SMARTSTART AT RVCC

INSTRUCTOR MANUAL

Students with Documented Learning Disabilities

Reasonable Accommodations: Students with disabilities who require accommodations (academic adjustments and / or auxiliary aids or services) for this course MUST provide documentation for accommodations from the RVCC office of disability Services, C143.

No accommodations will be made without this documentation.

For additional information, go to the Disabilities Services website at http://www.raritanval.edu/studentserv/disa/disabilityhome.html

RARITAN VALLEY COMMUNITY COLLEGE



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Academic

Departments

https://www.raritanval.edu/academic-

programs/academic-departments/health-

<u>science</u>

EdReady Link

https://rvcc.edready.org

COUNTY COLLEGE OF MORRIS



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Health Care Training http://catalog.ccm.edu/noncredit/fall/career-

professional-programs/health-

occupations/tuition-free-healthcare-training/

Healthgrant <u>www.ccm.edu/healthgrant</u>

EdReady Link: <u>www.ccm.edready.org</u>

MERCER COUNTY COMMUNITY COLLEGE



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Health Careers

http://www.mccc.edu/ccs/healthcareers.shtml

EdReady Link

www.mccc.edready.org

BROOKDALE SBROOKDALE COMMUNITY COLLEGE COMMUNITY COLLEGE

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Continuing Education

https://www.brookdalecc.edu/continuing

ed/healthcare/

EdReady Link:

https://brookdale.edready.org/home

PASSAIC COUNTY COMMUNITY COLLEGE



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Passaic County Community

College

www.pccc.edu/ce

EdReady Link

https://pccc.edready.org





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Continuing Education

https://www.middlesexcc.edu/continuing-

education/free-allied-health-training/

EdReady Link

https://middlesexcc.edready.org/login





Salwa Muhammad **Site Coordinator**

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http://bergen.edu/academics/continuing-Continuing Education

education/

Course Programs http://bergen.edu/academics/continuing-

education/courses-programs/

https://bergen.edready.org EdReady Link

CAREER MAP

Insert an image of front and back of the Career Map – this can be found on Skills Commons

Link for Career Map

https://www.skillscommons.org/handle/taaccct/10349

ADD IMAGE

• If doing on line Add screenshots and information for accessing online learning platform that you will use to deploy course.

I AM A FUTURE HEALTH CARE PROFESSIONAL

SMART START AT RVCC - INTRODUCTION TO HEALTH CARE CAREER OPPORTUNITES

SMART START CLASSES

- INTRODUCTION TO HEALTH CARE CAREERS
- WHO IS THIS CLASS FOR:
 - HIGH SCHOOL STUDENT OVER 18 YEARS OF AGE
 - UNEMPLOYED INDIVIDUALS
 - UNDEREMPLOYED INDIVIDUALS
 - INDIVIDUALS INTERESTED IN FIRST AND SECOND CAREERS

PURPOSE OF COURSE

- To provide information on the Health Care arena in the 21st century
- Introduce students to different Health Care careers
- Help student determine if they are interested in a Health Care career path
- Identify required preparation and education for several Health Care professions
- Identify where information on job locations, salary range can be found.

SMARTSTART AT RVCC (DAY ONE)

DAY ONE - WHY SHOULD YOU BECOME A HEALTH CARE PROFESSIONAL?

DAY ONE OBJECTIVES

- Define health care in the 21st century
- Discuss ethical and legal issues in health care
- Define HIPPA
- Discuss specific health care professions
- Discuss how to get started in a health care career
- Discuss search of career opportunities, salaries and probable locations
- Preparation for required education
- Assessment of individual learning style

HEALTH CARE IN THE 21ST CENTURY

- 4.2 MILLION INCREASE IN HEALTH CARE JOBS IS EXPECTED BETWEEN 2010 AND 2020
- 63% OF THOSE INCREASED JOBS WILL BE IN AMBULATORY SETTINGS

https://www.healthit.gov/sites/default/files/chws_bls_report_2012.pdf

LEGAL AND ETHICAL ISSUES

ETHICAL ISSUES

- ACCESS TO CARE
- END OF LIFE ISSUES
- DECISION-MAKING FOR PEDIATRIC AND GERIATRIC PATIENTS
- PATIENT WELFARE

LEGAL ISSUES

- MALPRACTICE
- INFORMED CONSENT
- PATIENT CONFIDENTIALITY
- HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT -HIPAA

WHAT IS HIPAA?

HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA)

- PROTECTS PATIENT CONFIDENTIALITY
- HELPS PATIENTS MAINTAIN HEALTH INSURANCE
- PROTECTS THE CONFIDENTIALITY OF PATIENT HEALTH INFORMATION

HEALTH CARE PROFESSIONS

- ATHLETIC TRAINER*
- CARDIOVASCULAR TECHNOLOGIST
- CERTIFIED NURSING ASSISTANT*
- CLINICAL CODER/MEDICAL CODER*
- DENTAL ASSISTANT*/HYGIENIST
- EKG TECHNICIAN*
- EMT/PARAMEDIC
- HEALTH INFORMATION TECHNOLOGIST*
- LANGUAGE INTERPRETOR
- MEDICAL ASSISTANT*

- NURSE RN*/LPN
- NUTRITIONIST
- OCCUPATIONAL/PHYSICAL THERAPIST
- OPHTHALMIC TECHNICIAN*
- PHARMACY TECHNICIAN*
- PHLEBOTOMIST*
- RADIOGRAPHER
- RESPIRATORY THERAPIST
- SONOGRAPHER
- SURGICAL TECHNICIAN
- THERAPIST
- *COURSES/PROGRAMS CURRENTLY OFFERED AT RVCC

