Healthcare Quality Concepts

Chapter 1

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Chapter outlines:

1. Definitions of HCQ
2. History of healthcare quality (HCQ).
3. Aspects of HCQ.
4. Concepts and principles of HCQ
5. Quality dimensions.
6. Total Quality Management (TQM).
7. Concept of value.
8. The quality chasm.
9. To error is human.
10. Role of HQ professional.
11. Quality Trilogy.

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Definitions of Quality in Healthcare

In practice .....

= doing right things right the first time

= the right care for every person every time

= first NO harm

What is healthcare quality?

- "The balance of health benefits and harm is the essential core of a definition of quality." (Donabenan, 1990)

- Quality is the optimal achievement of therapeutic benefit and avoidance of risk and minimization of harm. (Joint commission)

Two Broad Definitions of Quality in Healthcare

- Classic Definition
  - *Quality refers to the ability of a product or service to consistently meet or exceed customer expectations.*
  - Issue: Who is the customer?

- Institute of Medicine (1990) Definition
  - *"Quality is the extent to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."*
- The Juran Institute defines quality as both "Freedom from deficiencies" and "Product features that attract and satisfy patients".

Definitions of HCQ

- Doing the **right things right** the first time and each time.
- Compliance to **standard.**
- Freedom from defects(avoidable interventions)/ zero **defect**
- meet **customer expectations** (**satisfaction**) / adding **value** customer.
- Increase the likelihood **desired outcomes** consistent with current professional knowledge (IOM, JCI).
- Agency for healthcare research and quality (AHRQ) define HQ as healthcare is accessible, effective, safe, accountable and fair.

degree of **excellent**.

- **JCI defined quality** as:

  optimal achievement of therapeutic benefit and **avoidance of risk** and minimization of harm (**free from HARM**).

- Another definition:

  Degree with conformity with accepted principle and practice with appropriate use of resources

History of healthcare quality


Total Quality Management
Quality Assurance
Quality Control
Inspection

Change in Quality emphasis

QUALITY CONTROL	QUALITY ASSURNCE
• Implement in short notice • Focus on output • Emphasis on required standard (product oriented) • Achieved by sampling and checking (inspection) • Make sure that the result have done are what u • ((((OLD))))	• Long term process • Focus on process • Emphasis on customer oriented) • Achieved by improve production process • Make sure that doing right thing in right way (MODERN))))

Comparison Between Traditional Monitoring and Evaluation utilizing the three aspects of quality (Quality Assurance) and Continuous Quality Improvement (CQI)

	QA	TQM / CQI
Objective	Outcome.	Process and outcome.
Focus	Statistical tail. Problem-focused methods (Actions are initiated when a problem is identified).	Entire group. (Continuous improvement process) trying to improve the process itself.
Focus on	Clinical aspects of care only.	Clinical and non clinical aspects.

Comparison Between Traditional Monitoring and Evaluation utilizing the three aspects of quality (Quality Assurance) and Continuous Quality Improvement

	QA	TQM / CQI
	Departmental.	Cross-departmental acc. to patient flow.
	Frequently separating the dimensions of quality care— review of appropriateness separate from effectiveness and/or efficiency.	Integrating all efforts to improve both patient outcomes and efficiency of care delivery (improving value).
	Errors are due to individual performance.	Errors are due to system failure (85%).

Comparison Between Traditional Monitoring and Evaluation utilizing the three aspects of quality (Quality Assurance) and Continuous Quality Improvement

	QA	TQM / CQI
Focus on	WHAT of care ⇒ Patient care given. The right service to the right patient at the right time and place. WHO of care ⇒ Patient care giver. Competent and qualified staff who is doing the rights things *right.*	Also, focuses to the previous ones: HOW of care ⇒ Patient care processes. Systems and their key processes,Policies, procedures,andregulatory compliance,Relationships and communications; Clinical pathways, practice guidelines RESULT of care ⇒ Patient care outcome.

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What is Quality

" Doing the right thing right, right away"

W. Edwards Deming, 1982

"a measure of goodness that relates to the intended use of a product and the expectations customers have concerning this product"

Barkman, 1989

"Philip Crosby"	• Quality is conformance to requirements.
"Dr Edward Deming"	• Quality is a predictable degree of uniformity and dependability, at low cost and suited to the market.
"Dr Juran"	• Quality is fitness for use/purpose.
"R J Mortiboys"	• Quality is synonymous with customer needs and expectations.

zoom


Quality Gurus
QG
Shigeo Shingo
SMED (Single-Minute Exchange of Die)
Poka-Yoke
Genichi Taguchi
Robust Design
Taguchi Loss Function
Armand V. Feigen-baum
Total Quality Control
Hidden Factory
Quality Cost Concept
Kaoru Ishikawa
Ishikawa Diagram
Quality Circles
Cause-and-Effect Diagram
W. Edwards Deming
PDSA Cycle
14 Points for Man-agement
System of Pro-found Knowl-edge
Philip B. Crosby
4 Absolutes of Quality
Quality is Free
Zero Defects
Joseph M. Juran
Quality Trilogy
Pareto Principle

Codman

Emphasis on End result (Outcome)

