SEPSIS EVERY MINUTE COUNTS

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Avera eCare

Senior Care

THE LAND OF SNF

SEPSIS

ONCE UPON A TIME THERE WAS AN ELDERLY RESIDENT BY THE NAME OF MARY THAT LIVED IN THE LAND OF SNF. MARY WAS A VERY HAPPY 95 YEAR OLD ALERT RESIDENT IN THE LAND OF SNF. ONE MORNING SHE WOKE UP AND SHE DID NOT WANT TO EAT. SHE WAS VERY TIRED AND SHE DID NOT GET OUT OF BED. WHEN THE CNA WENT TO GET HER UP FOR LUNCH MARY SAID, “WHERE AM I IS IT JUNE”. SHE SEEMED TO BE BREATHING FAST AT A RATE OF 24. THE CNA ALERTED THE NURSE ABOUT MARY NOTING THAT HER BP WAS 95/50. WHATEVER COULD BE WRONG IN THE LAND OF SNF? MARY WAS 95 YEARS YOUNG BUT SHE HAD BREAST CANCER, DIABETES AND SHE GOT FREQUENT PNEUMONIA’S. SHE ALSO HAD A FOLEY CATHETER DUE TO HER NEUROGENIC BLADDER. WHATEVER COULD BE WRONG IN THE LAND OF SNF?? HER NURSE NANCY NOTED THAT HER HEART RATE WAS AT 110, LOW BODY TEMP, CHILLS WITH SHIVERING, DIZZINESS AND FACIAL FLUSHING. MARY WAS SHORT OF BREATH, HAD NOT VOIDED URINE FOR THE LAST 8 HOURS AND SHE HAD SKIN DISCOLORATIONS. WHAT WOULD A GOOD NURSE DO NOW??????

AVERA eCARE SENIOR CARE

OBJECTIVES

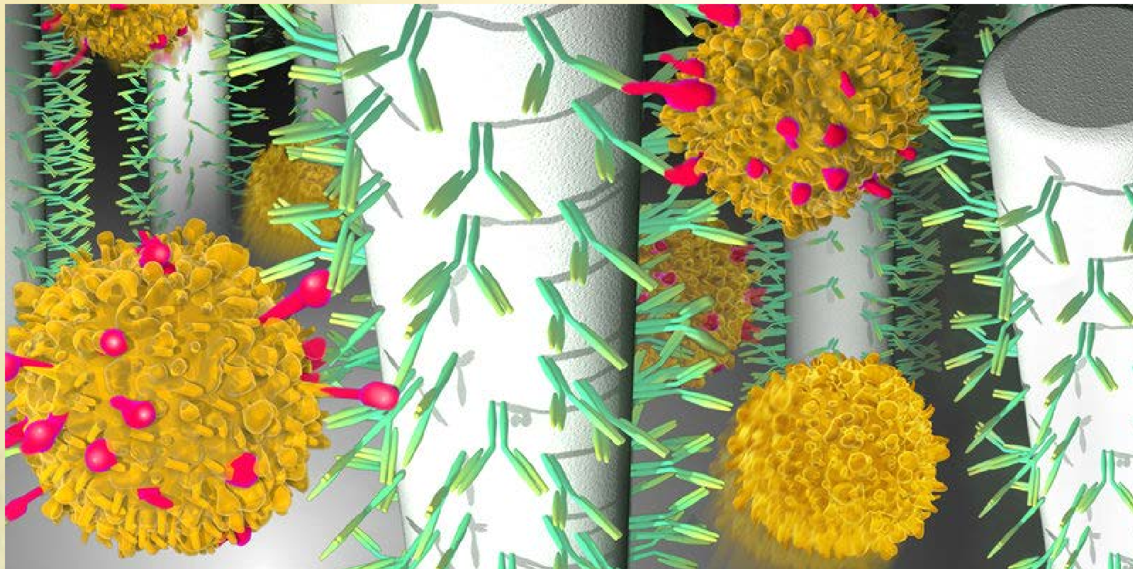
1. AT THE END OF THIS PRESENTATION NURSING STAFF WILL BE ABLE TO DEFINE SEPSIS AND LIST THE 3 KEY SEPSIS CRITERIA.
2. AT THE END OF THIS PRESENTATION NURSING STAFF WILL BE ABLE TO STATE WHICH RESIDENTS ARE AT HIGHEST RISK FOR SEPSIS.
3. AT THE END OF THIS PRESENTATION NURSING STAFF WILL BE ABLE TO STATE AT LEAST THREE CHANGES IN RESIDENT CONDITION THAT SHOULD BE REPORTED TO THE RESIDENT'S PROVIDER AND OR ECARE SENIOR CARE

SEPSIS

- COMPLICATION OF AN INFECTION
- SERIOUS COMPLICATIONS --IMMUNE SYSTEM TRIGGERED-BACTERIA RELEASE ENDOTOXINS- CHEMICAL IN BLOOD- CAUSES INFLAMMATION LEADS TO-ORGAN DAMAGE
- IN RESPONSE- MACROPHAGES SECRETE TUMOR NECROSIS FACTOR (TNF), INTERLEUKINS.
- THESE MEDIATORS ARE RESPONSIBLE FOR INCREASED RELEASE OF PLATELET-ACTIVATING FACTOR (PAF), PROSTAGLANDINS, LEUKOTRIENES, THROMBOXANE A2, KININS AND COMPLEMENT
- CONSEQUENCES OF IMMUNE ACTIVITY-VASODILATION, INCREASED CAPLILLARY PERMEABILITY, REDUCED SYSTEMIC VASCULAR RESISTANCE, MICROEMBOLI AND AN ELEVATED CARDIAC OUTPUT.
- ENDOTOXINS STIMULATE RELEASE OF HISTAMINE- INCREASING CAPILLARY PERMEABILITY.

SEPSIS

- AS SEPSIS PROGRESSES---
- RELEASE OF- MYOCARDIAL DEPRESSANT FACTOR, TNF, PAF AND OTHER FACTORS DEPRESS HEART FUNCTION
- CARDIAC OUTPUT FALLS-INADEQUATE BLOOD FLOW TO THE BODY ORGANS RESULTING IN MULTI-SYSTEM ORGAN FAILURE.