PROFESSIONAL ASSOCIATIONS AND WEBSITES

- Dental Hygienist http://www.adha.org
- EKG Technician http://www.CAAHEP.org
- EMT http://www.nremt.org
- EMT/Paramedic -
 http://www.paramedicemttraining.c
 om
- Language Interpretation -<u>http://ccie-accreditation.org</u>
- Medical Assistant –
 http://www.bls.gov/ooh/healthcare/medical-assistants.htm

- New Jersey Board of Nursing www.state.nj.us/oag/ca/medical/nurs ing.htm
- National League for Nursing www.nln.org
- Occupational Therapy www.acote.org
- American Association of Respiratory Care – <u>www.aarc.org</u>
- Association of Surgical Technologists
 http://www.ast.org

GETTING STARTED

WHAT INFORMATION DO I NEED?

- Career Opportunities
- Job locations
- Salary Ranges
- Required education

WHERE TO LOOK FOR INFORMATION? - LOCATED ON RVCC LION'S DEN



ADD RESOURCES

• Add resources that your college uses for career services and career planning that students may want to visit.

WHO WILL BE MY CLIENTS?

What Do You See When You Look At Me Nurse www.youtube.com/watch?v=LOtNdn_GsMc

"IF WE COULD SEE INSIDE OTHERS' HEARTS": LIFE, in 4 min https://www.youtube.com/watch?v=Wl2 knlv xw

WHAT IS MY LEARNING STYLE?

- Auditory Learner
- Visual Learner
- Kinesthetic Learner
- Take a free learning style inventory at Pennsylvania State University http://www.personal.psu.edu/bxb11/LSI/LSI.htm

SMART START AT RVCC (DAY TWO)

DAY TWO - PROFESSIONALISM AND INTRODUCTION TO THE LANGUAGE OF MEDICINE

DAY TWO OBJECTIVES

- Define professionalism
- Discuss transition from student to employee
 Resume writing, Job interview
- Discuss components of EXCELLENT customer service
 Accountability, Attitude, Reliability, Verbal and Written Communication
- Introduce medical terminology
 Medical Terms, Acceptable Abbreviations, Body Systems
- Demonstrate use of the military clock

PROFESSIONALISM — WHAT IS IT?

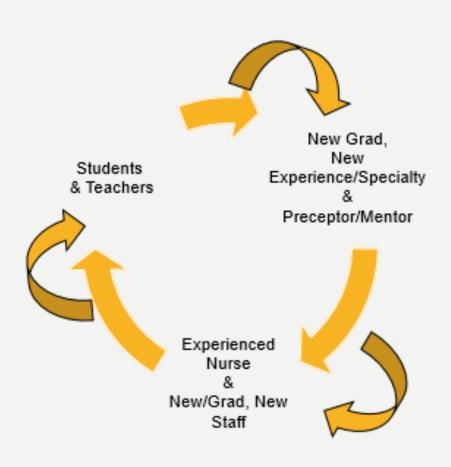
- Definitions
- Components of Professions
- Professional Requirements

WHAT IS A PROFESSIONAL TO YOU?

• List characteristics that you have observed in the past?

TRANSITIONAL ROLE FROM STUDENT TO PROFESSIONAL

TRANSITION FROM STUDENT TO EMPLOYEE



KEYS TO SUCCESS FOR NEW HEALTHCARE PROFESSIONALS

- CRITICAL THINKING SKILLS
- PROBLEM-SOLVING SKILLS
- PRIORITIZATION
- MOTIVATION
- TEAM WORK, SENSE OF COMMUNITY

SUCCESS ON LICENSING AND CERTIFICATION EXAMS

- STUDY, STUDY, STUDY
- EVALUATE YOUR LEARNING AND STUDY STYLES
- ENROLL IN A REVIEW COURSE IF AVAILABLE
- PRACTICE QUESTIONS
- PREPARE PHYSICALLY AND MENTALLY FOR EXAM (Rest, Sleep, Food)

GETTING THE JOB

- THE RESUME
- PRE-INTERVIEW, DO YOUR HOMEWORK
- THE INTERVIEW
- DRESS CODE AND BEHAVIOR
- POST-INTERVIEW

IS THIS THE JOB FOR MEP

- URBAN vs. RURAL, INNER CITY vs. COMMUNITY HOSPITAL
- CLINICS, PHYSICIAN'S OFFICES, LABORATORIES, SCHOOLS
- AVAILABLE POSITIONS, VARIED PRACTICE SETTINGS
- ORIENTATION
- COMPENSATION, BENEFITS
- TRAVEL DISTANCE AND TIME

KEEP GROWING!

- CONTINUING EDUCATION, JOURNALS, CONVENTIONS, SEMINARS, WORKSHOPS
- SPECIALTY CERTIFICATIONS
- HIGHER EDUCATION INSTITUTIONS AND PROGRAMS
- PROFESSIONAL ASSOCIATIONS
- SHARING WITH COLLEAGUES
- NEW AND ONGOING RESEARCH

GOALS

• WHERE DO I SEE MYSELF IN

I YEAR?

5YEARS?

IOYEARS?

MOLD YOUR CAREERS!

- Transition from Student to Health Care Professional is challenging and often has many steps along the way...
- ... Face change head on with a clear, focused plan
- Go forth and mold your careers and your life!