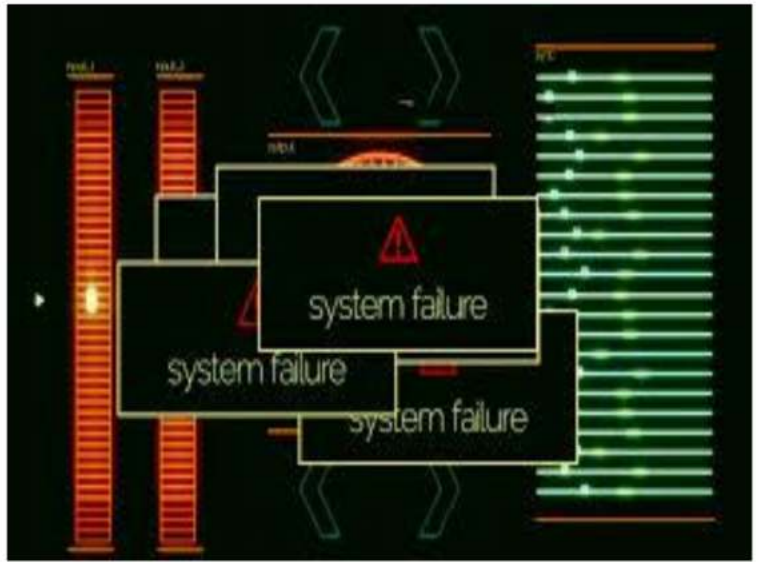
output : objective
tangible , can be counted and measured (quantitative

outcome
subjective ,**tangible , can not be counted and measured (qua**

idea
Product
Customer sat.

Deming

Philosophy:
The problem in a production process are due **to defects in the process in the system.**



defect : product has an error can not meet customer needs

defective : unacceptable errors (defects) in the product lead to discard it , can not rework

Dr. Deming's 14 Points for Management

- The principles were first developed with products in mind, not services.
- There is need for further adaptation in healthcare because a patient is a person, not a product.
- 9 out of 14 ated to behavior, psychology and ethics.

Adaptation.

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Coach

Total Quality Management (TQM)

Deming's 14 Point Plan for TQM

1	Create constancy of purpose	8	Drive out fear ✓
2	Adopt the new philosophy ✓	9	Eliminate boundaries ✓
3	Cease inspection, require evidence	10	Eliminate the use of slogans
4	Improve the quality of supplies	11	Eliminate numerical standards ✓
5	Continuously improve production	12	Let people be proud of their work ✓
6	Train and educate all employees ✓	13	Encourage self-improvement ✓
7	Supervisors must help people ✓	14	Commit to ever-improving quality ✓

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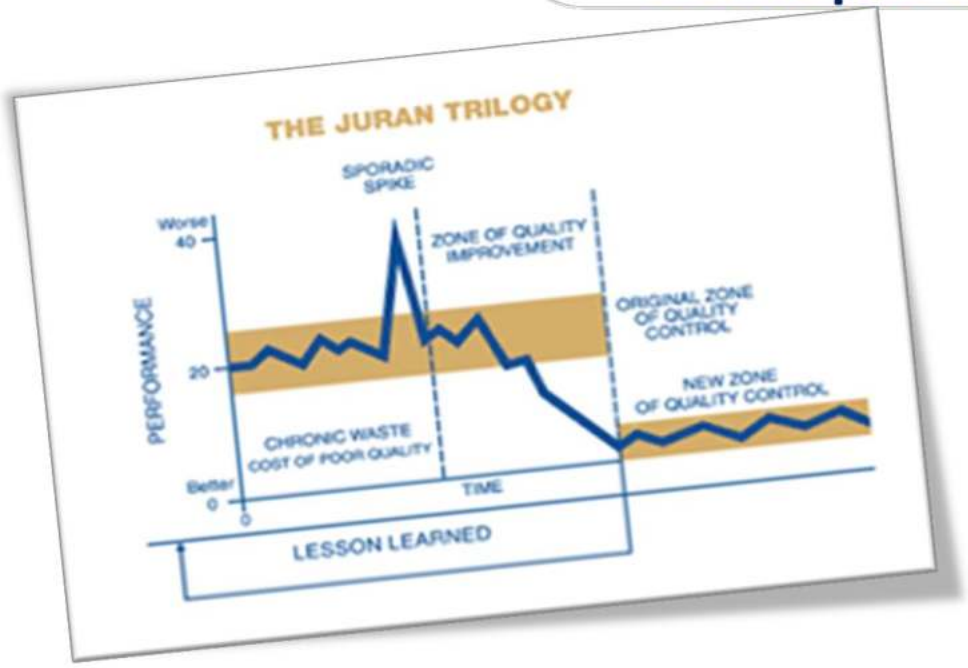
Juran

- Father of Quality
- Create concept of vital few and and useful many ((pareto principles 20-80 rules)).
- Develop juran trilogy (planning , control , improvement)
- Developed Q.council



QI project ??
High volume,
high risk ,
high cost ,
problem pron

Meeting
customer
needs
Cutting waste

The three components work together to provide QM Process that function like a loop. There is no starting point or end point, put all components work together in a continuous way

"Quality Management Cycle"

The three components work together to provide QM Process that function like a loop. There is no starting point or end point, put all components work together in a continuous way

Juran trilogy

understanding customer need

monitoring performance

Improvement

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Q.planning	Q.control	Q.improvement
• Engage leadership • Identify customers • Identify customer needs • Design processes	• Selecting measures • Defining measures • Collecting data • Analyze data • Taking action	• Identify problems • Identify team • Clarify process • Analyze root causes • Implement solutions

