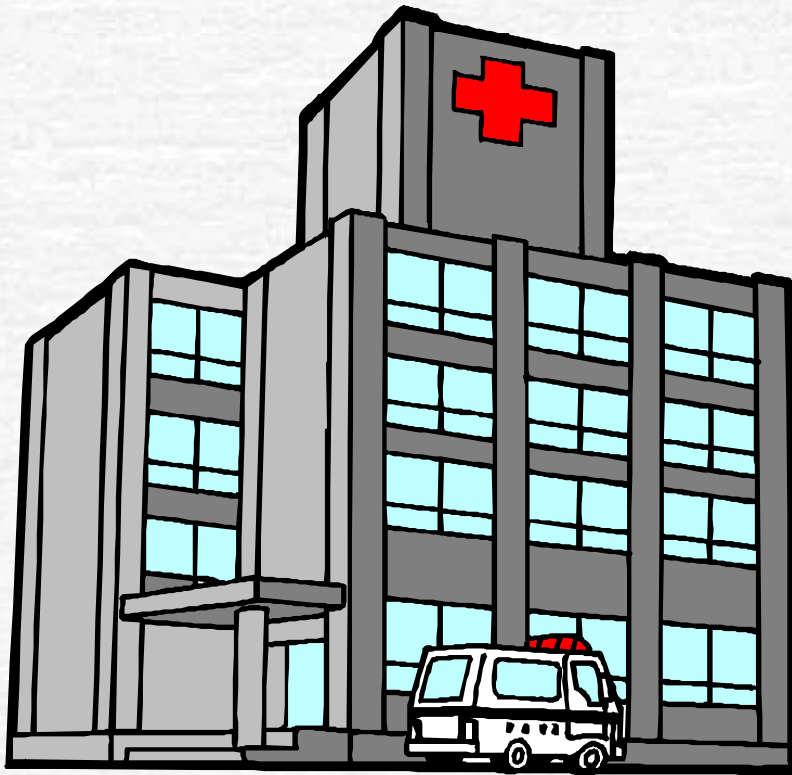


Systems Theory

Introduction



- Have you or any of your family ever been sick?
- Where have you received care?

Subsystems

- Generally health care systems are categorized based on the level of care that is provided within each system.
 - Acute care
 - Extended care
 - Home care
 - Ambulatory care
- How would you define these levels of care?

Acute Care

- An environment in which health care services are provided to patients with severe symptoms.
- Patient is usually seen within a hospital/inpatient care setting.
- Requires round the clock care by a team of skilled health care workers.
- A variety of illnesses/conditions and all age categories.

Acute Care

- ✓ Hospitals
- ✓ Emergency Rooms
- ✓ Critical Care
- ✓ Surgery Centers
- ✓ Birthing Centers
- ✓ Acute Drug Rehabilitation Centers
- ✓ Hospice



Extended Care

- Provided at a lower level than acute care; however, the patient is not critically ill or in need of a critical level of health care intervention.
- Patient does not require round the clock assistance.
- Recuperating or is chronically ill and in need of additional health care services.


Extended Care

- ✓ Skilled Nursing Facilities (SNF)
- ✓ Nursing Homes
- ✓ Convalescent Care Facilities
- ✓ Residential Care
- ✓ Rehabilitation Centers
- ✓ Inpatient Hospice





Home Care

- Patient is stable enough to be cared for in the home; however, is not well enough to be transported back and forth to the clinic or doctor's office.
 - Health care providers come to the home on a periodic basis to administer medications and/or treatments. They generally do not stay with the patient.
 - Family or caregivers take care of patient's daily needs.
- 

Home Care

Home visits

- RN: Registered Nurse
- PT: Physical Therapist
- NA: Nurse Assistant
- Social Worker

Hospice – assistance to patients with a terminal illness (within 6 months of dying; no heroic measures to keep them alive).

Durable Medical Equipment

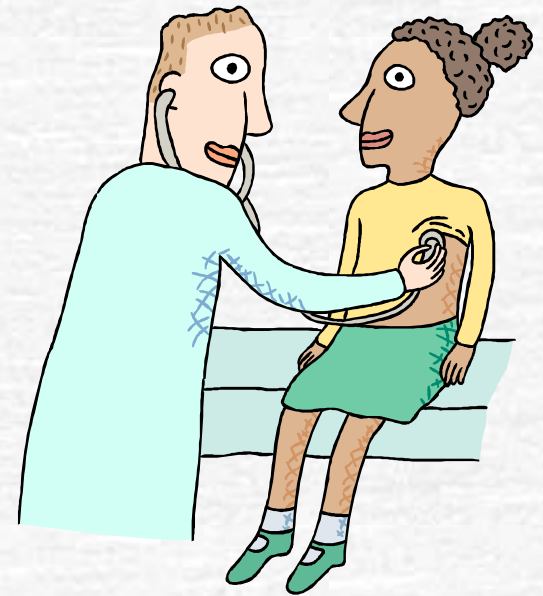
Ambulatory Care

- Comes from the word “ambulate” which means to walk.
- Refers to an outpatient health care setting (that you walk to and walk from).



