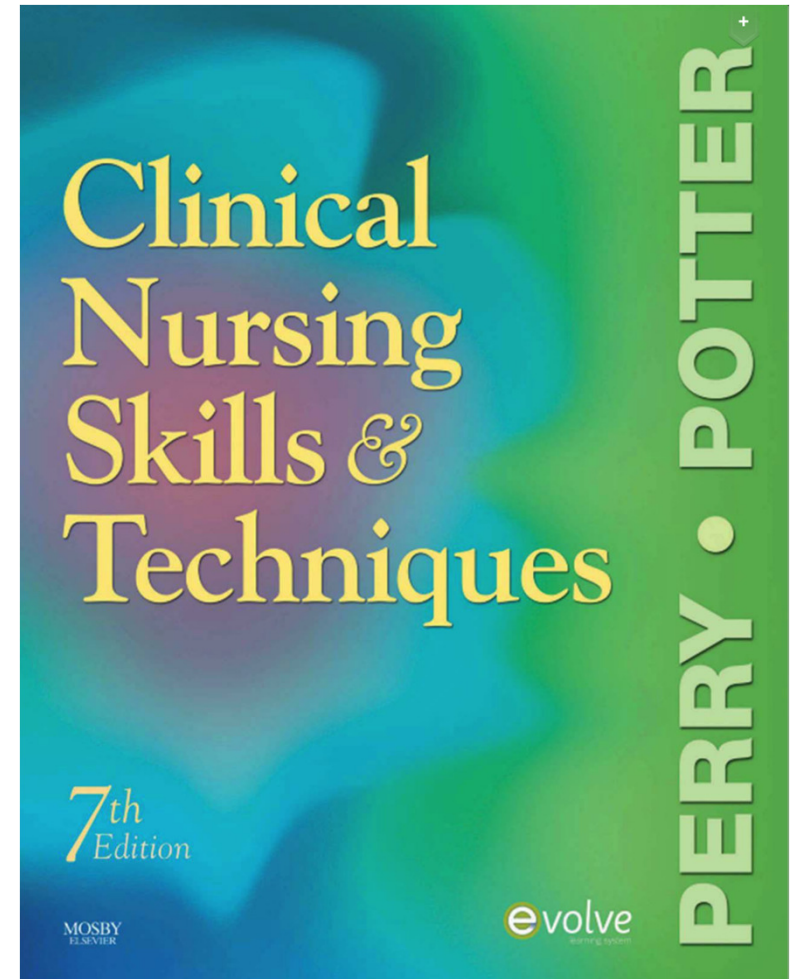
Anne Griffin Perry, RN, EdD, FAAN

Associate Dean and Professor, School of Nursing, Southern Illinois University–Edwardsville,
Edwardsville, Illinois