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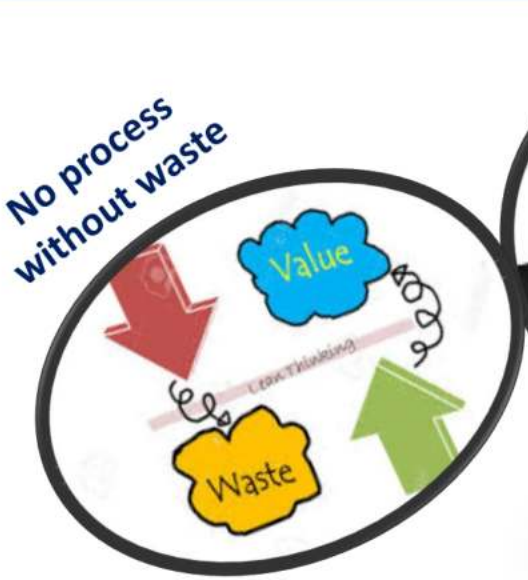
Crosby

Focus on zero defect , Quality is
of quality is ver

during the design phase rather than spending time and money on finding



Waste X value
Any steps
customer will
not pay for it

1.	Over-production	Producing more than asked by market
2.	Waiting	Goods or documents not being processed
3.	Transport	Transporting materials or products
4.	Over-processing	Taking unneeded steps to process parts
5.	Inventory	Unnecessary supplies or stock
6.	Movement	Searching and unnecessary movements
7.	Defects	Faults, scrap or bad quality
8.	Unused expertise	Not using existing expertise or knowledge

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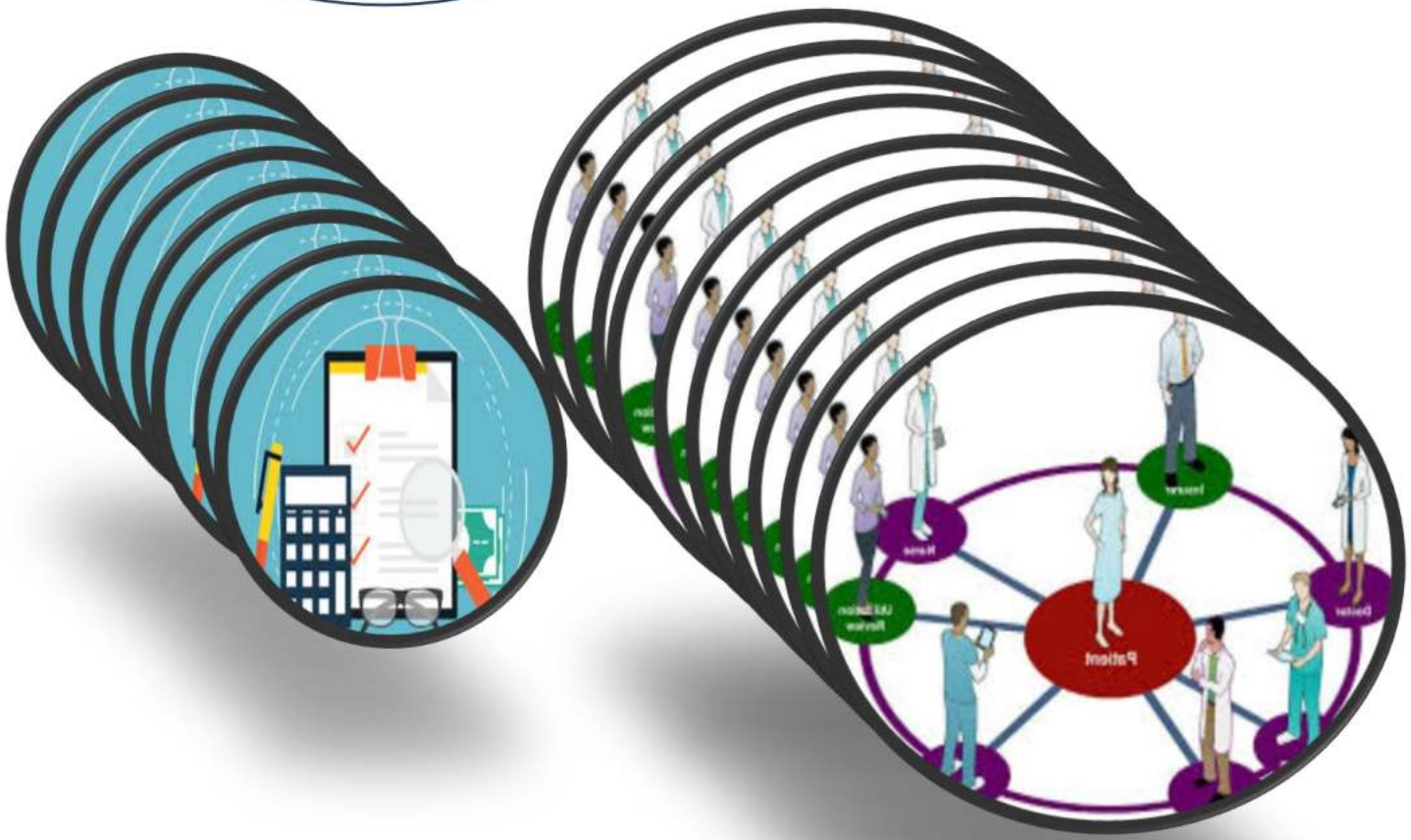
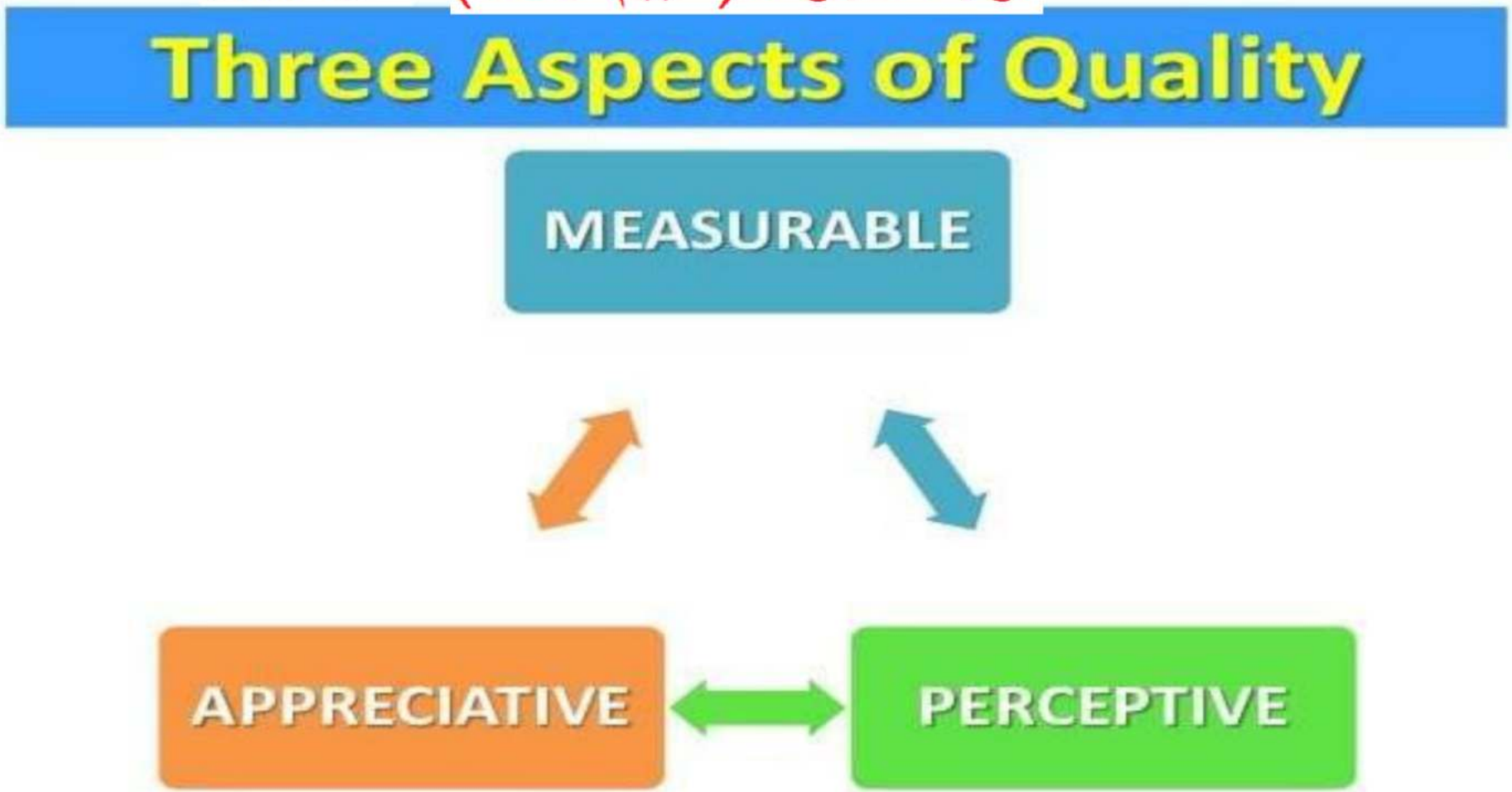
Berwick