Ambulatory Care

- ✓ Clinics
- ✓ Physician Offices
- ✓ School Nurse
- ✓ Mobile Clinics
- ✓ Public Health
- ✓ Rehabilitative Clinics – PT/OT
- ✓ Mental Health Clinics
- ✓ Dentist Offices




Health Care System Interface

- Patients move between different levels of health care.
- Example:
 - Elderly patient who has fallen and broken his hip.
 1. **Acute care setting** – admitted to hospital, surgery, IV pain medication, extensive physical care including physical therapy. Now able to get out of bed, walk using walker, is eating well.

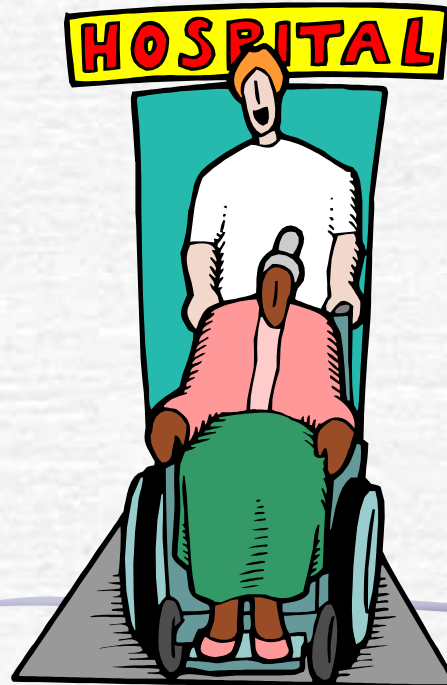


Health Care System Interface

2. Patient is transferred to **Extended Care** as he is not critically ill but does require round the clock assistance. PT continues.
 3. When the patient can move safely around and no longer needs 24 hour care, he can be transferred home. A **Home Health Care** nurse verifies patient safety and transition into this environment. Plan for home PT is established and care continues at home until patient is independent and caring for himself.
- 

Health Care System Interface

4. **Ambulatory Care** – Patient will have scheduled appointments with doctor(s) and physical therapist to follow up and continue care.



Standards & Accreditation

- ✓ Licensing and accrediting agencies establish standards and monitor health care's compliance to these standards.
- ✓ What happens if health care organizations and/or facilities do not maintain the regulations?
 - Will not be allowed to operate – doors legally closed.
 - Will not be eligible for federal, state, and/or county funding.

Regulatory Agencies

- Acute Care, Extended Care, & Home Care
 - State Dept of Health and Human Services (DHSS)
 - Regulations may vary by state.
 - Mandatory accreditation.
 - Cannot operate without current DHSS licensure.
 - JCAHO – Joint Commission on Accreditation of Health Care Organizations.
 - Voluntary accreditation, however State and Federal monies (Medicare, Medicaid) are paid only to hospitals and facilities that are fully accredited.

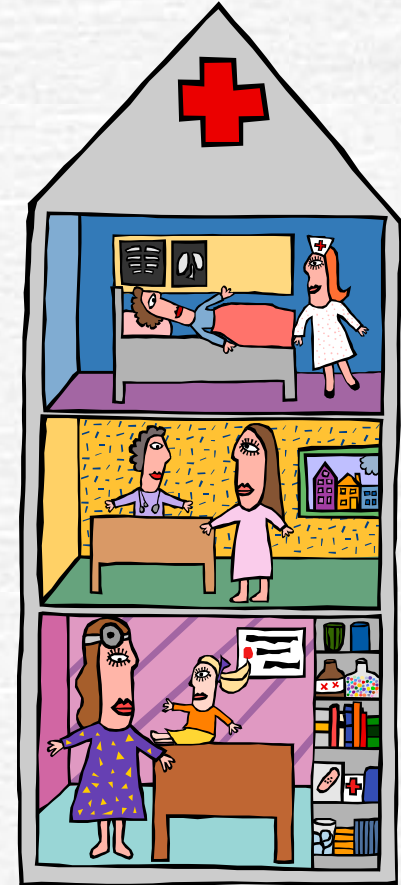
Regulatory Agencies

• Ambulatory Care

- NCQA – National Committee for Quality Assurance
 - Managed Care Organizations, Behavioral Care, and Preferred Provider Organizations.
- JCAHO – Joint Commission on Accreditation of Health Care Organizations.
 - Voluntary accreditation, however State and Federal monies (Medicare, Medicaid) are paid only to facilities that are fully accredited.