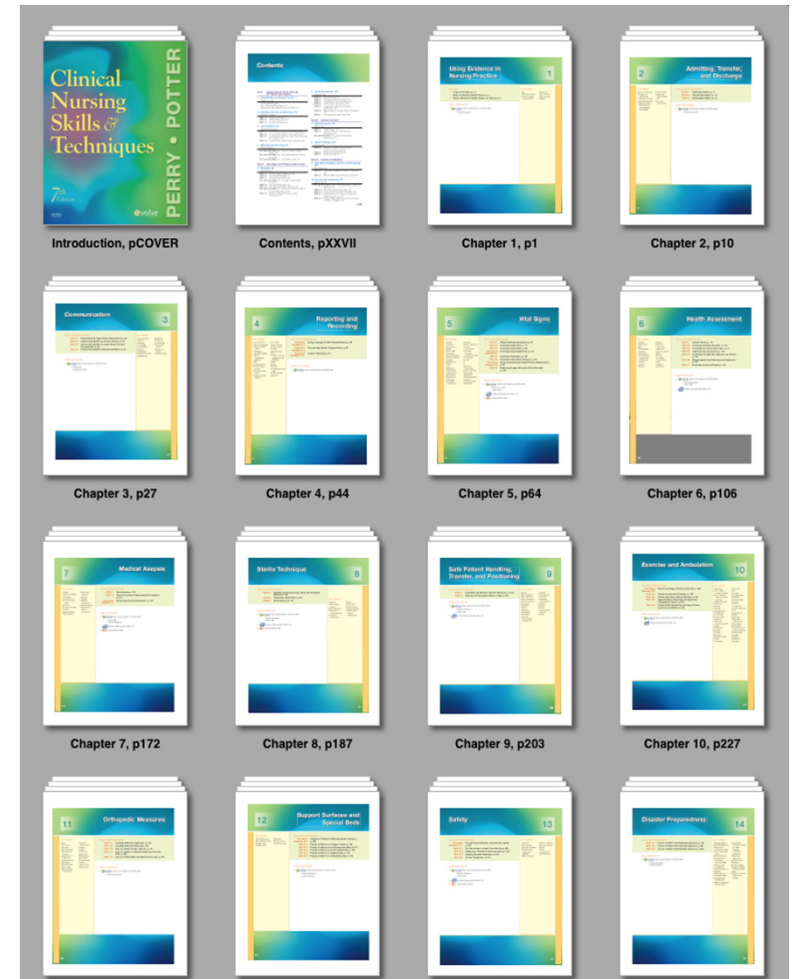
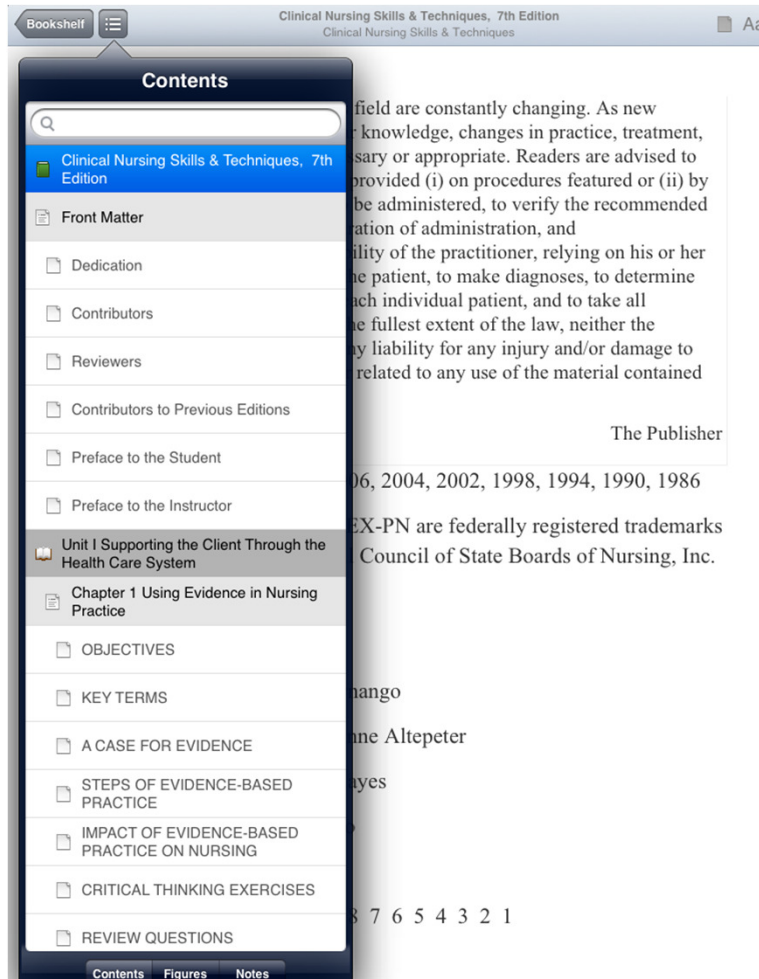
Patricia A. Potter, RN, MSN, PhD, FAAN

Research Scientist, Siteman Cancer Center at Barnes-Jewish Hospital and Washington University
School of Medicine, St. Louis, Missouri