Patient center and care coordination



MAP أوجه الجودة (تقييم الاداء)



Aspects of healthcare quality

Measurable	**Compliance with standard (guidelines, best practice,accreditations, awards, protocols) measurement tools (KPIs)**
Appreciative	Appraisal of excellent beyond minimal standards as peer view to judge personal skills, performance & courts of law to determine professional behavior was reasonable or negligent. (Judged by expert staff) (Peer review)
Perceptive	excellent that is perceived and judged by recipient or the observer of (respect the opinions affective the care).

The 3 Aspects of Quality Care

1. **Measurable Quality:**
   - is the aspect of care which can be judged by the provider through comparative measures between the actual performance versus the standard one.

2. **Appreciative Quality:**
   - is the aspect of care which can be judged by the experienced practitioners who rely not only on standards but on their personal judgments and experiences as well. Peer review is an example.

3. **Perceptive Quality:**
   - is the aspect of care which is perceived/judged by the recipient of care.

اوجهه الجودة تقييم الاداء (ASPECTS OF QUALITY (MAP

Compliance with/ adherence to standards.

According to the judgment of peer review bodies.

زميل له نفس التخصص والخبرة

As perceived by the recipient of care.إحساس العميل بالخدمة المقدمة

DEPENDENT

A customer is anyone who receives our service Or dependent on me as a supplier.

The concept of customer

- Person who consider e as a supplier
- One who receive goods and services.
- Customers are our "dependents"; they rely on us for a

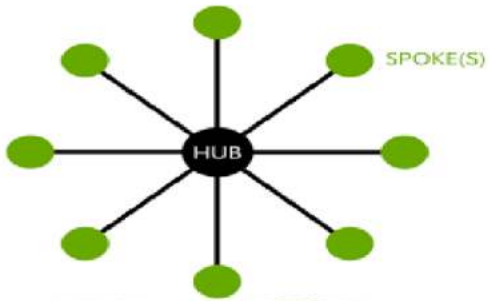
Customer satisfaction is viewed in healthcare as an essential component of success. Cause: they focus on / how service meet their needs and there expected outcome are met.

Value of customer include : 1- price of care
2- quality of service

- **Identifying customers:**

Wheel and spoke" or "sundial“.