Paying for Health Care

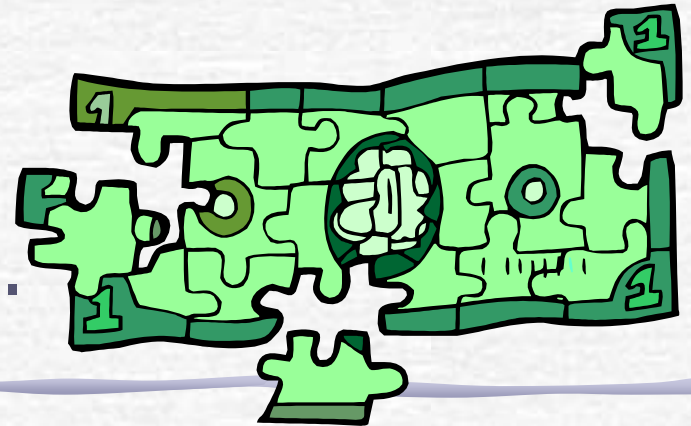
- ☞ If the total annual cost of our nation's health care were divided by the total population, each person's share would be about \$5,400. For a family of four, that would be over \$20,000 per year.
- ☞ Most of us don't have that much money laying around to pay for health care.



Who Pays For Health Care?

Health care delivery systems account for approximately 14% of the gross national product.

- That means that of every dollar you earn, approximately 14 cents of that dollar will be spent on health care.
- By 2014 health care costs will increase to 19%.



Who Pays For Health Care?

How is health care paid for?

- Insurance.
- Self-pay (out of pocket).
- Employer paid health insurance.
- Government paid programs.
- Volunteer agencies & privately funded health programs.



No Health Insurance

- In 1999, 42 million Americans (nearly 18% of the total non-elderly population) were uninsured.
- Low-income Americans (family of 3 who earn less than \$26,580/yr) run the highest risk of being uninsured.
- Nearly 40% of the poor and 30% of the near-poor lack health care coverage.

No Health Insurance

- ✓ The majority of the uninsured (83%) are in working families.
 - More adults than children are uninsured.
 - Medicaid and State Children's Health Insurance Programs (CHIP) provide insurance coverage for many children.
 - Low-wage workers, unskilled workers, and employees in small business are also more likely to be uninsured.

No Health Insurance

- ✓ The reason so many Americans are uninsured is due to the expense of insurance.
 - Employers are less likely to provide insurance to low-wage workers and these workers are less able to privately purchase insurance.
 - State Medicaid programs help to fill the gap, however state programs vary in their scope and breadth of services.

No Health Insurance

Impact:

- Nearly 40% of the uninsured have no regular source of health care and may forgo needed care.
- Uninsured children are much more likely not to have medical care for common conditions (ear infections), and also less likely to receive medical attention when they are injured.
- Both uninsured adults and children are less likely to receive preventative care.

No Health Insurance

Impact, cont. . .

- Uninsured are more likely to be hospitalized for controllable conditions (such as pneumonia or diabetes) than insured persons.
 - Due to a delay in accessing care.
- Cancer death rates are generally higher in the uninsured due to delay in preventive care and/or delay in needed care.
- 30% of the uninsured report that medical bills have had a major impact on their families' lives.

Government Paid Programs

☛ Medicare

- Largest federal program.
- Established in 1965.

☛ Military, Veterans, Native Americans, and Federal Prisoners

☛ Medicaid

- State programs that pay for services to persons who are medically indigent, blind, or disabled.

Medicare

- ✓ Elderly persons over age 65 are covered with health insurance through Medicare.
- ✓ Some transplant patients and patients who are permanently disabled may also be eligible for Medicare coverage.
- ✓ Medicare does not cover all health care expenses including medications.