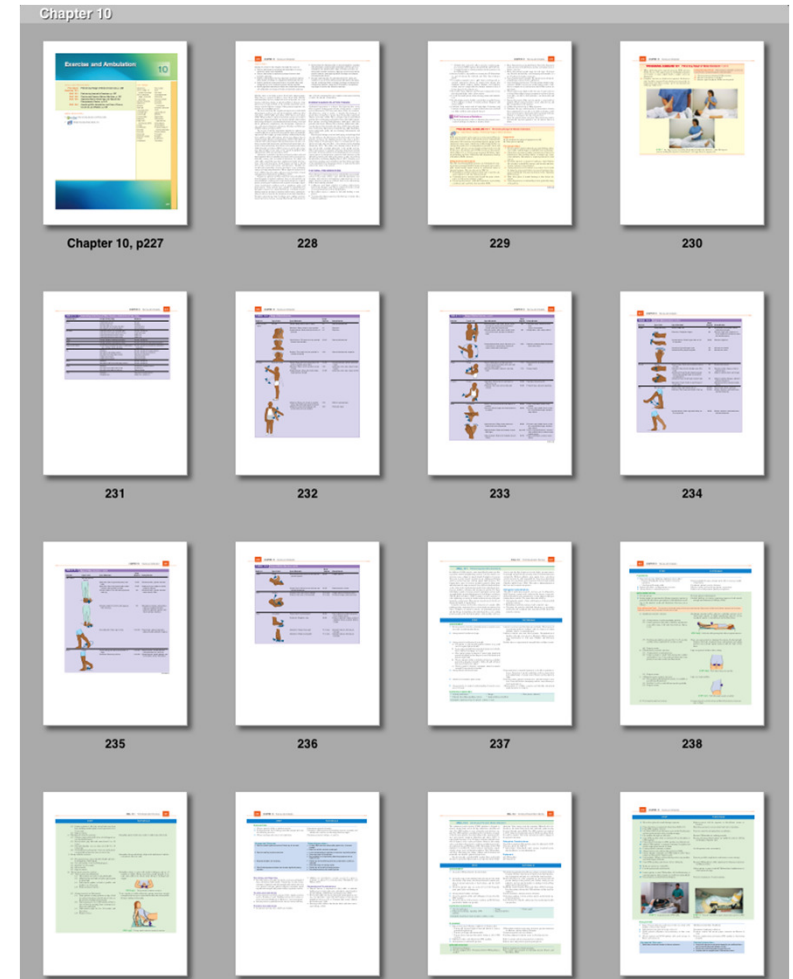
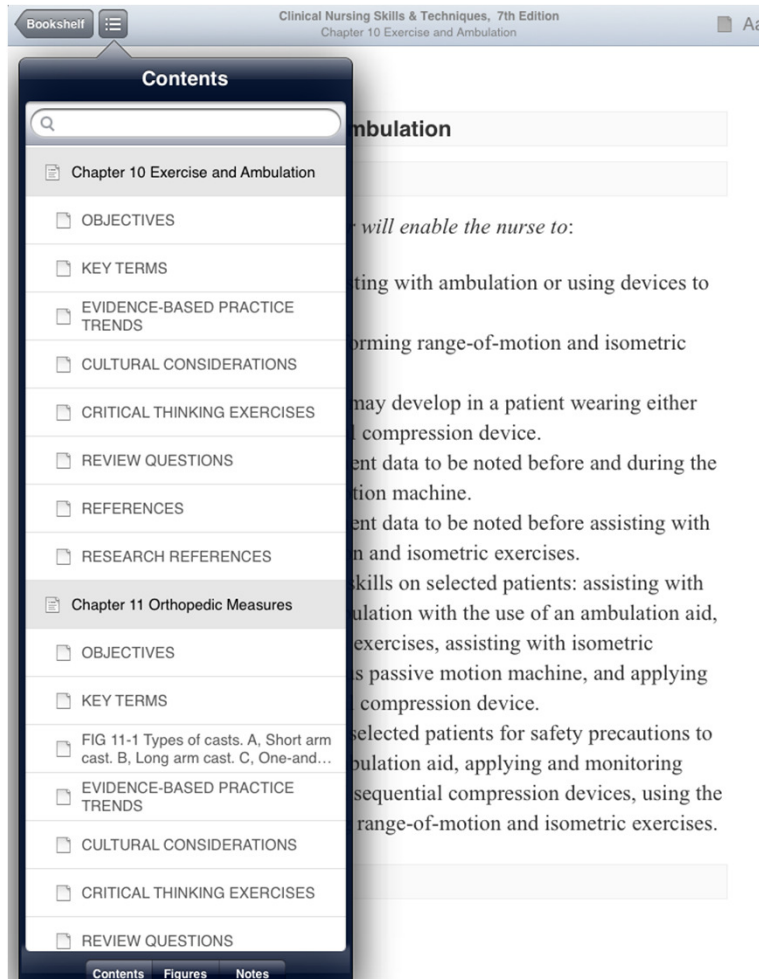
Section Editor