SEPSIS CAUSES

- **BACTERIAL INFECTIONS**-INFECT ALMOST ANY ORGAN –HOSPITAL OR COMMUNITY
- **AFFECTS** –SKIN, LUNG-PNEUMONIA, GI TRACT-BACTERIAL PENETRATION OR RUPTURED INTESTINE FROM TRAUMA, SURGICAL SITE, IV CATHETER, GU-URINE
- **INFECTING AGENTS/THEIR TOXINS OR BOTH SPREAD INTO THE BLOOD**---GOES TO ALMOST ANY ORGAN---BODY TRIES TO CONTERACT DAMAGE DONE BY BLOOD BORNE AGENTS
- **COMMON CAUSEA OF SEPSIS**-MAINLY GRAM POSITIVE S AUREUS, STREP, ENTEROCOCCUS, AND NEISERIA, ALTHOUGH GRAM NEGATIVE BACILLI-E COLI, P AERUGINOSA, E CORRODENS AND HAEMOPHILUS INFLUENZAE-SUBSTANTIAL
- **FUNGAL SEPSIS** INCREASED OVER PAST DECADE
- **HALF CASES SEPSIS** –ORGANISM NOT IDENTIFIED
- **DISEASE SEVERITY** –APPEARS TO BE INCREASING-WITH AT LEAST ONE ORGAN DYSFUNCTION
- **MOST COMMON SYSTEMS AFFECTED**-RESPIRATORY DISTRESS SYNDROME, ACUTE RENAL FAILURE, DIC

INFECTION RATES

- SINCE 2010 INFECTION RATES –RISEN FROM 8TH MOST COMMON CITATION TO 1ST.
- MOST COMMON INFECTION-UTI'S-CATHETERS, ELDERLY, LIMITED MOBILITY vs. PNEUMONIA
- 50% BLOOD INFECTIONS SNF R/T UTI-FATAL
- MOST LETHAL INFECTION-PNEUMONIA-LEADING CAUSE HOSPITALIZATION/DEATH
- 1.4/1000 PEOPLE, 60% SENIORS HOSPITALIZED LIFETIME
- SNF-33/1000 GET PNEUMONIA-STREP PNEUMONIAE
- RESIDENTS W/ FEEDING TUBES HIGHER RISK
- MAY NOT GET FEVER, MAY NOT TELL PAIN, DISCOMFORTS

INFECTION RATES

- FASTEST GROWING INFECTION- C DIFF-AGE 65 OR OLDER LARGER THAN OTHER YOUNGER POPULATIONS –DEATH-
- LEADING CAUSE DIARRHEA IN SNF
- HALF HOSPITAL CASES ORIGINATE IN SNF
- CAUSE-ANTIBIOTICS ESPECIALLY FOR UTI'S
- KILL MOST BACTERIA IN GUT-REMOVE COMPETITION FOR RESISTANT C DIFF.
- ONLY 50-60% ANTIBIOTIC USE IN SNF-APPROPRIATE
- CONTAINMENT PATHOGEN PREVENT OUTBREAK

INFECTION RATES

- MOST PREVENTABLE INFECTION-INFLUENZA
- EACH YEAR BETWEEN 3000-49,000 AMERICANS DIE FROM CONDITIONS R/T INFLUENZA 90% OVER 65
- PROXIMITY TO OTHERS, FREQUENT INTERACTION, IMPROPER DISINFECTION
- SKIN INFECTIONS-BED SORES- MOST COMMON PATHOGENS-GROUP A STREP- & MRSA –CAN LEAD TO SEVERE AND INVASIVE INFECTION-MULTIPLE ORGANS
- BOTH BACTERIA CAN SURVIVE OVER 6 MONTHS ON DRY INANIMATE OBJECTS!
- INCREASED SHARING BETWEEN SNF'S INFECTION DATA-LIKE HOSPITALS –ID PROBLEMS-SOLUTIONS.

SEPSIS-AT RISK

- **VERY YOUNG AND ELDERLY**-GREATER THAN 65-HIGHER MORTALITY-REQUIRE SNF OR REHAB STAY
- **THOSE ILL**- DUE TO INFECTIOUS AGENT
- **ICU, WEAKNED IMMUNE SYSTEM**-CANCER, RENAL &/OR LIVER FAILURE, AIDS, ASPLENISM, IMMUNOSUPPRESSANT MEDS
- **PRE-EXISTING MEDICAL CONDITIONS**-DIABETES, OBESITY
- **DEVICES**-IV LINES, BREATHING TUBES, CATHETERS
- **OTHER CONDITIONS-** EXTENSIVE BURNS, SEVERE TRAUMA
- **PREVIOUS HOSPITALIZATION**-INDUCES ALTERED HUMAN MICROBIOME-ESPECIALLY IF TREATED WITH ANTIBIOTICS-PREVIOUS HOSPITALIZATION-3 FOLD INCREASED RISK DEVELOPING SEPSIS IN NEXT 90 DAYS-ESPECIALLY THOSE WITH C DIFF
- **GENETIC FACTORS**-IMPAIRED RECOGNITION PATHOGENS BY IMMUNE SYSTEM, INCREASED SUSCEPTIBIITY TO SPECIFIC CLASSES MICROORGANISMS

SEPSIS

- **EACH YEAR** –AFFECTS **30 MILLION PEOPLE** ACROSS GLOBE
- **INCIDENCE RISING 8% PER YEAR**-ADVANCING AGE, IMMUNOSUPPRESSION, MULTI-DRUG RESISTANT BACTERIA, INCREASED DETECTION
- **92% CASES** OCCUR IN COMMUNITY
- **PERSON IN U.S. DIAGNOSED SEPSIS EVERY 2 MINUTES**
- **3RD LEADING CAUSE DEATH IN U.S.**
- KILLS MORE THAN PROSTATE AND BREAST CANCER & AIDS COMBINED
- AFRICAN AMERICAN MALES, WINTER, GREATER 65 YEARS-60-85%

Sepsis at a Glance

Sepsis is when the body reacts to infection—whether bacterial, viral, fungal, or even parasitic—with an "overwhelming and life-threatening" systemic inflammatory response. It can afflict anyone with any infection.

For more information, see Sepsis: Combating the Hidden Colossus

IT CAUSES A LOT OF DEATHS

3rd Leading Cause of Death

1. Heart disease 2. Cancer **3. Sepsis**

Sources: Elixhauser et al.; CDC.