ساعة شمسية



- **Customer lists by type:** Internal and external.
- **Identifying customer needs:**

- **Surveys and interviews.**

العصف الذهني

- **Research.**

- **Brainstorming.**

➢ Tools to identify customers:

1. Customer lists by category , e.g., patients/families , practitioners/clinicians.
2. Customer lists by type ; internal and external customers.

Any organization has 2 type of customer:

1- internal customer: who is performing work eg . physicians, pharmacists, nurses, finance staff, admitting staff, HR staff

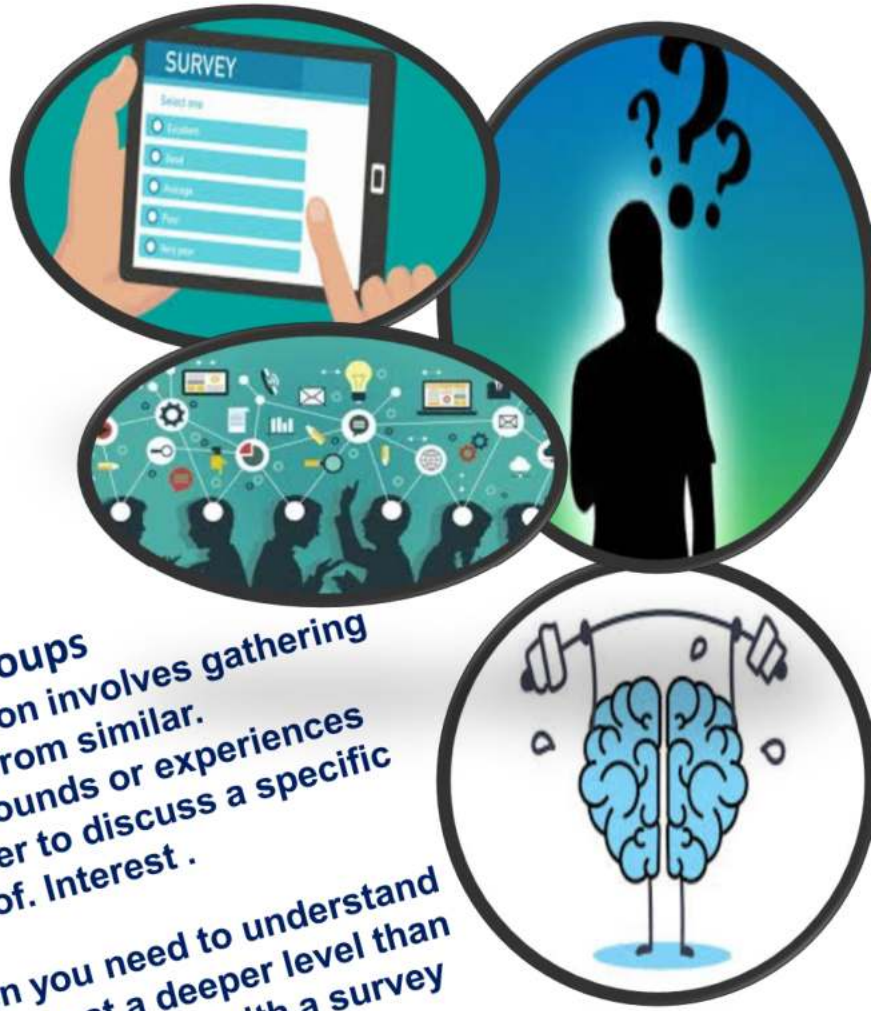
2- external customer: outside the organization eg . patients/families, accrediting bodies, suppliers, community

➢ Tools to identify customers needs:

1. Surveys and questionnaires.
2. Interviews:

Assigned interview process; each manager calls 8-10 members/patients/clients per month for feedback on care and service.