Next: Changing from Elsevier Vital Source Bookshelf to Kno



Next: Changing from Elsevier Vital Source Bookshelf to Kno



Next: Changing from Elsevier Vital Source Bookshelf to Kno

rationales for the ROM exercises, and describe and demonstrate exercises to be performed.

- 4 Assess patient's level of comfort (on a scale of 0 to 10 with 10 being the worst pain) before exercises. Determine if patient would benefit from pain medication before beginning ROM exercises.
- 5 Wear clean gloves if wound drainage or skin lesions are present.
- 6 Assist the patient to a comfortable position, preferably sitting or lying down.
- 7 When performing active-assisted or passive ROM exercises ([Table 10-2, p. 232](#)), support joint by holding distal portion of extremity or using cupped hand to support joint (see illustration).

STEP 7 A, Support joint by holding distal and proximal areas adjacent to joint. B, Support joint by cradling distal portion of extremity. C, Use cupped hand to support joint.

- Orthodox Jews may not be able to operate a continuous passive motion (CPM) machine during Sabbath and Holy Days.
- Consult the rabbi to obtain permission for the patient to use the CPM machine.
- Nurses should be responsible for turning the CPM machine on and off during the Sabbath and Holy Days (Galanti, 2003).
- Use gender-congruent care to apply elastic stockings and sequential compression devices for women from cultures that emphasize female modesty. Hindus, Muslims, and Orthodox women may not comply with the treatment measure for fear of being exposed to the opposite sex.
- Most elder Asian, Hispanic, and African women prefer to bare their legs and thighs only to other women.
- Provide for female privacy when assisting patients with ambulation.
- Muslim females need to be fully covered when in public because of the emphasis on hijab, or female modesty (Simpson and others, 2008).
- Southeast Asian women such as Cambodians, Vietnamese, and Laotians severely restrict exposure of their lower torso and will not likely ambulate unless properly dressed.

Skill Performance Guidelines

- 1 Check the physician's orders to determine the patient's activity level and type of exercises or assistive device.

- 2 Know the patient's past medical history. Know why the patient needs assistance with ambulation and any contraindications or limits to exercise.
- 3 Know the patient's normal range for vital signs. Vital signs vary. Exercise and mobility can be fatiguing and stressful, so a set of baseline vital signs is necessary.
- 4 Assess baseline muscle strength. The patient may need muscle-strengthening exercises before ambulation.
- 5 Assess baseline joint function. This determines whether range-of-motion (ROM) exercises are needed and provides a baseline for comparison of joint function after ROM exercises are performed.
- 6 Obtain and become familiar with the type of assistive device to be used. Knowledge of proper preparation and use of devices is needed to be able to teach patients to use them safely and correctly.
- 7 Prepare the patient. Make sure the patient is rested and not fatigued. Obtain extra personnel to assist, safety devices, and flat, nonskid shoes for the patient.
- 8 Address the patient's fear of falling if present.
- 9 Determine the type and frequency of intervention. Activity that is appropriate for one day or one shift can change, resulting in an increased or decreased need for assistance with ambulation or a change in the type of intervention.
- 10 Know the patient's home care plan. The patient may need to continue the exercise regimen or use an assistive device at home.