Contributes to **1** in every **2 to 3** hospital deaths

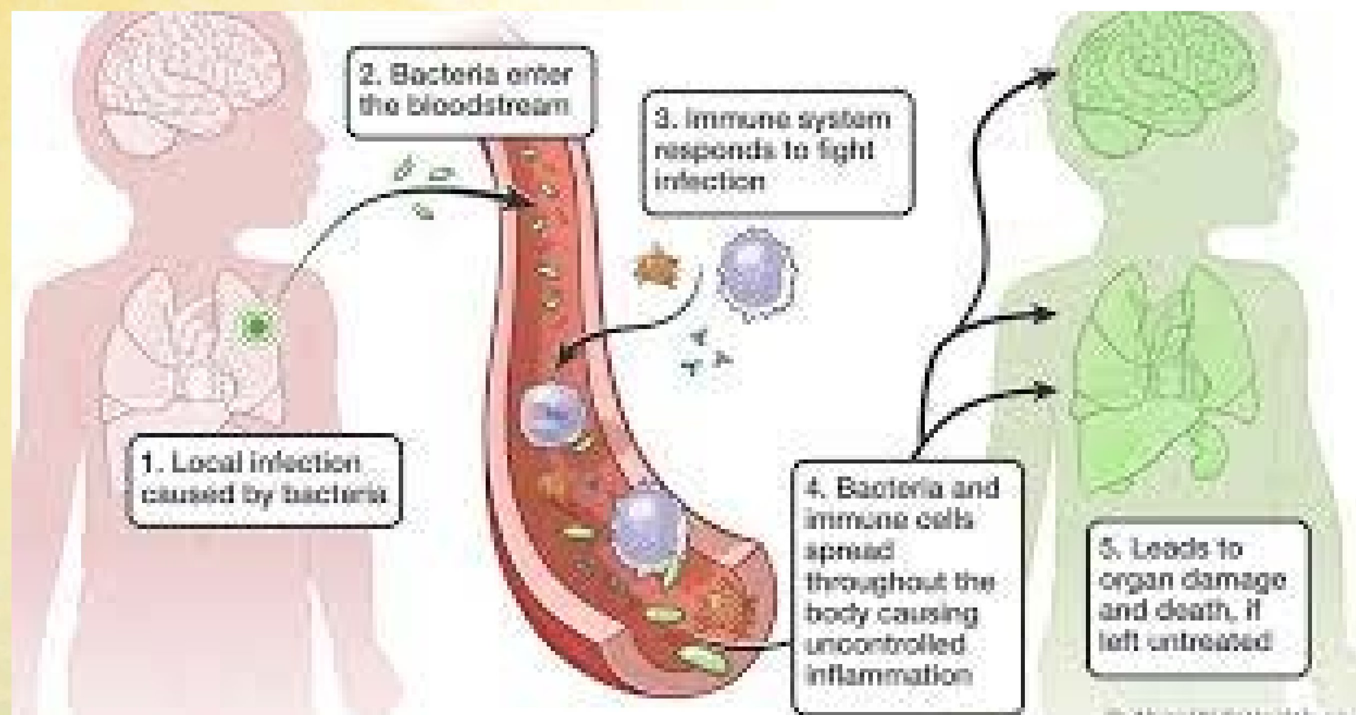
Source: Liu et al.

IT CAN PROGRESS QUICKLY

Septic shock:
7.6% drop in chance of survival each hour until antimicrobials are begun

Source: Kumar et al.

SEPSIS



SEPSIS NEW CRITERIA

2016-NEW CRITERIA FOR SEPSIS-3 CRITERIA-Q SOFA SCORE

1. ALTERED MENTAL STATUS

2. FAST RESPIRATORY RATE(GREATER THAN 22 BREATHS PER MINUTE)

3. LOW BP(LESS THAN OR EQUAL TO 100 MM HG SYSTOLIC)

PEOPLE THAT MEET THESE CRITERIA HAVE SEPSIS-**SEPTIC**.

BLOOD TESTS NO LONGER REQUIRED

PATIENTS MEET TWO OF THREE CRITERIA –LIKELY SEPTIC

SIMPLIFY-TEACH EVERYONE TO WATCH FOR THIS

How can you **measure qSOFA?**

THREE CRITERIA

ALTERED MENTAL STATUS

FAST RESPIRATORY RATE

LOW BLOOD PRESSURE

2 or more criteria suggests a greater risk of a poor outcome

SEPSIS-SIGNS

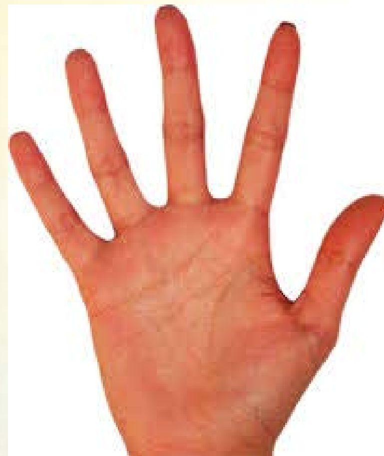
5 MAIN SIGNS OF SEPSIS

1. COLD/CLAMMY SKIN-BODY FOCUSING PUMPING BLOOD TO CRUCIAL ORGANS-HEART, KIDNEY, BRAIN

GOES AWAY FROM EXTREMITIES-CAN GET WORSE OR STAY SAME AS CONDITION PROGRESSES

2. LOW URINE OUTPUT-SENSITIVE TO CHANGES IN BLOOD FLOW AND PRESSURE-BODY HOLDS ONTO FLUID –LESS URINE OUT--DEHYDRATION-LOOSING FLUID IN FEVER-COMBINATION LEAD TO LESS URINE OUT

LEAKY BLOOD VESSELS-LEAKY GARDEN HOSE-PIN PRICKS ON SIDES-FLUID LEAKS OUT INTO BODY-LESS URINE OUT



SEPSIS-SIGNS

3. ALTERED MENTAL STATE-CONFUSION, DECREASED LEVEL OF ALERTNESS, LIGHT HEADEDNESS AND/OR DIZZINESS-CAN BE FROM LOSS BLOOD FLOW TO BRAIN, DEHYDRATION AND BAD TOXINS RELEASED INTO BODY FROM SEPSIS "WHAT IS THEIR BASELINE MENTATION"

4. VERY FAST HEART RATE-RACING HEART RATE-EVEN SITTING IN CHAIR

HEART REVED UP –ATTEMPTING TO FIGHT INFECTION

TRYING TO GET BLOOD TO DAMAGED TISSUES

CALLS ON HEART INCREASE BLOOD--- ITS PUMPING OUT

SEPSIS-SIGNS

5. DIFFICULTY BREATHING/SHORTNESS OF BREATH

BREATHING RAPIDLY OR SHORT OF BREATH AS IF CLIMBED FLIGHT OF STAIRS BUT ARE AT REST-TAKE A DEEPER LOOK

REMEMBER PNEUMONIA-MOST COMMON INFECTION CAUSE SEPSIS

BODY IN OVERDRIVE-COMSUMING MORE OXYGEN/PRODUCING MORE CARBON DIOXIDE S0….

BODY NEEDS MORE OXYGEN-MEET DEMANDS-BREATHE FASTER-COULD FEEL WINDED

IF YOU EXPERIENCE ANY OF THESE 5 WITH AN INFECTION-SEEK MEDICAL ATTENTION STAT.