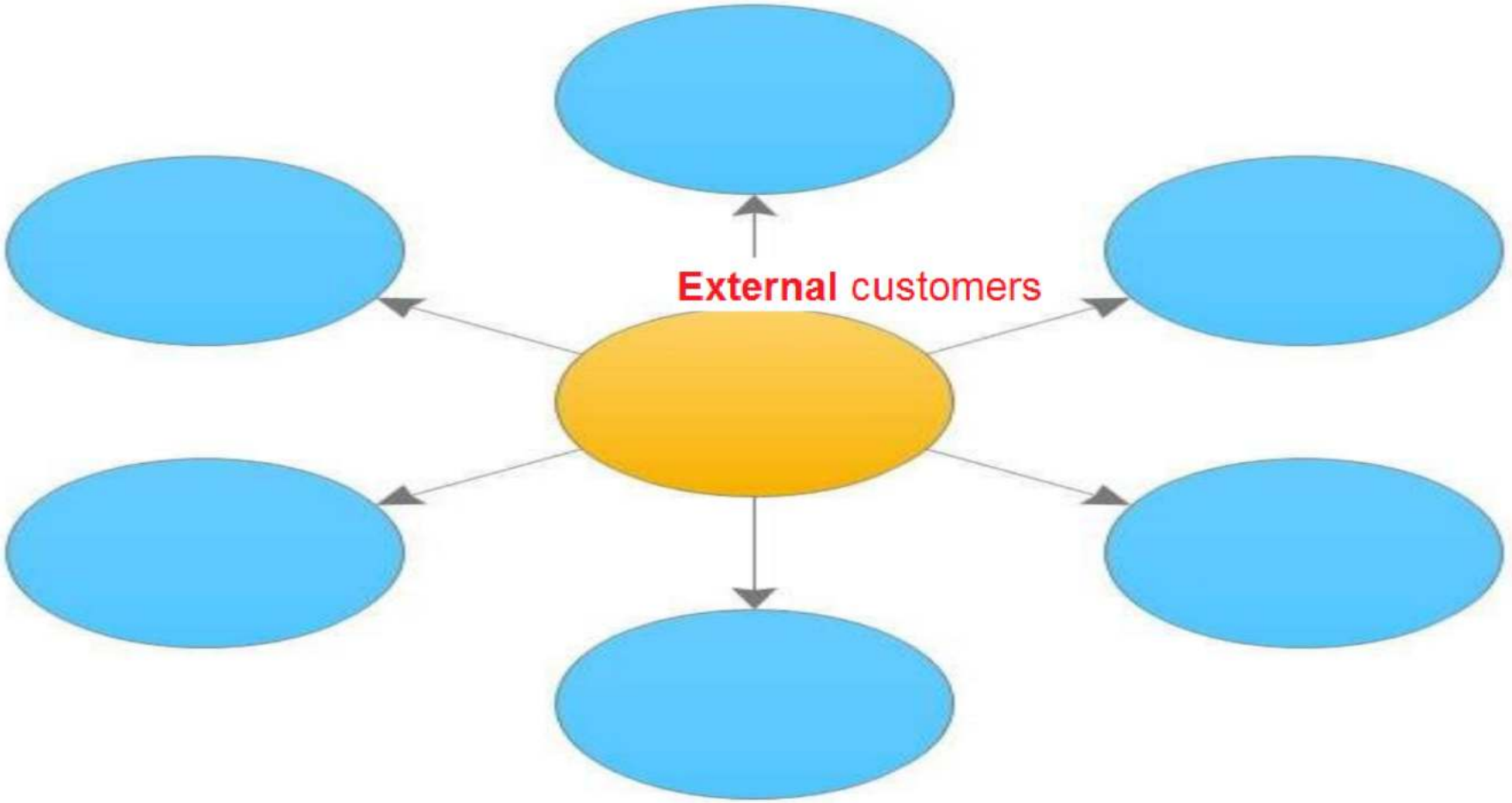
1. Focus groups, 6-12 homogenous customer particular process/ function with open-ended questions for qualitative data.
2. Brainstorming
3. Research



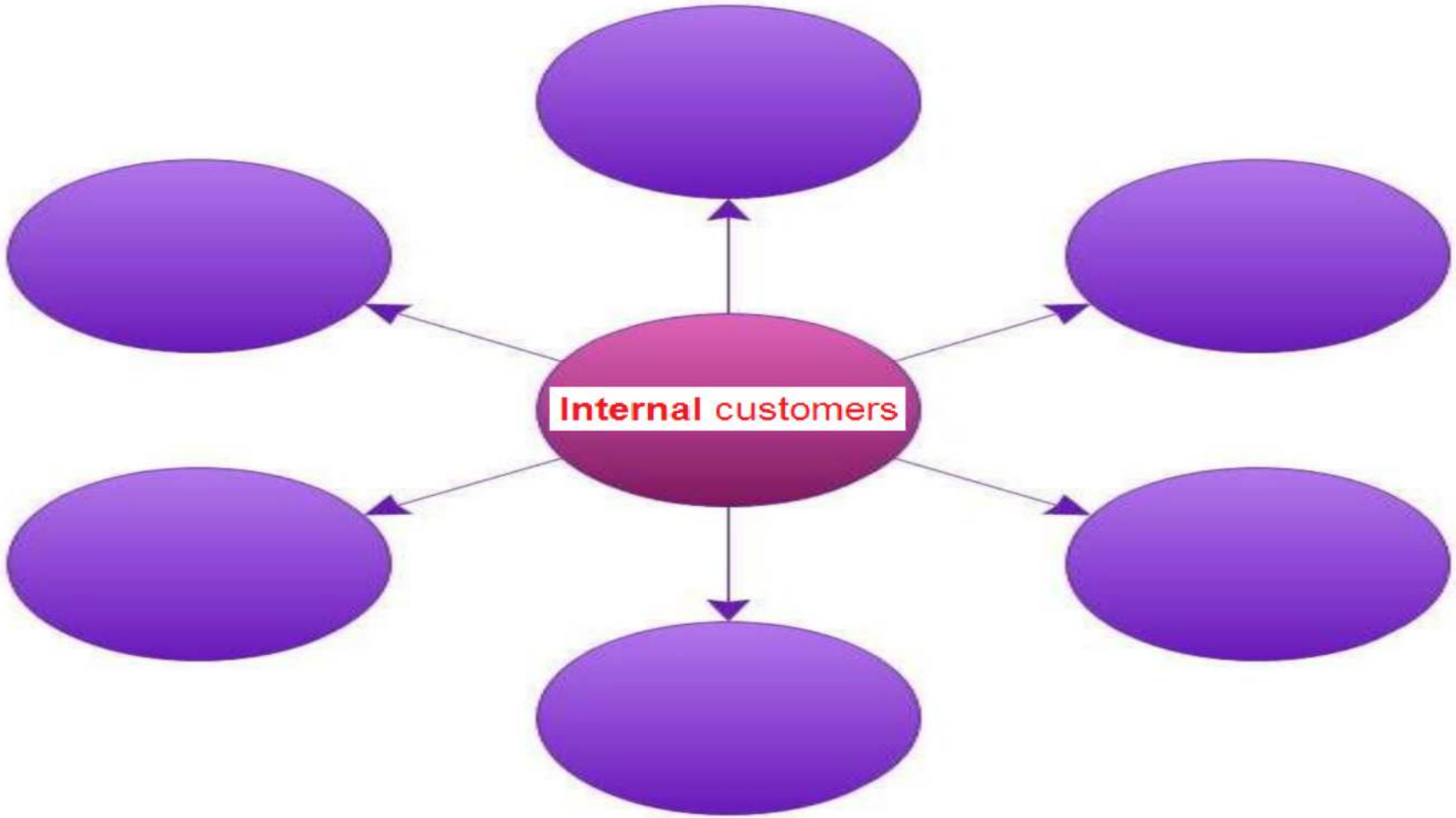
Focus groups discussion involves gathering people from similar. backgrounds or experiences together to discuss a specific topic of. Interest .