PROCEDURAL GUIDELINE 10-1 Performing Range-of-Motion Exercises

Basic / Safe Patient Handling / Performing Range-of-Motion Exercises

ROM exercises may be active, passive, or active assisted. They are active if the patient is able to perform the exercise independently and passive if the exercises are performed for the patient by the caregiver. In every aspect of activities of daily living (ADLs), encourage the patient to be as independent as possible. Active and passive ROM exercises are encouraged and supervised every day by the nurse. Incorporate active ROM exercises in the patient's ADLs (Table 10-1, p. 231). Incorporate passive ROM into bathing and feeding activities. Collaborate with the patient to develop a schedule for ROM activities.

Delegation Considerations

The skill of performing ROM exercises can be delegated to nursing assistive personnel (NAP). Patients with spinal cord or orthopedic trauma usually require exercise by professional nurses or physical therapists. The nurse directs the NAP by:

- Reminding to perform exercises slowly and to provide adequate support to each joint being exercised.
- Cautioning not to exercise joints beyond the point of resistance or to the point of fatigue or pain.
- Discussing the patient's individual limitations or preexisting conditions such as arthritis that may affect ROM.

Equipment

- No mechanical or physical equipment needed
- Clean gloves (*optional*)

Procedural Steps

- 1 Review patient's chart for physical assessment findings, physician's orders, medical diagnosis, medical history, and progress.
- 2 Obtain data on patient's baseline joint function. Observe for limitations in joint mobility, redness, or warmth over joints, joint tenderness, deformities, or crepitus produced by joint motion.
- 3 Determine patient's or caregiver's readiness to learn. Explain all rationales for the ROM exercises, and describe and demonstrate exercises to be performed.
- 4 Assess patient's level of comfort (on a scale of 0 to 10 with 10 being the worst pain) before exercises. Determine if patient would benefit from pain medication before beginning ROM exercises.
- 5 Wear clean gloves if wound drainage or skin lesions are present.
- 6 Assist the patient to a comfortable position, preferably sitting or lying down.

Continued

Next: Changing from Elsevier Vital Source Bookshelf to Kno

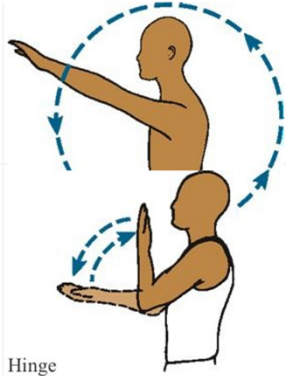







| | | | | |
|---------|---|---|-------|-----------------|
| Elbow |  | Flexion: Bend elbow so that lower arm moves toward its shoulder joint and hand is level with shoulder | 150 | Biceps brachii |
| | Hinge | Extension: Straighten elbow by lowering hand | 150 | Triceps brachii |
| Forearm |  | Supination: Turn lower arm and hand so that palm is up | 70-90 | Supinator |
| | | Pronation: Turn lower arm so that palm is down | 70-90 | Pronator |
| | Pivotal | | | |

TABLE 10-2 Range-of-Motion Exercises—cont'd

| Body Part | Type of Joint | Type of Movement | Range (Degrees) | Primary Muscles |
|---|---|--|-----------------|--|
|  |  | Internal rotation: With elbow flexed, rotate shoulder by moving arm until thumb is turned inward and toward back | 90 | Pectoralis major, latissimus dorsi, teres major, subscapularis |
| | | External rotation: With elbow flexed, move arm until thumb is upward and lateral to head | 90 | Infraspinatus, teres major, deltoid |
| | | Circumduction: Move arm in full circle, (circumduction is combination of all movements of ball-and-socket joint) | 360 | Deltoid, coracobrachialis, latissimus dorsi, teres major |
| Elbow |  | Flexion: Bend elbow so that lower arm moves toward its shoulder joint and hand is level with shoulder | 150 | Biceps brachii, brachialis, brachioradialis |
| | | Extension: Straighten elbow by lowering hand | 150 | Triceps brachii |
| Forearm |  | Supination: Turn lower arm and hand so that palm is up | 70-90 | Supinator, biceps brachii |
| | | Pronation: Turn lower arm so that palm is down | 70-90 | Pronator teres, pronator quadratus |
| Wrist |  | Flexion: move palm toward inner aspect of forearm | 80-90 | Flexor carpi ulnaris, flexor carpi radialis |
| | | Extension: Move fingers and hand posterior to midline | 80-90 | Extensor carpi radialis brevis, extensor carpi radialis longus, extensor carpi ulnaris |
| |  | Hyperextension: Bring dorsal surface of hand back as far as possible | 80-90 | Extensor carpi radialis brevis, extensor carpi radialis longus, extensor carpi ulnaris |
| | | Radial deviation: Bend wrist laterally toward fifth finger | Up to 30 | Flexor carpi radialis brevis, extensor carpi radialis brevis, extensor carpi radialis longus |
| | | Ulnar deviation: Bend wrist medially toward thumb | 30-50 | Flexor carpi ulnaris, extensor carpi ulnaris |