SEPSIS-TIME SENSITIVE SYNDROME-OCCURS OVER HOURS

FASTER SEPSIS IS TREATED-----BETTER OUTCOMES

LOWER RISK OF DEATH!!

SEPSIS-OTHER SIGNS

- SIGNS/SYMPTOMS SPECIFIC AGENT
- SBP <90, MAP <70, SBP DECREASE >40mmHG
- HEART RATE->90 -RAPID FULL BOUNDING PULSE
- FEVER >38.3 OR <36C, 20% MAY BE HYPOTHERMIC-LOWER TEMP THAN NORMAL
- REDUCED PACO2 IN THE BLOOD-SEE ON BLOODWORK
- CHILLS
- DIZZINESS
- FATIGUE/SLEEPINESS
- SHIVERING
- SIGNS END ORGAN PERFUSION-WARM FACIAL FLUSHING, ALTERED MENTAL STATUS, OBTUNDATION, RESTLESSNESS, LOW OR NO URINE OUTPUT
- SHORTNESS OF BREATH-RESP RATE >20 SOME SAY 22.
- DYSFUNCTION OF ONE OR MORE ORGANS
- ILEUS OR ABSENT BOWEL SOUNDS-OFTEN END-STAGE SIGN HYPO-PERFUSION

SEPSIS SYMPTOMS

- ELDERLY-SIMILAR SYMPTOMS TO ADULTS **BUT……..**
- **FIRST SYMPTOMS** OFTEN **CONFUSION** WITH **CHILLS**, **WEAKNESS**, POSSIBLY **FASTER BREATHING**, AND DUSKY **SKIN** APPEARANCE
- **LOOK FOR SOURCE OF INFECTION**-PRODUCTIVE COUGH, DYSURIA, FEVERS, PURULENT WOUND.
- SOME SEE RED LINES OR STREAKS ON SKIN –SIGNS OF SEPSIS-STREAKS DUE TO INFLAMMATORY CHANGES IN LOCAL BLOOD VESSELS OR LYMPHATIC VESSELS
- RED STREAKS –WORRISOME-INDICATE SPREADING INFECTION-CAN RESULT IN SEPSIS.

STAGES-SEPSIS-THREE

FIRST-LEAST SEVERE-FEVER & TACHYCARDIA

SECOND-MORE SEVERE-DIFFICULTY BREATHING,POSSIBLE ORGAN DYSFUNCTION(S)

THIRD-MOST SEVERE-SEPTIC SHOCK/SEVERE SEPSIS-LIFE-THREATENING LOW BLOOD PRESSURE

LABEL SEPSIS –CAUSE-MRSA SEPSIS, VRE SEPSIS, UROSEPSIS, WOUND SEPSIS

WAS BLOOD POISONING-----SEPSIS-CONCISE TERM

SEPSIS

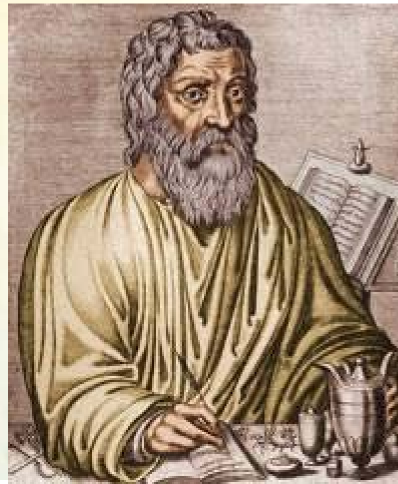
- INFECTION AND BACTEREMIA-INFECTION IN THE BLOOD CAN PROGRESS TO SEPSIS
- INFECTION-INVASION OF NORMALLY STERILE TISSUE BY ORGANISMS RESULTS IN INFECTIOUS PATHOLOGY.

SEPSIS

- SEPTEMBER 13- **WORLD SEPSIS DAY-** INCREASE RECOGNITION OF SEPSIS
- **WORLD HAND WASHING DAY** - TUESDAY OCTOBER 15
- ONLINE SURVEY MAY 2018-2000 ADULT U.S.-65% HEARD OF SEPSIS, 44% IN 2015
- 33% VERY AWARE OF SEPSIS, 72% AWARE STROKE SYMPTOMS
- 12% -IDENTIFY INFECTION SYMPTOMS OF SEPSIS
- 50% STRONGLY AGREED SEEK MEDICAL ATTENTION-SEPSIS
- 75% FELT SEEK MEDICAL ATTENTION FOR STROKE
- SEPSIS TWICE AS COMMON AS STROKE, TWICE AS LIKELY RESULT IN DEATH-GENERAL PUBLIC LACKS KNOWLEDGE TO ACT
- AWARENESS SEPSIS INCREASED FROM 19% IN 2003 TO 65% IN 2018
- 1/3 PEOPLE SURVEYED ADMIT -DID NOT KNOW SEPSIS SYMPTOMS.
- ONLY ONE IN TEN- IDENTIFIED SYMPTOMS OF SEPSIS CORRECTLY

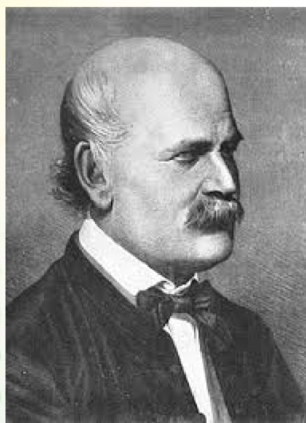
SEPSIS HISTORY

- MENTIONED IN SCRIPTURES ANCIENT GREECE
- COMES FROM GREEK WORD “SEPO” MEANS “I ROT” MENTIONED IN HOMER’S POEMS.
- MENTIONED BY HIPPOCRATES PHYSICIAN AND PHILOSPHER AROUND 400 BC-BIOLOGICAL DECAY POTENTIALLY OCCUR IN BODY
- SEPSIS WAS THOUGHT TO OCCUR IN THE COLON –TREAT WITH ALCOHOL AND VINEGAR
- 129-199 AD-ROMAN PHYSICIAN AND PHILOSOPHER THEORIES WOUND HEALING AND PURULENT DRAINAGE
- ROMANS BELIEVED SEPSIS –FROM INVISIBLE CREATURES-GAVE OFF FUMES-RESULTED IN ROMAN PUBLIC HEALTH SYSTEM-HYGEINE PRACTICES