Medicare

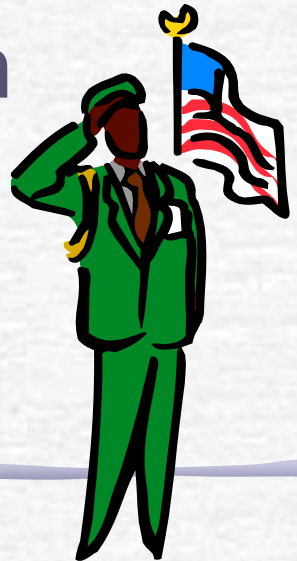
- Part A – provides for inpatient care (for all).
- Part B – provides for outpatient care (patient pays a premium and deductible).
- Major changes to Medicare benefits literally requires an act of Congress.

Medicaid

- Health insurance program for certain lower income people or those with very high medical bills.
 - Each state administers their own program.
 - About 33 million Americans are covered.
 - No co-payment or deductibles.
 - Generally only covers basic medical services.

Military Health Care

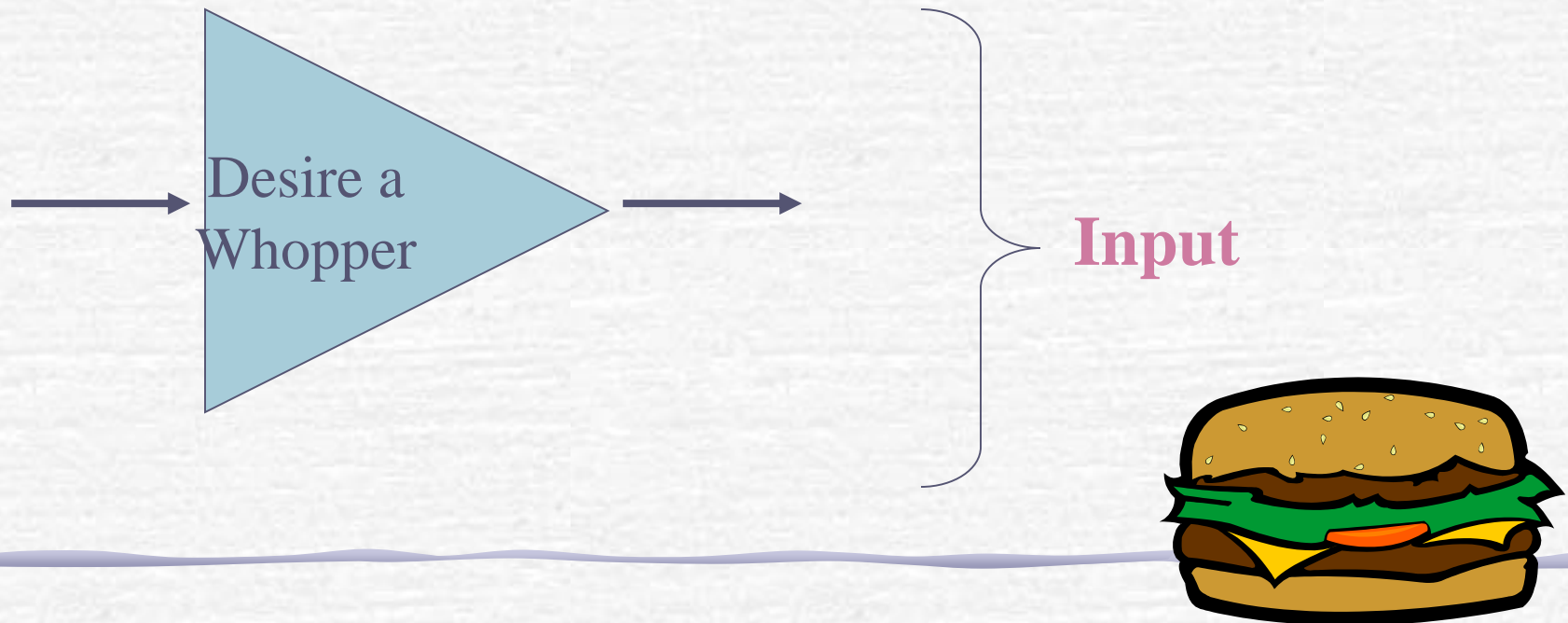
- U.S. Government provides health care benefits for families of current military personnel, retired military personnel, and veterans.
- Champus/Tricare programs – not an insurance plan.



Systems Theory

What did you do last night?