when you need to understand an issue at a deeper level than you can access with a survey

"Wheel and spoke" or "sundial"



"Wheel and spoke" or "sundial"



DEPENDENT

within the organization / outside the organization

- Admitting/reception/front office staff
- Administrative staff
- Administrative services staff
- Ancillary staff/technicians
- Care coordination/social services staff
- Communications staff
- Human resource staff
- Facilities staff
- Finance staff
- Medical/clinical record staff
- Nurses, aides, medical assistants
- Performance improvement, QM
- Pharmacists
- Physicians, med. directors

- Patients/families
- Physicians
- Purchasers
- Insurance companies and health plans
- Employers
- Government agencies
- Regulators and accrediting agencies
- Vendors/suppliers)goods and services)
- Other providers
- Educational institutions

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Healthcare between service or product

service

Perish once delivered, , if service opportunity is lost ,it may be that it can not recouped

It is a **combination of skills and expertise**, which are intangible and **cannot** be measured, tested, or verified in advance.

high variation from provider to provider, customer to customer, and from day to day.

heterogeneous

In **healthcare** service driven industry

In **manufacturing** product driven industry

product

Not perish

can be measured and counted, tangible items that an organization produces

homogenous

there is **little variation** from one product to the next

Product	Service
Tangible	Intangible غير ملموسة
Measure Output “objects”	Measure Outcome "performances"
Homogenous	Heterogeneous غير متجانسة
Can be stored or resold	Perishable فاني /ضائع cannot be stored or resold
Can be patented براءة اختراع	Very difficult to patent

KEY DIMENSIONS OF QUALITY CARE PERFORMANCE

1. Safe
2. Timely
3. Effective
4. Efficient
5. Equitable
6. Patient-centered
7. Efficacy
8. Appropriateness
9. Availability
10. Continuity
11. Respect and Caring

خدمة مناسبة للمريض

- The degree to which the care and services provided are:

1. Relevant to an individual's clinical needs.

ذو صلة

RELEVANT

2. Correct: Doing the right things in accordance with the purpose (Medical necessity).

3. Suitable resource utilization as judged by peers.

Peer

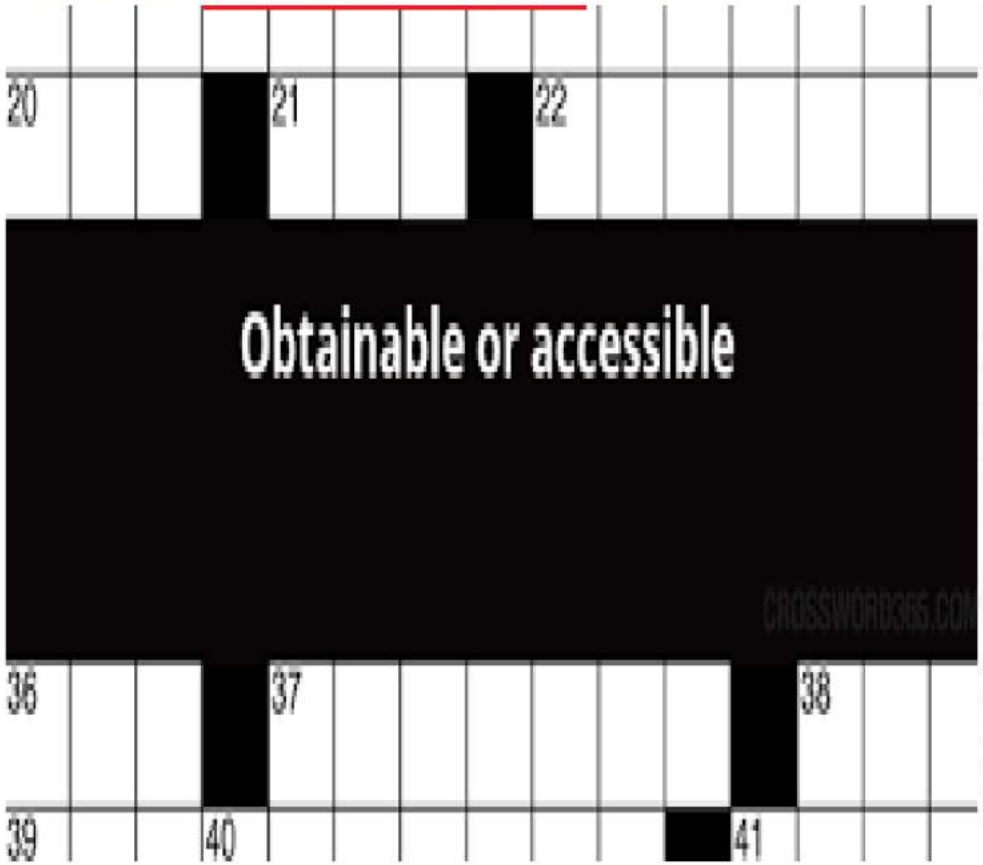
Timeliness

- The degree to which care is provided to the individual at the most beneficial or necessary time.