SEPSIS HISTORY

- **1880'S** IGNAZ SEMMELWEISS –OBSERVATIONS SEPSIS AFTER CHILDBIRTH
- MED STUDENTS AUTOPSIES/ DELIVERIES DIDN'T WASH HANDS-SEPSIS RATE 16%
- MIDWIVES WASHED HANDS- SEPSIS RATE 2%
- FORCED EVERYONE WASH HANDS BEFORE SEE PATIENTS
- POLICY MET WITH HEAVY CRITICISM-HE WAS FIRED
- JOSEPH LISTER, LOUIS PASTEUR, ROBERT KOCH –DISEASES DID NOT DEVELOP SPONTANEOUSLY, WOUND SEPSIS –BREAKS IN SKIN-DRESSINGS WITH CARBOLIC ACID-SIGNIFICANT DECLINE –WOUND SEPSIS & DEATH
- **1964**-NEW STRATEGIES FOR MANAGING SEPSIS, **FIND THE CAUSE**
- **2003**-MODERN GUIDELINES -SEVERE SEPSIS AND SHOCK PUBILISHED BY INTERNATIONAL COMMITTEE UPATED IN 2012



IMPACT INFECTIONS IN SNF'S

- OVER 1.5 MILLION RESIDENTS IN 16,000 NURSING HOMES-USA-2 MILLION INFECTIONS/YEAR
- HIGH RATE -MORBIDITY, MORTALITY, REHOSPITALIZATION, LONG HOSPITAL STAYS-LARGE HOSPITAL EXPENSES
- INFECTION CONTROL CHALLENGES-EMERGING INFECTIONS, RESISTANT ORGANISMS, ANTIMICROBIAL OVERUSE, OLDER FRAIL, SICKER RESIDENTS
- ACUITY RESIDENTS HIGHER

CHANGE IN CONDITION

- Mr. S-admitted SNF 3 days ago-pneumonia-1 week history fever, chills, poor appetite, productive cough, weakness
- HX-ex smoker-80 pack year smoking history
- Yesterday-pain with cough, needs 2 l oxygen keep sat 98%, bit confused, VS WNL. Today-drowsy, lethargic, 1 word answers, grunts, pursed lip breathing. Temp-100.2 BP 110/60, pulse-90, resp 24, oxygen sat 95% 2l
- Detect changes early
- Delay-recognize signs deterioration-BAD for resident
- **DELAYED RECOGNITION**— gaps knowledge, communication challenges, lack confidence in assessment skills

Why resident's deteriorate

1. **Acute condition**-why admitted to hospital-pneumonia-may resp distress or sepsis
2. **Comorbidities**-PMH
3. **Medications**-Diuretics-don't drink-dehydration
4. **Factors**-Age, Mobility, Nutrition, Frailty-stress on body

One diagnosis-two residents-same diagnosis-WHO ARE YOU MORE CONCERNED ABOUT??

Patient A-64 year old female elementary school teacher, 135 lbs active, no previous health conditions, daily MVI

Patient B-75 year old retired female, 190 lbs ambulates with walker, DM, Heart Disease, Arthritis, On insulin 4xd, ASA qd, Metoprolol 25 mg qd, Naproxen 3xd

Doesn't take long for patient like Patient B to decline from infection/ailment

Assess your resident

- **Focused, Head to toe, Systems**
- **Focused**-body system r/t diagnosis-pneumonia-resp system-subtle changes other systems may go unnoticed-need head to toe or systems-if only assess resp system may miss confusion-need baseline info-see status change
- **Systems approach**-won't miss something important
- **One-earliest signs**-Deterioration- **change in LOC** -MAY BE SUBTLE-Friends, family "He seems a little off"

"My goodness, when's the last time anyone checked on Mr. Klink in room 207?!"

CHANGE IN STATUS

- CHANGE-AWAY FROM HOME, CHANGE ROUTINE, POOR SLEEP, NEW MEDS-MAY BE CORRECT
- ANXIETY, CONFUSION, RESTLESSNESS –EARLY HYPOXIA?? MAY BE DETIORATION
- CHANGE IN NEURO STATUS=ASSESS PUPILS
- DILATED-MEDS, BRAIN INJURY, SEVERE HYPOXIA
- PINPOINT-MORPHINE, HEMORHAGIC STROKE
- UNEQUAL-BRAIN SWELLING, HEMORRHAGE, HEAD INJURY-FALL
- DON'T REACT-SIGNIFICANT BRAIN INJURY, POOR OUTCOMES
- OTHER-FACIAL DROOP, ARM DRIFT, ABNORMAL SPEECH, VERY HIGH BP, SUDDEN SEVERE HEADACHE

VITAL SIGNS

- FUNDAMENTAL COMPENENT OF CARE-ID DETERIORATION-MEASURE CONSISTENTLY AND ACCURATELY
- RESEARCH –NOT CONSITENTLY ASSESSED, RECORDED, OR INTERPRETED
- PHYSIOLOGIC CHANGES OCCUR OFTEN 24 HOURS PRIOR TO DEATH OFTEN UNDOCUMENTED, UNRECOGNIZED
- CASE-DEATH DUE TO HEMORRHAGIC SHOCK AFTER SURGERY-BP WASN'T MONITORED OR CHANGES NOT NOTED.
- TEDIOUS TASK//WORK LOADS
- MOST FUNDAMENTAL TOOL AT DISPOSAL-USED DETECT CHANGES

CHANGE IN VITALS

- RESIDENT PULSE 65-CLIMB TO 95-**TREND OVER TIME-30 BEAT INCREASE VERY SIGNIFICANT**
- EXAMINE BP TRENDS OVER HOURS TO DAYS RATHER THAN IN ISOLATION-**SEE BIGGER PICTURE**
- RESIDENT NORMALLY **HTN-160/80 NOW BP 120/60-RESIDENT LIKELY HYPOTENSIVE**
- RESIDENT DETIORATING-PULSE QUALITY-IRREGULAR, BOUNDING, WEAK, ABSENT, SLOW/DELAYED CAPILLARY REFILL, EDEMA, DIZZINESS, SYNCOPE, NAUSEA, CHEST PAIN, DIAPHORESIS
- MONITOR TEMP-IF IT IS LOW-**CHECK IT AGAIN**

ASSESSMENT

- LISTEN ALL LUNG FIELDS-BENEATH CLOTHING
- EXAMINE AIRWAY, BREATHING, O2 NEEDS, SKIN COLOR, CHEST SHAPE, LOC-TIRED, ANXIOUS, CONFUSED
- PROTECT AIRWAY? EFFECTIVE COUGH? CLEAR SECRETIONS?
- SAFELY SWALLOW FOOD? DIAGNOSIS-DYSPHAGIA
- COMBINE RESP WITH NEURO ASSESSMENT-FULL PICTURE
- WORK OF BREATHING-UPRIGHT? LEANING FORWARD? SLUMPED? ACCESSORY MUSCLES, PURSED LIPS, NASAL FLARE
- LOOK FOR TRENDS-RESP RATE NORMAL 12-NOW BREATHE AT 16 OR 20-**SIGNIFICANT**
- NORMALLY ON 3 LITERS - OXYGEN SAT AT 93%- INCREASE OXYGEN TO 10 L FACE MASK KEEP OXYGEN 93%- **SIGNIFICANT**