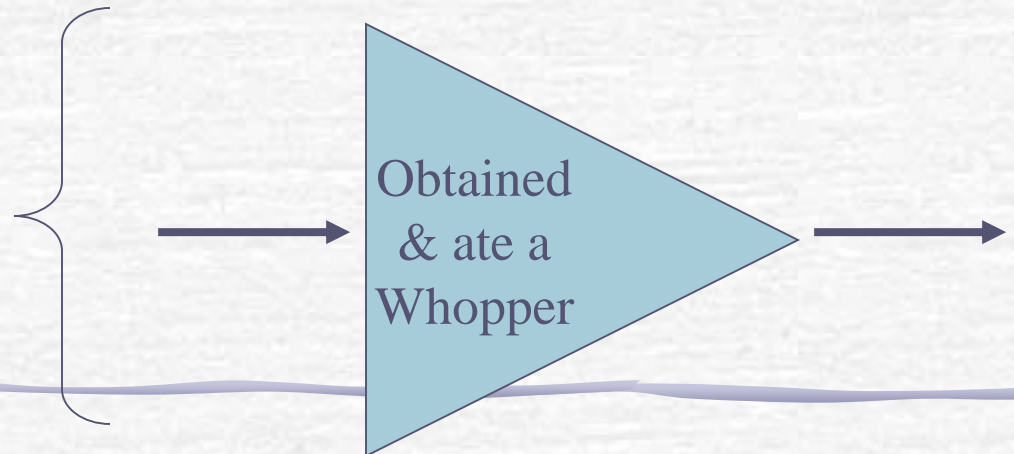
--- You went to Burger King . . . Why?



Systems Theory

- ☛ Did you get what you wanted?
- ☛ Were you satisfied?
- ☛ Was the cost acceptable and will you return to Burger King again for more food?

Output



Systems Theory

- **System:** A set of objects or elements in interaction to achieve a specific goal.
 - The function of any system is to process energy, information, or materials into a product or outcome for use within the system – or outside the system (environment), or both.
 - All systems have common elements:
 - Input, Output, Feedback Loop, Throughput, Environment, Boundaries, Equilibrium, Constraints.

Systems Theory

- ☞ **Input:** The business the organization is in.
- ☞ **Output:** The products of the business.
 - For a hospital, output would be the measurement of the quantity and quality of care that the patient receives as well as their satisfaction with that care.
- ☞ **Feedback Loop:** Environmental reaction to the output that determines future input.
 - If customers are dissatisfied with the service or quality of care, they will not return; thereby decreasing the input, and vice versa.

Systems Theory

☞ What is involved to get you a good Whopper?

☞ **Information?**

- A collection of data which allows you to perform the tasks at hand.
- Policies and procedures, recipes, menus, consumer expectations.

☞ **Material?**

- Raw materials to produce the product.
- Hamburger, buns, stoves, refrigerators, paper goods.

Systems Theory

Resources?

- Human resources needed to produce the product.
- Chefs, fry cooks, waitresses, managers, accountants, shipping/receiving clerks, etc.

Energy?

- Is produced and is the outcome from the interpersonal interchange, the decisions, the teamwork, and the ability to overcome barriers.
- If the cook was not at work, could you produce a hamburger?
- If the stove was broken, could you make a whopper?

Systems Theory

- ✓ **Throughput:** The transformation process whereby inputs of information, materials, and energy (including human energy) take the raw products (inputs) and develop or transform them into the goods and services (outputs).

Systems Theory

- **Environment:** Constraints that limit the flow across the boundaries of a system.
 - **Educational** – personnel trained to do the type of work you need.
 - **Sociocultural** – attitude of the neighborhood to your business, value of product related to cost.
 - **Legal/political** – regulatory standards which govern your business and the people who work in it.
 - **Economic** – ability of the business to survive economically in this area.

Systems Theory

- ✓ **Boundaries:** Separates the system from the larger environment. Matter, energy and information flow back and forth across the boundary.
 - Example – Burger King and McDonalds are performing the same type of work and producing a similar product; however they are separate businesses.

Systems Theory

Boundaries, cont:

● Open System

- Exchanges information, energy or material with the environment.
- System achieves a steady state or dynamic equilibrium while retaining its capacity for work.
- What fast food chains are viable in our community? Why?

● Closed System

- System does not interact with its environment, ex: A Rock.
- Have there been a store or fast food place in our community that has not be viable? Why?

Systems Theory

- **Equilibrium:** The balance of matter, energy and information flowing back and forth across the boundaries of a system.
- A system in equilibrium responds to disturbance from the outside by - -
 - Resisting or disregarding the disturbance, or protecting and defending itself against the intrusion.
 - Using homeostatic forces to restore the former balance.
 - Accommodating the disturbances or by achieving a new equilibrium.