Continued

No way back from here, have to go to table of contents.

Next: Changing from Elsevier Vital Source Bookshelf to Kno

rationales for the ROM exercises, and describe and demonstrate exercises to be performed.

- 4 Assess patient's level of comfort (on a scale of 0 to 10 with 10 being the worst pain) before exercises. Determine if patient would benefit from pain medication before beginning ROM exercises.
- 5 Wear clean gloves if wound drainage or skin lesions are present.
- 6 Assist the patient to down.

7 When performing active-assisted or passive ROM exercises (Table 10-2, p. 232), support joint by holding distal portion of extremity or using cupped hand to support joint (see illustration).

STEP 7 A, Support joint by holding distal and proximal areas adjacent to joint. B, Support joint by cradling distal portion of extremity. C, Use cupped hand to support joint.

- Orthodox Jews may not be able to operate a continuous passive motion (CPM) machine during Sabbath and Holy Days.
 - Consult the rabbi to obtain permission for the patient to use the CPM machine.
 - Nurses should be responsible for turning the CPM machine on and off during the Sabbath and Holy Days (Galanti, 2003).
 - Use gender-congruent care to apply elastic stockings and sequential compression devices for women from cultures that emphasize female modesty. Hindus, Muslims, and Orthodox women may not comply with the treatment measure for fear of being exposed to the opposite sex.
 - Most elder Asian, Hispanic, and African women prefer to bare their legs and thighs only to other women.
 - Provide for female privacy when assisting patients with ambulation.
 - Muslim females need to be fully covered when in public because of the emphasis on hijab, or female modesty (Simpson and others, 2008).
 - Southeast Asian women such as Cambodians, Vietnamese, and Laotians severely restrict exposure of their lower torso and will not likely ambulate unless properly dressed.
- Skill Performance Guidelines**
- 1 Check the physician's orders to determine the patient's activity level and type of exercises or assistive device.
 - 2 Know the patient's past medical history. Know why the patient needs assistance with ambulation and any contraindications or limits to exercise.
 - 3 Know the patient's normal range for vital signs. Vital signs vary. Exercise and mobility can be fatiguing and stressful, so a set of baseline vital signs is necessary.
 - 4 Assess baseline muscle strength. The patient may need muscle strengthening exercises before ambulation.
 - 5 Assess baseline joint function. This determines whether range-of-motion (ROM) exercises are needed and provides a baseline for comparison of joint function after ROM exercises are performed.
 - 6 Obtain and become familiar with the type of assistive device to be used. Knowledge of proper preparation and use of devices is needed to be able to teach patients to use them safely and correctly.
 - 7 Prepare the patient. Make sure the patient is rested and not fatigued. Obtain extra personnel to assist, safety devices, and flat, nonskid shoes for the patient.
 - 8 Address the patient's fear of falling if present.
 - 9 Determine the type and frequency of intervention. Activity that is appropriate for one day or one shift can change, resulting in an increased or decreased need for assistance with ambulation or a change in the type of intervention.
 - 10 Know the patient's home care plan. The patient may need to continue the exercise regimen or use an assistive device at home.