GI/RENAL

- NAUSEA, VOMITING, DIARRHEA, CHANGE BOWEL SOUNDS-CAN SHOW DETIORATION
- ANY INCREASING PAIN-TAKE NOTICE
- VISUAL INSPECTION, AUSCULTATION, PERCUSSION OR PALPATION
- OBSERVE FOR GUARDING, DISCOMFORT, SHAPE, LUMPS, BUMPS, DISCOLORATION
- NORMAL BOWEL SOUNDS-EVERY 2-5 SECONDS
- HYPERACTIVE-MAY MEAN INFECTION
- HYPOACTIVE-PERITONITIS
- DECREASED URINE OUTPUT-SIGN DETIORATION
- MANY-INCONTINENT-NOTE FREQUENCY OF CHANGING, COLOR, ODOR, WEIGH PRODUCTS
- LOOK AT LAB VALUES

COMMUNICATE FINDINGS

- “I KNOW SOMETHING IS WRONG, I JUST DON’T KNOW WHAT”
- KNOW SUBTLE CHANGES OCCUR EARLY-COMMUNICATE THEM TO PROVIDER/ECARE
- ORGANIZE YOUR THOUGHTS-WRITE THEM DOWN IF NECESSARY
- SBAR-SITUATION-WHAT IS HAPPENING RIGHT NOW
- BACKGROUND-RELEVENT HISTORY, ASSESSMENT-WHAT YOU’VE FOUND, INCLUDE RECENT VITAL SIGNS, RECOMMENDATION-WHAT YOU NEED
- MR. SMITH-DAY ONE ADMIT PNEUMONIA-STABLE
- DAY TWO-SUBTLE CHANGES-SLIGHT CONFUSION, MORE TIRED, CHANGES IN BP, HR AND RESP RATE
- DAY THREE-LETHARGIC, INCREASED WORK OF BREATHING, VITALS WORSENING
- DAY FOUR-HARD TO AROUSE, CONFUSED, LUNG CRACKLES, FEVER
- COMMUNICATE WHEN LAST WELL, MED CHANGES, LABS, TESTS

SEPSIS CASE

- 90 YEAR OLD MALE-HX MDS, ANEMIA, PROSTATE CANCER, DEMENTIA, TYPE 2 DM, CELLULTIS. NORMALLY-WALK AROUND FACILITY ALONE. CALL 10 PM-RESIDENT HAS FEVER-ARMS SWOLLEN –CELLULITIS ??
- MENTATION-A&0-YESTERDAY STARTED ACT “FUNNY”. FALL NOC’S, FEVER. FEVERS DAYS, ANOREXIA, PULLUP-URINE INCONTINENCE
- NOW-LIE IN BED EYES CLOSED, FLUSHED IN FACE, SLUGGISH, ALERT SELF ONLY, NEED HELP SIT EDGE OF BED
- BP 130/68, PULSE 126, RESP 28, TEMP 100.6, OXYGEN SAT 92% RA
- ASSESSMENT-SLEEPY, MOUTH DRY NO LESIONS, LUNGS-RHONCHI RLL, HT-TACHYCARDIA-REGULAR-BOUNDING, ABDOMEN-NONTENDER, BSX4, BLADDER NON-TENDER, SKIN-LEFT ARM DIFFUSE REDNESS AROUND ELBOW ½ WAY UP AND ½ WAY DOWN ARM WARM, RIGHT ARM LESS RED BUT WARM BOTH ARMS WITH PITTING EDEMA, RIGHT LEG ABLE TO FEEL WARMTH WITHOUT TOUCHING THE LEG, REDNESS TOP LEG 12 IN BY 4 IN AND BOTTOM 14 IN BY 4 IN, 2+ EDEMA

SEPSIS CASE

- WHAT COULD WE DO DIFFERENT???
- ECARE IS A RESOURCE, OUTSIDE SET OF EYES/EARS, WE CAN INTERVENE EARLY –HELP IMPROVE CARE OVERALL
- WE ARE NOT HERE TO POINT FINGERS OR MAKE ANYONE FEEL BAD
- RESIDENT –STARTED BECOME ILL DAY BEFORE-FEVERS, MENTATION CHANGE, FALL
- HE WAS NOT EATING WELL, NEW INCONTINENCE, REQUIRED MORE ASSISTANCE WITH CARES
- LOOK TO RESIDENT HISTORY-MDS, PROSTATE CANCER, DIABETES, RECENTLY TREATED WITH ANTIBIOTICS DUE TO CELLULITIS
- DO FULL ASSESSMENT WHEN SEE CHANGES, FULL SET OF VITALS, PASS THROUGH REPORT –EVERYONE IS ALERTED TO CHANGES- **CHART THE FINDINGS**
- **CALL EARLY-**MAYBE THE RESIDENT IS IN EARLY STAGES- “I DON’T KNOW EXACTLY WHAT IS GOING ON” -WE CAN THINK IT THROUGH TOGETHER

SEPSIS CASE

- WE HAVE TO LOOK FOR CLUES AS TO WHAT COULD BE GOING ON.
- NEED TO LOOK AT HISTORY WITH VITALS-WHAT DO THE VITALS NORMALLY RUN-COMPARE TO CURRENT VITALS
- FACILITY **–"I DON'T KNOW THIS RESIDENT"** NEED TO REFER TO CHARTING, ASK OTHER STAFF-WORK TOGETHER CARE FOR RESIDENT
- RESIDENT MET 2/3 SEPSIS CRITERIA-ALTERED MENTAL STATUS, FAST RESPIRATORY RATE-GREATER THAN 22 BREATHS PER MINUTE, BLOOD PRESSURE WAS NOT LESS THAN OR EQUAL TO 100 BUT WAS LESS THAN HIS BASELINE.
- DOH-MONITORING OUR RESIDENTS-VITALS, ASSESSMENTS-CHARTING THEM-TELL A STORY WITH YOUR **CHARTING-PROTECT YOUR LICENSE WITH GOOD ACCURATE CHARTING**

