Management in Healthcare

Presentation Objectives
- Understand components of Management
- Explain objectives, importance and benefits of planning;
- Explain various steps in planning process, types and tools of planning
- Describe health planning, its importance and scope
- Explain program evaluation methods including Cost Effectiveness and Cost Benefit Analyses
- Explain Effectiveness and Efficiency
- Explain Administration, Legislation and Regulation as components of Management in Health Care System

What is Management?
- Management is the process of getting activities completed efficiently and effectively with and through other people
- Common Management Functions:
  - Planning
  - Organizing
  - Staffing
  - Directing
  - Coordinating
  - Reporting
  - Budgeting
Frederic Taylor’s principles of Management

- Develop a science for each element of an individual’s work
- Scientifically select, train and develop the worker
- Heartily cooperate with the workers
- Divide work & responsibility equally between managers & workers
- Improve production efficiency through work studies, tools, economic incentives

Henri Fayol’s principles of management

1. Division of work
2. Authority
3. Discipline
4. Unity of command
5. Unity of direction
6. Subordination of individual interest
7. Remuneration
8. Centralization
9. Scalar chain
10. Order
11. Equity
12. Stability of tenure
13. Initiative
14. Esprit de corps

Roemer Model

The Roemer model of a healthcare system incorporates 4 major functions.
1. Planning
2. Administration,
3. Legislation and
4. Regulation
What is Planning?

- Planning is the process of setting objectives and determining how to accomplish them.
- In one sentence, we can define planning as, “chalking out the blueprint of future activities”
- Related terms
  - Implementation
  - Evaluation

Why health care planning?

- Objectives of planning
  - Set direction
  - Decide where you want to go
  - Decide how best to get there

The Planning Process

- There are five essential steps in the planning process (Schermerhorn):
  1. Define Objectives
  2. Determine where you stand vis-à-vis objectives
  3. Develop premises regarding future conditions
  4. Analyze and choose among action alternatives
  5. Implement the plan and evaluate results
Why plan?

Anticipate problems:

- **Externally:**
  - Greater government regulations,
  - Ever-more complex technologies,
  - Uncertainties of market and global economy,
  - Changing technologies, and
  - The sheer cost of investments in inputs

- **Internally:**
  - Quest for operating efficiencies
  - New structures and technologies
  - Alternative work arrangements
  - Greater diversity in workplace
  - Related managerial challenges

Benefits of planning

Planning improves

1. Focus
2. Flexibility
3. Action orientation
4. Coordination
5. Time management
6. Control

Types of plans

- **Time horizon**
  - Short term
  - Long term

- **Scope**
  - Strategic
  - Operational
“Terms” and “tools and techniques”
- Terms
  - Policy
  - Procedure
  - Budget
- Tools and techniques
  - Forecast
  - Contingency planning
  - Benchmarking

Planning in health care
- Goals are outcome based
- Specific objectives
- Budget
  - Allocation to optimize goals
- Community served

An Example: Mission of American Health Planning Association (AHPA)

"The mission of health planning is the development of comprehensive, community-oriented health systems designed to assure universal access to necessary care of the highest quality and most reasonable cost possible."
Summarize: Why Health Planning?

- Better utilization of available resources
- Achieving targeted outcomes
- Prevention of epidemics and disease spread
- Combating emerging health threats
- Ensuring healthcare cost (affordable), quality (high) and access (increased) issues

Planning in U.S. Healthcare

- A revival in the 1990s
  - Private sector
    - Cost, quality, access
  - Public sector
    - Emerging public health threats

Factors drawing attention to health planning are:

- An emphasis on local, community-based approaches to health issues;
- Obvious failures of the laissez-faire approach applied to health care;
- Identified deficiencies in public health;
- The abuses and excesses that have occurred in the private sector;
- The costs of providing health services under current conditions;
- Increasing numbers of mandated services at the state level; and
- The perceived ineffectiveness of the health care system overall.

(Source: AHPA)
An Example of a health planning process

A health program for a local community.

**Goal:** (e.g.) “To assess and improve the cardiovascular health of the community”

**Objective:**

**General:** To prevent or minimize the incidence (occurrence) of heart attacks in the community.
Example: the objectives

Specific objectives:

a) To perform Cholesterol screening among selected age group (20-65),
b) To perform Blood Pressure (BP) screening among the same age group,
c) Identify high risk individuals based on screening findings,
d) Refer those who are in risk groups for treatment/medication, and
e) Provide preventive measures to others

Health Planning example (contd..)