PROCEDURAL GUIDELINE 10-1 Performing Range-of-Motion Exercises

Basic / Safe Patient Handling / Performing Range-of-Motion Exercises

ROM exercises may be active, passive, or active assisted. They are active if the patient is able to perform the exercise independently and passive if the exercises are performed for the patient by the caregiver. In every aspect of activities of daily living (ADLs), encourage the patient to be as independent as possible. Active and passive ROM exercises are encouraged and supervised every day by the nurse. Incorporate active ROM exercises in the patient's ADLs (Table 10-1, p. 231). Incorporate passive ROM into bathing and feeding activities. Collaborate with the patient to develop a schedule for ROM activities.

Delegation Considerations

The skill of performing ROM exercises can be delegated to nursing assistive personnel (NAP). Patients with spinal cord or orthopedic trauma usually require exercise by professional nurses or physical therapists. The nurse directs the NAP by:

- Reminding to perform exercises slowly and to provide adequate support to each joint being exercised.
- Cautioning not to exercise joints beyond the point of resistance or to the point of fatigue or pain.
- Discussing the patient's individual limitations or preexisting conditions such as arthritis that may affect ROM.

Equipment

- No mechanical or physical equipment needed
- Clean gloves (optional)

Procedural Steps

- 1 Review patient's chart for physical assessment findings, physician's orders, medical diagnosis, medical history, and progress.
- 2 Obtain data on patient's baseline joint function. Observe for limitations in joint mobility, redness, or warmth over joints, joint tenderness, deformities, or crepitus produced by joint motion.
- 3 Determine patient's or caregiver's readiness to learn. Explain all rationales for the ROM exercises, and describe and demonstrate exercises to be performed.
- 4 Assess patient's level of comfort (on a scale of 0 to 10 with 10 being the worst pain) before exercises. Determine if patient would benefit from pain medication before beginning ROM exercises.
- 5 Wear clean gloves if wound drainage or skin lesions are present.
- 6 Assist the patient to a comfortable position, preferably sitting or lying down.

Continued

Next: Changing from Elsevier Vital Source Bookshelf to Kno

rationales for the ROM exercises, and describe and demonstrate exercises to be performed.

- 4 Assess patient's level of comfort (on a scale of 0 to 10 with 10 being the worst pain) before exercises. Determine if patient would benefit from pain medication before beginning ROM exercises.
- 5 Wear clean gloves if wound drainage or skin lesions are present.
- 6 Assist the patient to a comfortable position, preferably sitting or lying down.

7 When performing active-assisted or passive ROM exercises (Table 10-2, p. 232), support joint by holding distal portion of extremity or using cupped hand to support joint (see illustration).

STEP 7 A, Support joint by holding distal and proximal areas adjacent to joint. B, Support joint by cradling distal portion of extremity. C, Use cupped hand to support joint.

- Orthodox Jews may not be able to operate a continuous passive motion (CPM) machine during Sabbath and Holy Days.
- Consult the rabbi to obtain permission for the patient to use the CPM machine.
- Nurses should be responsible for turning the CPM machine on and off during the Sabbath and Holy Days (Galanti, 2003).
- Use gender-congruent care to apply elastic stockings and sequential compression devices for women from cultures that emphasize female modesty. Hindus, Muslims, and Orthodox women may not comply with the treatment measure for fear of being exposed to the opposite sex.
- Most elder Asian, Hispanic, and African women cover their legs and thighs only to other women.
- Provide for female privacy when assisting patients with ambulation.
- Muslim females need to be fully covered when in public because of the emphasis on hijab, or female modesty (Simpson and others, 2008).
- Southeast Asian women such as Cambodians, Vietnamese, and Laotians severely restrict exposure of their lower torso and will not likely ambulate unless properly dressed.

Skill Performance Guidelines

- 1 Check the physician's orders to determine the patient's activity level and type of exercises or assistive device.