LEGAL RISKS

- LAWYERS-LABELING RESIDENT CASES –STAFF FAIL RECOGNIZE SEPSIS CASES AS PERSONAL INJURY/ABUSE
- LEGISLATURE-LAWS-ILLINOIS –GABBY'S LAW-HOSPITALS CREATE GUIDELINES RECOGNIZE SEPSIS-KIDS/ELDERLY-LTC WILL BE SOON
- KANSAS NURSING HOMES CITED FOR FAILINGS TO PROTECT RESIDENTS FROM INFECTION
- KAISER HEALTH –WORKING WITH SNF'S IN KANSAS-EDUCATION-RECOGNIZE EARLY INFECTION
- THINK ABOUT HEART ATTACKS, STROKES BUT SEPSIS-BIG RISK OF DEATH
- PREVENTION OF SKIN BREAKDOWN, OTHER INFECTIONS.
- PUBLIC-INFO HEALTH AND INSPECTION REPORTS-CENTERS FOR MEDICARE AND MEDICAID NURSING HOME WEBSITE

QUALITY CARE

- QUALITY CARE-COMPETENT ASSESSMENT & DOCUMENTATION
- EARLY IDENTIFICATION ACUTE CHANGE IN CONDITON, APPROPRIATE ASSESMENT BY NURSES –DIFFERENCE BETWEEN MILD ILLNESS & SERIOUS DECLINE OR QUICK RECOVERY WITH LESS TREATMENT, PROLONGED COURSE
- NURSING ASSESSMENT/DOCUMENTATION-BASIC NURSING STANDARD
- ANA-NURSES ROLE RESIDENT CARE
- NEED FOR DATA COLLECTION-DEPENDS ON RESIDENT CONDITION
- IMPORTANT DATA IS COLLECTED-CORRECT ASSESSMENT METHODS

QUALITY CARE

- DATA COLLECTION-FROM RESIDENT, FAMILY, FRIENDS, PROVIDERS
- PROCESS-SYSTEMATIC, ONGOING, CHARTING – AVAILABLE TO THOSE NEED INFORMATION
- RESIDENT CONDTION CHANGES-PROFESSIONAL NURSES RESPONSIBILITY TO COMPETE ASSESSMENT, DOCUMENT IT
- ASSESSMENT-VITALS, BODY SYSTEMS EXAM
- NURSING STANDARD-THOROUGH DOCUMENTATION-CONTINUITY OF CARE, SNF POLICY, LEGAL PROTECTION

SNF DOCUMENTATION STUDY

- 289 SNF RESIDENTS STUDY-MISSOURI-DETERMINE HOW EFFECTIVELY SNF NURSES MEET STANDARD ASSESSMENT TIME -RESIDENT CHANGE IN CONDITION & OBTAIN VS
- NURSES TRAINED REPORT RESIDENTS-CHANGE IN CONDITION-EITHER RESPIRATORY OR NON-RESPIRATORY
- 31% RESIDENT DIDN'T HAVE ANY VS DONE AT TIME OF ACUTE CHANGE IN CONDTION
- ONLY 36% HAD COMPLETE SET VITALS
- 52% ID ACUTELY ILL-SOME TYPE PHYSICAL ASSESSMENT
- 54% WITH RESP SYMPTOMS –LUNG ASSESSMENT
- 43% WITH NON-RESP SYMPTOMS-APPROPRIATE EXAM
- 88% LUNG ASSESSMENTS DOCUMENTED, 94% OTHER EXAMS DOCUMENTED, 52%-CORRECT TERMS

SNF DOCUMENTATION STUDY

- STUDY SHOWED-SIGNIFICANT PROBLEM IN SNF SETTING –DOING APPROPRIATE ASSESSMENTS, CHARTING THEM
- EDUCATION-SNF STAFF –NURSING STANDARDS, EXPECTATIONS
- QA PROGRAMS- IMPROVE NURSING ASSESSMENTS, DOCUMENTATION CHANGE IN RESIDENT CONDITION
- SHOWN-IMPROVES RESIDENT OUTCOMES.

CHANGE IN CONDITON-TOOLS

1. SPICES-SLEEP, PROBLEMS WITH EATING, FEEDING, INCONTINENCE, CONFUSION, EVIDENCE OF FALLS, SKIN BREAKDOWN-PROBING QUESTIONS WITH EACH LETTER CAN BE REVEALING
2. FANCAPES-FLUID, AERATION, NUTRITION, COGNITION, COMMUNICATION, ABILITY/ABILITIES, PAIN, ELIMINATION, SKIN/SOCIALIZATION
3. DELIRIUM-DRUG USE-RECENT INTAKE OF MEDS, ELECTROLYTE IMBALANCE, LACK OF DRUGS. MISSED OR NEW MEDS, INFECTION, REDUCED SENSORY INPUT-BLINDNESS, HEARING OR SPEECH IMPAIRMENT, INTRACRANIAL PROBLEMS-STROKE, BLEEDING,MENINGITIS, POSTICTAL STATE, URINARY RETENTION AND FECAL IMPACTION, MYOCARDIAL PROBLEMS.

CHANGE IN CONDITION-TOOLS

4. PQRST-PROVOKES/PALLIATES, QUALITY/QUANTITY, REGION/RADIATES, SEVERITY, TIMIING

5. COLSPA-CHARACTER, ONSET, LOCATION, DURATION, SEVERITY, PATTERN, ASSOCIATED SYMPTOMS

WHEN SHOULD I CALL?

CALL MD OR CNP

SBP >200 OR <90

DIASTOLIC BP>115

RESTING PULSE >130 OR <55

ORAL TEMP >101

RECTAL TEMP >102

DELIRIUM-SUDDEN ONSET MENTAL STATUS CHANGE

EDEMA-SUDDEN WITH DYSPNEA

PINK FROTHY SPUTUM, W/CHEST PAIN

LEG SWELLING W PAIN, REDNESS

CALL 911

VS ASSOC. WITH SEVERE SYMPTOMS, DISTRESS

AIRWAY OBSTRUCTION OR ANAPHYLAXIS

MENTAL STATUS CHANGE WITH SUSPECTED AIRWAY PROBLEM

RESPIRATORY DISTRESS, SHOCK

CV EVENT-SYNCOPE, TACHYCARDIA

ACUTE CORONARY SYNDROME

SLEEPING DIFFICULTIES- WITH MENTAL STATUS CHANGES

WHEN SHOULD I CALL?