In the survey, we’ll look for the following (for example):

- Population structure – age, gender, race, ethnicity
- Average life expectancy
- Literacy rate
- Communication (transport) system, media coverage
- Major occupations, average income
- Life style, Recreation places
- Cultures, traditions, and beliefs
- Local climate, natural resources etc.

Health Planning process (contd..)

Now, we move to the implementation phase.

► Assume it is a week long program:
  • 1st day: Set up our mobile work area and select different locations to provide free transport
  • 2nd and 3rd day: Collect blood samples
  • 4th day: Analyze the results and contact high risk groups who would be referred for medication and treatment
  • 5th and 6th day: distribute relevant printed information to local people
  • 7th day: Interact with local leaders, social organizations, and government departments to discuss about the outcome and future coordination on similar program
Example: Evaluation Phase (contd.)

Next, we move to evaluation phase:

1. Preliminary evaluation: the survey
2. Ongoing Evaluation:
   • periodically scheduled according to plan
   • Allows for mid-implementation modifications
3. Terminal evaluation: Since our goal was to improve the cardio-vascular health of the local population: we’ll repeat the program every year and follow up the collected data to see if we achieved our goal

   • **Recommendations**

Evaluation

Cost benefit
Cost Effectiveness

Why CBA?

Rationality and efficiency in choice

Rationale for CBA

- Positive net-benefits implies social welfare will be improved
  - Benefits and costs include
    - All direct benefits & costs
    - All indirect benefits or costs
  - The above implies CBA involves the evaluation of social benefits and social costs
- "Spending less" vs. "Spending wisely"
A. Types of costs (for whom?)
1. Direct medical care costs
2. Direct non-medical costs are all monetary costs imposed on any non-medical personnel.
3. Indirect costs primarily consist of the opportunity cost of the patient’s time.

B. Types of benefits: just like costs are negative benefits, benefits are regarded as negative costs, so
1. Direct benefits: savings in health expenditures
2. Indirect benefits: restored earnings
3. Intangible benefits: reductions in pain and suffering from illness that no longer exists

C. Cost Benefit Analysis (CBA)
- A common unit of account (weights)
- Problems
  - Absence of Markets (public goods)
  - Quality of Life Improvement Projects
  - In general: intangible benefits
  - Revenue vs. Consumer Surplus
With the total figures the benefit/cost (B/C) ratio can be calculated:

\[
B/C \text{ Ratio} = \frac{\text{Total Benefits}}{\text{Total Costs}}
\]

As an example, let's say the total benefits of the program are $100,000 and the total operating cost is $98,000. The benefit/cost ratio is: $100,000/$98,000 = 1.02

COST-EFFECTIVENESS ANALYSIS (CEA)

A more modest approach to program evaluation

The difference between CBA and CEA*

- CBA
  - What is the dollar value of program costs and benefits?
  - Do the benefits exceed the costs by a sufficient amount?
- CEA
  - Is there a desirable pre-specified objective to be attained?
  - What are the alternatives for reaching that objective?
  - What are the costs associated with the various alternatives?

*McGuigan and Moyer 1986, pp. 562-563*

Examples of Government planning in case of Bio-terrorism Attack
HHS’ Role in the Federal Response Planning against Bio-terrorism

Identify Potential Terrorist Biological Weapons

- Anthrax
- Smallpox
- Botulism
- Plague
- Q Fever
- Tularemia
- Brucella
- Cholera
- Typhoid
- Hemorrhagic Fevers

Forecast estimated damage

<table>
<thead>
<tr>
<th>AGENT</th>
<th>DOWNWIND REACH (km)</th>
<th>DEAD</th>
<th>INCAPACITATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthrax</td>
<td>&gt;20</td>
<td>95,000</td>
<td>125,000</td>
</tr>
<tr>
<td>Tularemia</td>
<td>&gt;20</td>
<td>30,000</td>
<td>125,000</td>
</tr>
<tr>
<td>Typhus</td>
<td>5</td>
<td>19,000</td>
<td>85,000</td>
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<tr>
<td>Tick-borne encephalitis</td>
<td>1</td>
<td>9500</td>
<td>35,000</td>
</tr>
<tr>
<td>Brucellosis</td>
<td>10</td>
<td>500</td>
<td>100,000</td>
</tr>
<tr>
<td>Rift Valley Fever</td>
<td>1</td>
<td>400</td>
<td>35,000</td>
</tr>
<tr>
<td>Q-fever</td>
<td>&gt;20</td>
<td>150</td>
<td>125,000</td>
</tr>
</tbody>
</table>

* Biological Weapons Attack: City of 500,000 People
Increase Community Awareness: Educate Community with Terrorism “Clues”