ADD RESOURCE

- Insert Networking session PowerPoint 'Writing the Effective Resume.'
 This can be found on Skills Commons
- Link: https://www.skillscommons.org/handle/taaccct/8715

QUESTIONS & ANSWERS

ADD RESOURCES (PG. 2)

- Insert the Slides and presentation materials on "6 Secrets to Writing a Great Cover Letter which can be found on Skills Commons
- Link: https://www.skillscommons.org/handle/taaccct/8601

SMART START AT RVICED (CUSTOMER SERVICE)

CUSTOMER SERVICE

COMPONENTS OF CUSTOMER SERVICE

- Accountability
- Reliability
- Verbal and Written Communication
- https://www.youtube.com/watch?v=y2Z4OEhufTQ
- https://www.youtube.com/watch?v=WIRY_72O_LQ
- Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)
- https://www.youtube.com/watch?v=0jPk6CtK360
- Exercise: Can you give an example of good customer service?

COMMUNICATION EXERCISE

• Reflection Exercise: Think about a time you misinterpreted communication. Think about how easy and common it is to misinterpret messages. Think also of times when you have said – "Well, had I known that, I would have ...?" This is a classic example of gaps in communication.

CONFLICT RESOLUTION

Assertive vs. Aggressive behavior

Cool down before discussing conflict with those involved

• Use assertive communication to discuss the issue, problem-solve and strive for a win-win solution

CULTURE IS ...

• Culture

• Culture and Health Care

SMARTSTART AT RVCC (INTRO)

INTRODUCTION TO MEDICAL TERMINOLOGY

MEDICAL TERMINOLOGY

- WORD PARTS
- MEANINGS
- MEDICAL DICTIONARY
- PRONUNCIATION
- SPELLING
- ABBREVIATIONS

WORD ANALYSIS

- PREFIXES
- WORD ROOTS/COMBINING FORM
- SUFFIXES

WHEN ANALYZING WORDS...

- BEGIN AT THE END
- LOOK AT THE WORD PARTS IN THIS ORDER:
 - I. SUFFIX
 - 2. PREFIX
 - 3. ROOT(S)

SUFFIXES

UNIT(S) OF MEANING ATTACHED TO THE END OF WORD THAT CHANGE THE MEANING OF A WORD OR CREATE A NEW WORD

SUFFIXES THAT CHANGES A ROOT WORD TO A NOUN

- -CIDE killer
- **-GEN** production of
- -ICIAN one charged with
- -IST skilled in
- -METER measure
- -PHYLAXIS protection

SUFFIXES THAT CHANGES A ROOT WORD TO AN ADJECTIVE

- -AC, -IC, -ARY, AL, -ACY pertaining to
- -AD toward, in direction of
- -AN pertaining to, belonging to
- -AR of, related to, pertaining to
- -ILE capable of, having qualities of
- -IOUS capable of, causing
- -OID like

SUFFIXES THAT DENOTES A DISEASE PROCESS

- -AGRA severe pain
- -ALGIA pain
- -ATRESIS abnormal closure
- -CELE swelling, bulging, tumor
- -CHEZIA, -CHESIA discharge of foreign substance
- -DYNIA pain
- -EMA swelling, distention

MORE SUFFIXES THAT DENOTES A DISEASE PROCESS

- -IA, -IASIS disease, condition
- **-ITIS** inflammation
- **-PATHY** suffering, disease
- -PENIA deficiency
- -RRHAGE, -RRHAGIA bursting forth
- -RRHEA flow, discharge

SUFFIXES THAT INDICATES A SURGICAL OR DIAGNOSTIC PROCEDURE

- -CENTESIS puncture of cavity
- -CIS cut
- -CLASTIC breaking
- -CLEISIS closure
- - DESIS binding, fusion
- -ECTOMY excision, cutting out
- -OSTOMY creation of a mouth or opening
- -OTOMY cutting into
- -TRIPSY rubbing, crushing

SUFFIXES THAT INDICATES SMALLEST

• -CULUS, -CULUM, -CULE, -OLE, -OLUS indicates the smallest

NOT TRUE SUFFIXES... BUT CHANGE THE MEANING OF THE WORD

- CHEMICAL COMPOUNDS:
 - -ASE enzyme
 - -ATE salt made from an acid
- DENOTING A CONDITION
 - **-FUL** full of
 - -ID condition
 - -NESS state of being
 - **-OSIS** condition

PLURALS/PLURALS OF NOUNS

• SINGULAR

-A

-EN

-EX

-OS or -US

-ON or -UM

PLURAL

-AE

-INA

-ICES

-1

-ES or -A

PREFIXES

UNIT(S) OF MEANING ATTACHED TO THE FRONT OF A WORD THAT CAN CHANGE THE MEANING OF THE WORD OR CREATE A NEW WORD

PREFIXES - RELATED TO POSITION REGARDING TIME AND PLACE

- ANA- up, back again
- ANTE- before
- NOCT(I)- night
- PRIM- first
- TER(T)- third

PREFIXES - DESCRIBING POSITION OR LOCATION

- ACRO- extremity, tip
- CIRCUM- around
- **CONTRA-** opposite, against
- JUXTA- near
- MEDI-, MESO- middle

PREFIXES - RELATED TO TYPE

- BRADY- slow
- TACHY- fast
- MAL-bad
- PATH(O)- disease, suffering

PREFIXES - DESCRIBING DIRECTION

- AB- away
- AD- to, toward
- **DEXTRO-** right
- LEVO- left
- **PRO-** *forward, anterior*
- RETRO- behind, backward