- 2 Know the patient's past medical history. Know why the patient needs assistance with ambulation and any contraindications or limits to exercise.
- 3 Know the patient's normal range for vital signs. Vital signs vary. Exercise and mobility can be fatiguing and stressful, so a set of baseline vital signs is necessary.
- 4 Assess baseline muscle strength. The patient may need muscle-strengthening exercises before ambulation.
- 5 Assess baseline joint function. This determines whether range-of-motion (ROM) exercises are needed and provides a baseline for comparison of joint function after ROM exercises are performed.
- 6 Prepare the patient. Prepare the patient with the type of assistive device and proper preparation and use of devices to teach patients to use them safely and correctly.
- 7 Prepare the patient. Make sure the patient is rested and not fatigued. Obtain extra personnel to assist, safety devices, and flat, nonskid shoes for the patient.
- 8 Address the patient's fear of falling if present.
- 9 Determine the type and frequency of intervention. Activity that is appropriate for one day or one shift can change, resulting in an increased or decreased need for assistance with ambulation or a change in the type of intervention.
- 10 Know the patient's home care plan. The patient may need to continue the exercise regimen or use an assistive device at home.

PROCEDURAL GUIDELINE 10-1 Performing Range-of-Motion Exercises

Basic / Safe Patient Handling / Performing Range-of-Motion Exercises

ROM exercises may be active, passive, or active assisted. They are active if the patient is able to perform the exercise independently and passive if the exercises are performed for the patient by the caregiver. In every aspect of activities of daily living (ADLs), encourage the patient to be as independent as possible. Active and passive ROM exercises are encouraged and supervised every day by the nurse. Incorporate active ROM exercises in the patient's ADLs (Table 10-1, p. 231). Incorporate passive ROM into bathing and feeding activities. Collaborate with the patient to develop a schedule for ROM activities.

Delegation Considerations

The skill of performing ROM exercises can be delegated to nursing assistive personnel (NAP). Patients with spinal cord or orthopedic trauma usually require exercise by professional nurses or physical therapists. The nurse directs the NAP by:

- Reminding to perform exercises slowly and to provide adequate support to each joint being exercised.
- Cautioning not to exercise joints beyond the point of resistance or to the point of fatigue or pain.
- Discussing the patient's individual limitations or preexisting conditions such as arthritis that may affect ROM.

Equipment

- No mechanical or physical equipment needed
- Clean gloves (optional)

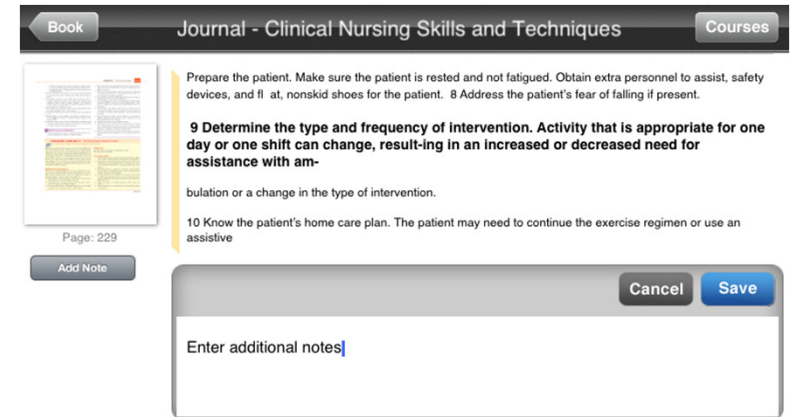
Procedural Steps

- 1 Review patient's chart for physical assessment findings, physician's orders, medical diagnosis, medical history, and progress.
- 2 Obtain data on patient's baseline joint function. Observe for limitations in joint mobility, redness, or warmth over joints, joint tenderness, deformities, or crepitus produced by joint motion.
- 3 Determine patient's or caregiver's readiness to learn. Explain all rationales for the ROM exercises, and describe and demonstrate exercises to be performed.
- 4 Assess patient's level of comfort (on a scale of 0 to 10 with 10 being the worst pain) before exercises. Determine if patient would benefit from pain medication before beginning ROM exercises.
- 5 Wear clean gloves if wound drainage or skin lesions are present.
- 6 Assist the patient to a comfortable position, preferably sitting or lying down.

Continued

Next: Changing from Elsevier Vital Source Bookshelf to Kno

- Kno collects the highlights I make and builds a “journal” I can use for review.





Q & A

Contact information:

Anthony.Frisby@jefferson.edu

Kellie.Smith@jefferson.edu