CALL MD OR CNP	**CALL 911**
BLEEDING-UNCONTROLLED OR REPEATED EPISODE, EMESIS W FRANK BLOOD BLOODY STOOLS, VAG BLEEDING, PROFUSE	UNCONTROLLED BLEEDING BLEEDING W SHOCK SX TRAUMA W/WO INURY
FALLS-DEFORMITY LIMB, JOINT PAIN W LESS ROM CAN'T BEAR WT, LACERATION W/BLEEDING WON'T STOP	TRAUMA-FALL DISTANCE W/ ASSOC. LOC OR VS CHANGE
CHEST PAIN- NEW ONSET OR RECURRENT NOT RELIEVED IN 20 MIN W/ ORDERED NTGX3 PAIN W/VS CHANGE, SOB,SWEATY, N&V	PAIN W/LOC OR ARRYTHMIA W/PULSE<40 OR >150
MED ERROR -SYMPTOMS DUE TO ERROR	SYMPTOMS +VS &/OR LOC
NAUSEA/EMESIS –SEVERE ABD PAIN, RIGID OR EXTREME TENDER TO PALPATE, ABSENT BS GUARDING	ONLY WHEN ASSOC W MENTAL STATUS CHANGE OR CV SX.

WHEN SHOULD I CALL?

CALL MD OR CNP	**CALL 911**
PAIN-ASSOC. W/FALL, TRAUMA	SEVERE, UNCONTROLLED
NEW INABILITY TO DO ROM	
HEADACHE W/ ALTERED VISION, LOC	
DEHYDRATION->1 EPISODE VOMIT/24 HRS	VS CHANGE, LOC CHANGE
&DECREASED FLUID, < 50% NORMAL/24H	SUSPECTED SEPSIS
PRESSURE ULCERS/SKIN RASH- ST 2, 3 OR 4	NA
NO TX/NO PROTOCOL, INFECTION-PURULENCE,	
ERYTHEMA, ODOR, FEVER	
DEPRESSION/SUICIDAL IDEATION- EXPRESS PLAN	PLAN & CAN'T MONITOR ADEQUATELY
SEIZURES- NEW ONSET OR STATUS EPILEPTICUS	NEW ONSET OR STATUS EPILEPTICUS W/ POSSIBLE RESP DISTRESS, SHOCK

WHEN SHOULD I CALL

CALL MD OR CNP

VISUAL CHANGES- STROKE SX. –HEMIPARESIS

SLURR SPEECH, HA, FACIAL DROOP

SHORTNESS OF BREATH

VS CHANGE OR SUSPECTED CV INVOLVEMENT

LABORED BREATHING

ASHEN APPEARANCE/CYANOSIS

CALL 911

SUSPECTED STROKE/CVA

EVIDENCE INADEQUATE

OXYGEN-CYANOSIS,

INCREASED RESP RATE

PARADOXICAL CHEST

MOVEMENT, ACCSSORY MUSCLE USE

CASE STUDY

84 YEAR OLD MALE CALL AT 0445-FOUND CRAWLING AROUND ON THE FLOOR-ROOMMATE PUT LIGHT ON TO ALERT THE STAFF.

VITALS-BP 106/46, PULSE 101, TEMP 99, RESP 20, OXYGEN SAT 96% RA

CONFUSED….. ENCOURAGED ECARE TELE-HEALTH VISIT

CHART REVIEWED-RESIDENT WAS ALERT AND ORIENTED YESTERDAY AM. CONFUSED WHEN NURSE CAME ON NIGHT SHIFT.

HAD CONGESTION OVER THE WEEKEND-CLARITIN STARTED-2-3 D AGO

WENT ON CAMERA- "IS SHE GOING TO PUT ME IN JAIL"?

DENIES DYSPNEA, PAIN. EATING, DRINKING, BOWELS, BLADDER OK.

COUGH MOIST INCREASED WITH DEEP BREATH. RUNNY NOSE.

CONFUSED SPEECH. ABLE TO STATE NAME, FACILITY, JANUARY, TOWN

HISTORY OF PNEUMONIA, PNEUMONIA, PNEUMONIA, IMPAIRED FASTING GLUCOSE, STAGE 3 CKD, FREQUENT FALLS

SUBTLE CHANGES, SUBTLE CHANGES, SUBTLE CHANGES

NEED TO LOOK AT EACH SITUATION WITH MAGNIFYING GLASS-YOU ARE THE EYES & EARS FOR RESIDENT!!

MARY-LAND OF SNF

- **CASE STUDY**
- SIGNIFICANT-ELDERLY 95
- WOKE UP DIDN'T WANT TO EAT, FATIGUED, WANTED TO STAY IN BED
- CONFUSED
- INCREASED RESPIRATORY RATE, HYPOTENSION
- HISTORY-BREAST CANCER, DIABETES, HISTORY PNUEMONIA
- FOLEY
- VITALS-HEART RATE 110, LOW BODY TEMP, SHIVERING, DIZZINESS, FACIAL FLUSHING
- DYSPNEA, DECREASED URINE OUTPUT

OBJECTIVES

OBJECTIVES

1. AT THE END OF THIS PRESENTATION NURSING STAFF WILL BE ABLE TO DEFINE SEPSIS AND LIST THE 3 KEY SEPSIS CRITERIA. **AMS, RESP RATE GREATER THAN 22, LOW BP**
2. AT THE END OF THIS PRESENTATION NURSING STAFF WILL BE ABLE TO STATE WHICH RESIDENTS ARE AT HIGHEST RISK FOR SEPSIS. **DM, OBESITY, RENAL & LIVER FAILURE, CANCER, AIDS, ABSENT SPLEEN, IMMUNOSUPPRESSANT MEDS, TUBES, BURNS, PREVIOUS INFECTIONS, GENETIC FACTORS**
3. AT THE END OF THIS PRESENTATION NURSING STAFF WILL BE ABLE TO STATE AT LEAST THREE CHANGES IN RESIDENT CONDITION THAT SHOULD BE REPORTED TO THE RESIDENT'S PROVIDER AND OR ECARE SENIOR CARE

COLD CLAMMY SKIN, LOW UOP, AMS, INCREASED HR, DYSPNEA, FACIAL FLUSHING, FEVER, SHIVERING

NURSE PRAYER

- MAY REST FIND YOU, IN THE PEACEFUL MOMENTS WHEN ALL IS STILL, IN THE QUIET TIMES WHEN YOU PAUSE AND BREATHE MAY REST FIND YOU IN THE CHOAS OF THE MOMENT, IN THE SORROW YOU SEEK TO HEAL. MAY REST STRENGTHEN AND BLESS YOU. MAY IT FILL YOUR SPIRIT AND GIVE YOU UNEARNED JOY. MAY YOU FIND REST IN THE CARE OF OTHERS, IN THE KNOWLEDGE OF YOUR WORTH, IN THE VALUE OF YOUR SERVICE. MAY THE ONE WHO GIVES YOU REST BLESS YOU AND HOLD YOU CLOSE. AND MAY YOU IN YOUR VERY BEING, BE A PLACE OF REST FOR OTHERS.

- MAY GOD BLESS YOU IN THE WORK THAT YOU DO!!

Thank you!!