PREFIXES - DESCRIBING NUMBER AND QUANTITY

- BI- two
- AMBI-, AMPHI- both
- **DEMI-**, **HEMI-** one-half
- MONO- one
- PAN- all
- POLY- many

PREFIXES - RELATED TO SIZE AND AMOUNT

- AN-,A- none
- ANIS(E)- unequal
- MACRO-, MEGA- large
- MICRO- small
- **OLIGO-** scant

PREFIXES - DENOTING COLOR

- ALBA-, LEUKO- white
- CHLORO- green
- CHROMO- color
- CYANO- blue
- ERYTHRO-, RUBE- red
- LUTE-, XANTHO- yellow
- MELANO-, NIGRO- black

DENOTING SHAPE

- **ORTHO-** straight
- PLATY-, EURY- broad, flat
- PACHY- thick

PREFIXES - DENOTING #'S IN ASCENDING ORDER

- MONO- one
- BI- two
- TRI- three

WORD ROOTS/COMBINING FORMS

- WORD ROOT(S) Foundation of word's meaning, can sometimes stand by itself as a separate word
- COMBINING VOWELS A vowel added to the end of the root
- COMBINING FORMS The root(s) and combining vowel together

IDENTIFICATION AND SPELLING OF MEDICAL WORDS

- IF THE SUFFIX BEGINS WITH A VOWEL, DROP THE COMBINING VOWEL AND ADD THE SUFFIX
- IF THE SUFFIX BEGINS WITH A CONSONANT, KEEP THE COMBINING VOWEL AND ADD THE SUFFIX
- KEEPTHE COMBINING VOWEL BETWEEN TWO OR MORE WORD ROOTS

MEDICAL TERMINOLOGY HINTS

- PREFIXES AND SUFFIXES Many have multiple meanings.
- SPELLING Words of Greek origin can be difficult to spell because of silent letters
- IMPORTANCE OF CORRECT SPELLING An addition or omission of letter(s) can change the meaning of the word

SMARTSTART AT RVCC (A&P)

ANATOMY AND PHYSIOLOGY

ANATOMY AND PHYSIOLOGY

• ANATOMY:

• PHYSIOLOGY:

Study of body structures and their organization Study of the processes and functions of the body

ORGANIZATION OF STRUCTURES

- ORGANISM
- CELLS
- TISSUES
- ORGANS
- SYSTEMS

LOCATIONAL TERMS

- POSITIONAL AND DIRECTIONAL TERMS
- PLANES OF THE BODY
- QUADRANTS AND REGIONS

POSITIONAL AND DIRECTIONAL TERMS

- SUPINE/PRONE
- LATERALLY
- SUPERIOR/INFERIOR
- ANTERIOR/POSTERIOR
- MEDIAL
- PROXIMAL/DISTAL
- SUPERFICIAL/DEEP

BODY PLANES

• FRONTAL

• SAGITTAL

• TRANSVERSE

QUADRANTS AND REGIONS

- RIGHT UPPER QUADRANT
- LEFT UPPER QUADRANT
- RIGHT LOWER QUADRANT
- LEFT LOWER QUADRANT
- NINE REGIONS RIGHT AND LEFT HYPOCHONDRIAC, EPIGASTRIC, RIGHT AND LEFT LUMBAR, UMBILICAL, RIGHT AND LEFT INGUINAL, HYPOGASTRIC

BODY CAVITIES

- DORSAL CAVITY cranial and spinal cavity
- VENTRAL CAVITY body organs, peritoneum

CYTOLOGY

- CELL STRUCTURE
- GENETICS
- GENETIC DISORDERS
- GENETIC COUNSELING
- CONGENITAL DISORDERS

HISTOLOGY

- STEM CELLS
- TISSUES epithelial, connective, muscle and nerve
- TISSUE FORMATION aplasia, hypoplasia, hyperplasia, dysplasia, anaplasia

PATHOLOGY

- TYPES OF DISEASES
- DISEASE TRANSMISSION
- OUTBREAK OF DISEASES

MAJOR BODY SYSTEMS

- SKELETAL
- MUSCULAR
- CARDIOVASCULAR
- RESPIRATORY
- LYMPHATIC AND
 IMMUNE
- DIGESTIVE

- URINARY
- NERVOUS
- INTEGUMENTARY
- ENDOCRINE
- REPRODUCTIVE

SMARTSTART AT RVCC (DAY 3)

DAY THREE - TECHNOLOGY IN HEALTHCARE AND MEDICAL MATHEMATICS

DAY THREE OBJECTIVES

- Discuss the role of technology in health care
 Electronic Health Records, portals, medical equipment, research
- Discuss safety principles of medication administration
- Discuss the concept of polypharmacy
- Identify pertinent information on medication labels
- Utilize medical math calculations to determine correct medication doses
- Discuss common medication interactions and potential side effects

ROLE OF TECHNOLOGY

- ELECTRONIC HEALTH RECORDS
- HEALTH INFORMATION PORTALS
- MEDICAL EQUIPMENT ELECTRONIC THERMOMETERS, BLOOD PRESSURE MACHINES, TELEPHONIC MEDICINE, MONITORS, DAVINCI ROBOTIC SURGERY

MEDICATION ADMINISTRATION

PRINCIPLES

- Right patient
- Right medication
- Right dose
- Right route
- Right time
- Right documentation

ORAL ROUTE OF MEDICATION ADMINISTRATION

ADVANTAGES OF ORAL ROUTE

- Easy
- Most common method
- Many choices
- Retrievable
- Less Anxiety
- No Pain
- No Break in the Skin

ORAL ROUTE

- Requires the patient participate
- Slower onset
- Prolonged effect
- Potential drug to drug or drug to food reactions
- Aspiration Risk
- Gl Irritation

ORAL MEDICATIONS

- ASSESS patient's ability to swallow safely
- Plan: expected outcomes, crush or not, needs of patient, equipment, position, education
- Implement: gather equipment, position, educate,
- Evaluate: knowledge, side effects, effects,

CASE STUDY

- An 83 year old patient given Cardizem CD. The capsule was too large to swallow so the patient chewed it. She became weak, bradycardic and died!!!!!! WHY?
- What is polypharmacy? How would this impact on the 83 year old patient above?