- Any case of a rare or novel disease
- Unusual clinical presentation or age distribution
- Many cases of unexplained illness or deaths
- Outbreak of a disease in non-endemic area
- Animal illnesses/deaths
- Seasonal disease during a different time of year
- Atypical transmission through aerosols, food or water

Terrorism “Clues” (continued)

- Known pathogen with unusual features
- Illnesses affecting people in a specific building or who attended the same event
- Unusual liquid, spray or vapor
  - Droplets, **oily film**
  - Unexplained **odor**
  - Low flying clouds/fog unrelated to weather
- Genetically-identical pathogen in different areas

Planning for a Bio-terrorism attack with Small Pox virus

Source: CDC
Smallpox

Educate the community to diagnose smallpox


An example is “Ring” Vaccination strategy to combat Smallpox attack

Contact to Contact
Contact to Case
Case

Other issues
- Community involvement and developing a community plan
- Coordination between public and private facilities
- Training and planning
- Improvement of surveillance
Effective and Efficient Planning

- **Effective:**
  - Related to *Goal attainment*

- **Efficient**
  - Related to *Resource utilization*
  - Resource includes materials, money, man power etc. utilized to achieve the goal.

The Possibilities

<table>
<thead>
<tr>
<th>Goal Attainment</th>
<th>Effective but not efficient</th>
<th>Effective and efficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>• Goals achieved</td>
<td>• Goals achieved</td>
</tr>
<tr>
<td></td>
<td>• Resources wasted</td>
<td>• Resources not wasted</td>
</tr>
<tr>
<td>Low</td>
<td>• Goals not achieved</td>
<td>• Goals not achieved</td>
</tr>
<tr>
<td></td>
<td>• Resources wasted</td>
<td>• Resources not wasted</td>
</tr>
</tbody>
</table>

- Poor
- Good

- Resource Utilization
Example

A surgical unit plans to have 1000 surgeries in 4 months time, and allocates a monetary resource of $5,000,000 to achieve the goal.

Now, the unit has following resources to attain that goal.

- Resource = $5,000,000.
- Goal = 1000 surgeries

"the decision making of program leaders and the supervision, controls and other actions to ensure satisfactory performance and attain certain goals"
Dimensions of an Administrative Capacity

1. Organization of a program into manageable units
2. Staffing and budgeting
3. Supervision of and consultation with employees
4. Procurement of necessary supplies and materials
5. Maintenance of appropriate records
6. Coordination of activities; and
7. Evaluation of the unit’s efforts

Roemer Model

Planning
Administration
Legislation
Regulation

Legislation

- All government units have legislative authority to enact laws and ordinances to aid in governing

- Roemer identifies six types of legislation that govern a health services system (next slide)
Six types of Legislation: Roemer

1) Writing or enabling legislation to provide governmental authority to carry out a program or an activity
2) Legislation that facilitates resource production to train the work force or develop health services facilities
3) Social financing of health services;
4) Quality surveillance;
5) Legislation that prohibits injurious behavior, including environment protection laws; and
6) Legislation that protects individual rights
   • E.g. informed consent.

Roemer Model

Planning
Administration
Legislation
Regulation

Regulation

A control mechanisms for authoritative bodies to ensure that programs and services are provided in the prescribed manner

In a free market economy, regulatory provisions may be invoked when voluntary collective-societal behavior cannot be achieved to accomplish the desired goal
**Regulatory Process**

- Specific Targeted Regulations
  - Licensure
  - Certification
  - Other registration requirements
- Accreditation by a national body is an additional, and usually voluntary form of regulation

**Licensure**

Licensure is Required
- To operate a facility; and
- Ability to practice a profession
- Usually issued by the state government – although national standards may be required

**Certification**

- May also be required for a facility or a profession
  - Sometimes voluntary
  - Medicare Certification of Facilities
    - For reimbursement purposes
  - State health facility licensure agencies, usually under state health department, generally conduct certification procedures
  - Professional like physicians may take board certification as an extra credential component.
Accreditation

- Usually voluntary
- Ensure national standards
- Ensures the users of a facility or a program that the program or facility meets specified operational standards
- Examples:
  - JCAHO for hospitals
  - NCQA for managed care organizations

Effective Management

- Effective management of a health services system incorporates the functions of planning, administration, legislation and regulation
- Effective management ensures quality and desired outcome
- Effective management ensures disciplined and organized effort against specific challenges and problems of each organization

Conclusion

To be an effective manager

- Know your strengths and weaknesses and those of the people around you.
- Know your objectives and have a plan of how to achieve them.
- Build a team of people that share your commitment to achieve those objectives, and
- Help each team member to achieve their best which will be able to attain a common goal.