MEDICATION LABELS

Look at this Over-the- Counter medication label

Find the specific uses of this medication.

What are the potential side effects?

How frequently should this medication be taken?

What is the correct dose for children 6-12 years old?

What does the Warnings mean?

Medical label taken fromhttp://familydoctor.org/familydoctor/en/drugsprocedures-devices/over-the-counter/how-to-read-otcdrug-facts-label.html



MEDICAL MATH GALGULATION QUESTIONS

DATE

SHOW ALL YOUR WORK AND CIRCLE YOUR ANSWERS.

Patient's dose is 40 mg. On hand are 20 mg tablets. How many tablet(s)

should the patient receive?

2 grams = ? mg

ω Patient's dose is 20 mg. On hand is medication 40 mg in 5 mL. How many mL should the patient receive?

the patient receive? mg tablets. How many tablet(s) should Patient's dose is 30 mg. On hand are 10

4.

- <u>ب</u> Patient's dose is 5 mg. On hand are 10 mg tablets. How many tablets should the patient receive?
- patient receive? mg tablets. How many tablets should the 6. Patient's dose is 750 mg. On hand is 250

MEDICAL MATH CALCULATION QUESTIONS CONTINUED

	 7. Patient's dose is 50 mg. On hand are 20 mg tablets. How many tablet(s) should the patient receive? 8. Patient's dose is 7.5 mg. On hand 	
10. 500 mg = ? grams	9. 300 mg = ? Grams	

MEDICAL MATH CALCULATIONS

SEE HANDOUTS FOR MATH QUESTIONS TO SOLVE

MEDICAL MATH CALCULATIONS - CONVERSIONS AND FORMULA

CONVERSIONS

I gram (g)= 1000 milligrams (mg)	I kilogram (kg) = 1000 grams (g)	I kilogram (kg) = 2.2 pounds (lbs)
I teaspoon (tsp) = 5 milliliters (mL)	I tablespoon (tbsp) = 15 milliliters (mL)	I tbsp = 3 tsp
I ounce (oz) = 30 mL	12 oz = 360 mL	I cup = 8 oz = 240 mL

FORMULA

D (dose desired) X Quantity = amount to giveH (what on hand)

MEASURE CONVERSION CHART – WEIGHT (UK)

Use this link to access the Measure Conversion Chart for Weight (UK)

ttp://www.math-salamanders.com/image-files/measureonversion-chart-uk-weight.gif Name Date

MEASURE CONVERSION CHART – WEIGHT (UK)



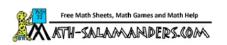
Please note, long tons are used in the UK, short tons are used in the US.

METRIC CONVERSIONS					
1 gram	=	1000 milligrams	1g	=	1000 mg
1 kilogram	=	1000 grams	1 kg	=	1000 g
1 tonne (1 megagram)	=	1000 kilograms	1 tonne	=	1000 kg
			(1 Mg)		

IMPERIAL CONVERSIONS					
1 ounce	=	16 drams	1 oz	=	16 dr
1 pound	=	16 ounces	1 lb	=	16 oz
1 stone	=	14 pounds	1 st	=	14 lb
1 quarter	=	2 stone	1 qr	=	2 st
1 hundredweight	=	4 quarters (or 8 stone)	1 cwt	=	4 qr (or 8 st)
1 ton, long	=	20 hundredweight (160 stone)	1 ton	=	20 cwt (or 160 st)

METRIC -> IMPERIAL CONVERSIONS					
1 gram	=	0.035274 ounces	1 g	=	0.035274 oz
1 kilogram	=	2.20462 pounds	1 kg	=	2.20462 lb
1 kilogram	=	35.27396 ounces	1 kg	=	35.27396 oz
1 tonne	=	0.9842 ton, long	1 tonne	=	0.9842 ton, long
1 tonne	=	157.47304 stone	1 tonne	=	157.47304 st

IMPERIAL -> METRIC CONVERSIONS					
1 ounce	=	28.34952 grams	1 oz	=	28.34952 g
1 pound	=	453.59237 grams	1 lb	=	453.59237 g
1 pound	=	0.45359 kilograms	1 lb	=	0.45359 kg
1 stone	=	6.35029 kilograms	1 st	=	6.35029 kg
1 hundredweight	=	50.8023 kilograms	1 cwt	=	50.8023 kg
1 ton, long	=	1.01605 tonnes	1 ton, long	=	1.01605 tonnes
1 ton, short	=	0.90718 tonnes	1 ton, short	=	0.90718 tonnes





COMMON MEDICATION INTERACTIONS AND SIDE EFFECTS

COMMON INTERACTIONS

- DRUG –DRUG
 INTERACTIONS
- DRUG-FOOD/BEVERAGE INTERACTIONS
- DRUG-CONDITIONS

http://www.fda.gov/Drugs/ResourcesForYou/ucm163354.htm

COMMON SIDE EFFECTS

- ALLERGIC REACTION –
 ITCHING, RASH,
 ANAPHYLACTIC SHOCK
- BLEEDING
- NAUSEA AND VOMITING
- DIARRHEA, CONSTIPATION

http://www.webmd.com/a-to-z-guides/drug-side-effects-explained

SMARTSTART AT RVCC (DAY 4)

DAY FOUR - PATIENT SAFETY, INFECTION CONTROL AND CLINICAL COMPETENCIES

DAY FOUR OBJECTIVES

- Define Infection Control and Infection Control procedures
- Discuss Patient Safety and the Joint Commission's National Patient Safety Goals
- Demonstration and correct Return Demonstration of specific clinical competencies
 - Handwashing, Application, Removal and Disposal of PPE, Measure accurate Vital Signs (Blood pressure, Pulse, Respiration and Temperature)
- Identify common conditions and medications for which vital sign monitoring is indicated

INFECTION CONTROL

HANDWASHING, MASK, GOWN AND GLOVES!

CHAIN OF INFECTION

- INFECTIOUS AGENT
- SOURCE (RESERVOIR)
- PORTAL OF EXIT
- TRANSMISSION
- PORTAL OF ENTRY
- SUSCEPTABLE HOST

ADD IMAGE (PT. 2)

• Add image of your choice of chain of infection

STANDARD PRECAUTIONS

- BLOOD AND BODY FLUIDS
- APPROPRIATE PROTECTIVE WEAR
- HANDWASHING
- STORAGE OF CONTAMINATED WASTE
- PROPER DISPOSAL OF SHARPS
- SPECIFIC ISOLATION PROCEDURES

ISOLATION – TRANSMISSION-BASED PRECAUTIONS

- CONTACT ISOLATION
- DROPLET
- AIRBORNE
- STRICT
- PROTECTIVE (NEUTROPENIC)

"IF IT IS WET-WEAR GLOVES"

MEDICAL ASEPSIS

- DEFINITION
- WAYS TO PROMOTE MEDICAL ASEPSIS
- DISINFECTANTS
- ANTISEPTICS

A snapshot of the Safety Goals

Not all of JCAHO's National Patient Safety Goals (NPSGs) apply to hospitals. For 2007, accredited hospitals must comply with the requirements for the following eight goals:

Goal 1	Improve	the accuracy	of patient	identification.
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- Goal 2 Improve the effectiveness of caregiver communications.
- Goal 3 Improve the safety of using medications.
- Goal 7 Reduce the risk of healthcare-associated infections.
- Goal 8 Accurately and completely reconcile medications across the continuum of care.
- Goal 9 Reduce the risk of patient harm resulting from falls.
- Goal 13 Encourage patients' active involvement in their own care.
- **Goal 15** Identify safety risks inherent in your patient population.

Source: Joint Commission on Accreditation of Healthcare Organizations. "2007 Hospital/critical access hospital national patient safety goals." 2006. www.joint commission.org/PatientSafety/NationalPatientSafetyGoals/07_hap_cah_npsgs .htm (8 Sept. 2006).

PATIENT SAFETY AND INFECTION CONTROL

The Joint Commission's National Patient Safety Goals are reviewed and updated frequently. There are updates 2016 goals:

Goal I – accuracy of patient ID continues.

Goal 2 – Caregiver communication issues continues.

Goal 3 – Safety of medication administration continues.

Goal 6 – Reduce harm related to clinical alarms returns.

Goal 7 – Reduce risk of Healthcareassociated infections returns.

Goal 9 – Reduce risk of patient harm from falls continues.

Goal 14 – Reduce hospital-acquired pressure ulcers returns.

Goal 15 – Identify safety risks inherent in patient population continues.

SKILLS/TECHNIQUES

- HANDWASHING
- PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mask

Gown

Gloves

VITAL SIGNS

THE VITAL SIGNS

- Temperature
- Pulse
- Respiration
- Blood Pressure
- Most Hospitals Also Require Assessment of:
 - Pain Level
 - Pulse Oximetry

TEMPERATURE - WAYS TO TAKE TEMPERATURE

- Oral
- Rectal
- Axillary
- Ear/Tympanic
- Forehead (Temporal Artery)

TEMPERATURE -BODY TEMP VARIATIONS

- Afebrile: without elevation in body temp
- Pyrexia: a body temp above normal
- Hypothermia: decreased body temp, death may occur below 34 degrees C.
- Febrile: elevated body temp
- Core temp: temp of deepest tissues of body. i.e.: cranium, thorax, abdomen & pelvic cavity. 98.6F. Is constant

TEMPERATURE - SIGNS & SYMPTOMS OF FEVER

- Increase temperature
- Increase heart rate
- Increase respiratory & depth
- Shivering
- Cold skin
- Cyanotic nail beds
- Goosebumps

PULSE - METHODS OF PULSE ASSESSMENT

- Palpation
- Auscultation

ADD IMAGE HERE

 Add image of your choice showing areas on the human body for pulse.

PULSE - VARIATIONS

- Bradycardia: heart rate less than 60/min
- Tachycardia: heart rate greater than 100/min
- Dysrhythmia: irregular heart rate
- Pulse Deficit: deficit in pulse to the peripheral pulse site (assess 2 sites at same time)

PULSES

PULSE QUALITY

- Absent pulse
- Thready
- Weak
- Normal
- Bounding

PULSE CHARACTERISTICS

- Rate
- Rhythm
- Pulse Deficit

PULSE - FACTORS THAT INFLUENCE PULSE RATE

- INCREASES: short term exercise, fever, heat, acute pain, drugs, hemorrhage, postural changes, COPD, asthma, hypoxia.
- DECREASES: conditioned athlete, hypothermia, unrelieved severe pain, relaxation, medications, lying down.

RESPIRATIONS - CHARACTERISTICS OF RESPIRATIONS

- Depth: degree of movement of the chest wall
- Rhythm: observe chest or abdomen
- Rate: Adult, I2-20/min: Child 20-30/min: Newborn 30-60/min

FACTORS INFLUENCE CHARACTER OF RESPIRATIONS

- Exercise, increases rate and depth
- Pain, shallow
- Anxiety, increase rate and depth
- Smoking, increases rate
- Body position, straight promotes full chest expansion: slumped impairs: flat-prevents full chest expansion
- Medications: decrease or increase rate and depth
- Brain injury: decrease rate and depth

TYPES OF ABNORMAL BREATHING

- Bradypnea
- Tachypnea
- Apnea
- Dyspnea
- Cheyne Stokes
- Wheeze
- Stridor

BLOOD PRESSURE

- Systolic: reflects contraction of ventricles
- Diastolic: reflects relaxation of ventricles

WHAT FACTORS INFLUENCE BLOOD PRESSURE

- Age: older adults have rise in systolic pressure related to decrease in vessel elasticity
- Circulating Volume
- Stress: sympathetic stimulation, increases
- Ethnicity: HTN highest in African-Americans and develop at younger age
- Medications: multiple increase and/or decrease

ASSESSING BLOOD PRESSURE

- SITES
 - Upper Extremity
 - Lower Extremity
- EQUIPMENT
 - Stethoscope
 - Doppler/Ultrasound
 - Automated Devices

BLOOD PRESSURE SKILL

- Proper Cuff Size
- Proper Patient Positioning
- Palpation

HYPERTENSION

• Hypertension: usually asymptomatic, takes years, thickening and loss of elasticity in the arterial walls which decreases blood flow to vital organs causing damage. Risk factors: family hx(history), cigarette, heavy alcohol, high sodium intake, sedentary lifestyle, diabetic, old, African-Americans.

HYPOTENSION

• When systolic BP below 90mm, Dilation of the arteries in the vascular bed, loss of a substantial amount of blood volume (hemorrhage), or failure of the heart muscle to pump adequately (MI).

SIGNS & SYMPTOMS OF HYPOTENSION

- Pallor
- Skin mottling
- Clamminess
- Confusion
- Increased heart rate
- Decreased urine output

OTHER ASSESSMENTS

- PAIN LEVEL
 - The 5th Vital Sign
 - Use of Appropriate Pain Scale
- PULSE OXIMETRY
 - Measures Oxygen Concentration in Hgb

SKILL: HANDWASHING

#	Procedure	Competent	Not Competent
-	Prepare and assess hands. Check hands for breaks in skin, file nails short and remove all jewelry		
2.	Turn on water and adjust flow and temperature.		
3.	Wet hands thoroughly and apply soap. Hold hands lower than the elbows so water flows from arms to fingertips.		
4.	Thoroughly wash and rinse hands. Use firm, rubbing, circular movements. Wash palm, back, and wrist of each hand. Interlace fingers and thumbs, and move hands back and forth for 15-30 seconds.		
	Thoroughly dry hands and arms with paper towel from finger tips towards arm. Discard paper towel in appropriate receptacle.		
6.	Turn off water using dry, clean paper towel.		

BNIAIdd	/ING AND REMOVING PERSONAL PROTECTIVE EQUIPMENT		
#	Procedure	Competent	Not Competent
I.	APPLYING PPE		
2.	Don clean gown.		
a	When picking up clean gown, do not allow it to touch contaminated area(s). Unfold the gown in front of you, avoiding touching the floor.		
Ь	Put arms and hands through sleeves. Tie the strings at the neck first to keep gown in place. Overlap the gown at the back and tie the strings at the waist.		
	Don the face mask. Look for top edge of mask, hold by top two strings. Place top edge of mask over the bridge of the nose and tie upper two strings at back of head. Place lower edge of mask under chin and tie the lower strings at nape of neck.		
4.	Don clean disposable gloves. Pull gloves over cuffs of gown		
5.	REMOVING PPE: Remove gloves first. First glove is removed by using opposite hand to grasp soiled glove at palmar surface and rolling the glove inside out. Hold removed soiled gloves with fingers of remaining gloved hand. To remove second glove, place first two fingers of bare hand inside the cuff of glove. Pull second glove off to the fingers by turning inside out. The results will be that the first soiled glove is now inside the second removed glove. Dispose removed gloves in appropriate container without contaminating bare hands. Wash if applicable.		
6.	Remove gown: Untie waist strings in the back. Touching gown along the inside of the neck, pull it down the shoulders. Roll up gown with soiled part on the inside and discard in appropriate container.		

.7

Hold upper strings

Remove mask: Untie lower strings, then upper strings.

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at touching fr

	K)	യ		#	
	2.			#	
lightly over pulse point.	Assessing a Peripheral Pulse Perform Hand Hygiene and Identify Patient and Provide Privacy. Select pulse point. Position patient comfortably. Palpate and count pulse using two or three middle fingers	Perform Hand Hygiene and Identify Patient and Provide Privacy. Determine method of taking temperature. For Oral Temperature – determine if patient has taken in oral fluids or smoked recently. Remove thermometer from charger if necessary. Remove temperature probe if necessary. Place disposable cover securely on probe. Take temperature by placing probe at below of tongue into the posterior sublingual pocket. Listen for sound indicating completion of reading. Remove and discard probe cover. Return thermometer to battery charger if necessary. Variation: For Rectal Temperature – Place disposable cover on probe and then place lubricant on it. Wearing clean gloves, raise patient's upper buttock to expose anus. Ask patient to take a deep breath and insert probe into anus. Variation: Place disposable cover on probe and then place in patient's axilla. Have patient place his/her arm tightly across chest.	Assessing Body Temperature using an electronic/digital thermometer	Procedure	
				Competent	
				Not Competent	

ASSESSING VITAL SIGNS 2 OF 3

#	Procedure	Competent	Not
			Competent
2.	Count for 30 seconds and multiply by 2. If pulse is irregular count for 1 minute. Assess the rhythm and volume of the		-
a	Document findings.		
ω	Assessing an Apical Pulse: Perform Hand Hygiene and Identify Patient and Provide Privacy. Position patient into		
	supine or sitting position Locate apex of patient's heart. Ausculate with stethoscope and count beats (clean earpieces and diaphragm of stethoscope with antiseptic wipes before		
	and ance assessment). Document interings.		
4.	Assessing Respirations: Perform Hand Hygiene and Identify Patient and Provide Privacy. Count respiratory rate		
	by observation or palpation by placing hand on patient's chest to feel movement or placing patient's arm across their		
	chest and observing movement. Count respirations for one		
	respirations. Document findings.		
5.	Assessing Blood Pressure		
	Perform Hand Hygiene and Identify Patient and Provide		
	Privacy. Clean stethoscope. Choose proper size cuff for the patient. Position patient properly and expose upper arm.		
	Wrap deflated cuff evenly around upper arm, have center of		
	bladder directly above brachial artery and for an adult have lower horder of cuff 1 inch above the antecubital space		
	Palpate brachial or radial artery. Inflate cuff until pulse		
	disappears then slowly release the valve and notate reading		
	when pulse reappears. Fully deflate cuff and wait 1 to 2		
	minutes. Position stethoscope properly – earpieces should		
	brachial pulse and hold with thumb and index finger.		
	of a light with the light of th		

ASSESSING VITAL SIGNS 3 OF 3

5.	#
(cont'd from prev.) Release valve on cuff so that pressure decreases at a rate of 2 to 3 mm Hg per second. As pressure falls, identify manometer reading at each phase – systolic and diastolic. Decrease remaining pressure quickly and completely. Repeat measurements once or twice if necessary with 1-2 minutes in between each reading. Remove cuff from patient's arm. Document findings.	Procedure
	Competent
	Not Competent

DAY 5 CARDIOPULMONARY RESUSCITATION

DAY FIVE OBJECTIVES

- Identify 3 types of CPR certification courses available from American Heart Association
- Correctly perform Cardiopulmonary Resuscitation (CPR)
- Correctly apply and use Automatic External Defibrillator (AED)
- Assess scene for safety
- Identify requirements to become a certified CPR instructor

TYPES OF CPR CERTIFICATION

- BASIC LIFE SUPPORT (BLS) FOR HEALTH CARE PROVIDERS
- HEARTSAVER CPR
- FIRST AID AND CPR
- ALL ABOVE CAN INCLUDE USE OF AED, INFANT, PEDIATRIC AND ADULT PROCEDURES

CPR AND AED TRAINING

- PLEASE REFER TO THE AMERICAN HEART ASSOCIATION HEARTSAVER BOOK
- DEMONSTRATION, PRACTICE AND RETURN DEMONSTRATION
 OF CPR AND AED TRAINING
- RECEIVE AHA HEARTSAVER CERTIFICATION CARD

THE SCENE IS SAFE!

- USE ALL SENSES LOOK, LISTEN, SMELL
- LOOK FOR BROKEN WINDOWS, BROKEN DOORS
- LISTEN FOR ARGUMENTS, HISSING SOUNDS, WATER RUNNING
- SMELL FOR SMOKE, CHEMICALS
- CALL FOR PROPER PROFESSIONALS

https://www.sharecare.com/health/first-aid-emergencies-and-conditions/when-emergency-scene-is-safe

BECOME A CPR INSTRUCTOR

- REQUIRES A HIGH SCHOOL DIPLOMA
- AHA OR RED CROSS INSTRUCTOR TRAINING AND INSTRUCTOR CERTIFICATION
- GOOD PUBLIC SPEAKING AND CUSTOMER SERVICE SKILLS
- PHYSICAL ABILITY TO PERFORM CPR AND LIFE NECSSARY TEACHING EQUIPMENT

http://study.com/articles/How_to_Become_a_Certified_CPR_Instructor.html

SMARTSTART AT RVCC INSTRUCTOR MANUAL

BASIC LIFE SUPPORT

BASIC LIFE SUPPORT

- Add resources (PowerPoint) for student on cpr and instructions on how to prepare for the on campus portion of the course for skills and CPR certification.
 Students will have purchased the book and received it in the welcome package from their home school.
- If this is a joint college course- provide the necessary college information on where and when to show up for this portion of the program at the home college site.
- This on campus day will include skill based education (handwashing, vital signs and CPR Certifications- some home college will do it in one day some do two days depends on college) and CPR certification to complete the course. If students do not go on to a health professions program at the college, they are still completing the course with a CPR Certification, a valuable certification for anyone and an attractive certification that future employers will see.
- Customize this file with your own images and clipart.

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