Availability خدمة متاحة

ممكن الوصول إليه

- The degree to which appropriate care and services are accessible and obtainable to meet an individual's needs.



Competency كفاءة

- The degree to which the practitioner adheres to professional and/or organizational standards of care and practice.

Peer

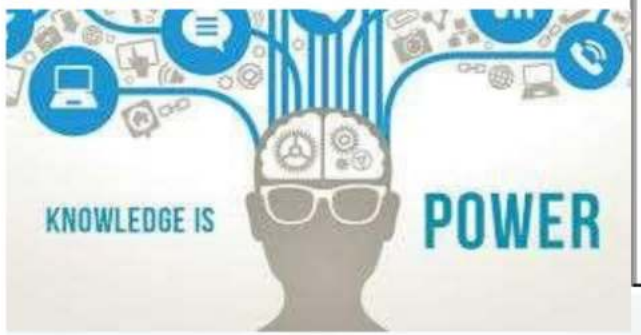
استمرارية الخدمة Continuity

- The coordination of needed healthcare services for a patient among all practitioners and across all involved organizations over time.
- The ~~delivery of needed~~ healthcare as a coherent unbroken succession of services.

متماسك

Effectiveness

- The degree to which care is provided in the correct manner, given the current state of knowledge, to achieve the desired or projected outcome(s) for the individual"

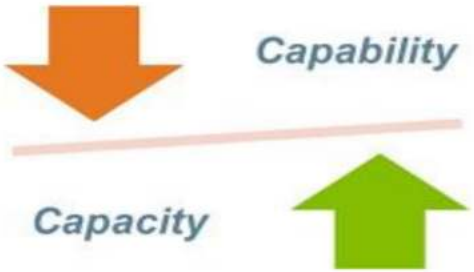


$$\text{Effectiveness} = \frac{\text{Achieved}}{\text{Desired}}$$

Efficacy

produce the desired effect or outcome, as already shown, e.g., through scientific research (evidence- based) findings.

- The power of a procedure or treatment to improve health status.



Vaccine efficacy and effectiveness

Mediecen efficacy and effectiveness

Efficiency

- The relationship between the outcomes (results of care) and the resources used to deliver care.

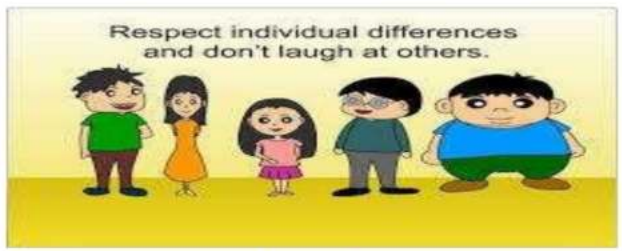
- "The relationship of outputs (services produced) to inputs (resources used to produce the services)"

Prevention/Early Detection

- The degree to which interventions, including the identification of risk factors, promote health and prevent disease.

Respect and Caring

- The degree to which those providing services do so with sensitivity for the individual's needs, expectations, and individual differences.



- The degree to which the individual or a designee is involved in his or her own care and service decisions

Safety

- The degree to which the healthcare intervention minimizes risks of adverse outcome for both patient and provider.

Key dimensions of quality

Key Dimensions	Explanation
Appropriateness	the care & services provided are relevant to individual's needs (correct, suitable & judged by peer), doing right thing in accordance to the purpose.
Availability	The healthcare service can be obtained in the face of financial, organizational, procedural, emotional & cultural to meet individual needs (accessible)
Competency	The degree to which adheres of professional / organizational standard of care / practice (satisfaction / privilege), practioner's ability to produce health and satisfaction of customer.
Continuity	The coordination of needed healthcare services for patient among all healthcare providers across organization/s over time (integration, communication)

Effectiveness	The degree to which the provided are achieved desired outcomes is reached +ve result of care delivery
Efficacy	The capability of the care to produce the desired outcomes , the power of procedure and ttt to improve health
Efficiency	The relationship between outcomes (results) and resources used (inputs) (cost effective
Prevention / Early Detection	Identification of risk factors / prevention of diseases (risk assessment)
Respect and Caring	he degree to which those providing services do with sensitivity for the individual's needs, expectations, differences and involve the individual in decision of care (patient centered
Safety	The degree to which the healthcare intervention minimizes risks of adverse outcome for both patient & provider / minimizes risks of organizational environment (risk reduction) , environment is free from hazard or danger.
Timeliness	The degree to which the healthcare intervention at the most beneficial or necessary time.

Basic concepts of quality

Quality should be defined by the recipient of care or service.

- **Quality /performance management process:**

planning ,systemic and organization wide to the monitoring analysis improvement of organizational performance there by continuously improving the quality of patient care and services provided and likelihood of desired patient outcome.

Evaluation of patient outcome and effectiveness of diagnosis and treatment must be placed with in the context of appropriate use of available resources and level of care

Always monitoring for adverse outcome

Observe risk issue as well as the expected positive outcome

Business sector

Before employers concerned only about increasing cost of care but now they are also requiring proof that the quality of care received is the best possible of dollar spent and that adverse outcome are minimized

Value:

framework that is utilized for quality management program of facility
value depend on the result not input and always should defined by customer

$$\text{value} = \frac{\text{Quality of care x outcome}}{\text{cost (total cost of full cycle of care)}}$$

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Value-based healthcare:

healthcare delivery **model** in which providers, including hospitals and physicians, are **paid based** on patient health outcomes. Under value-based care agreements, providers are rewarded for **helping patients improve their health, reduce the effects** and **incidence** of chronic disease, and live healthier lives in an evidence-based way.

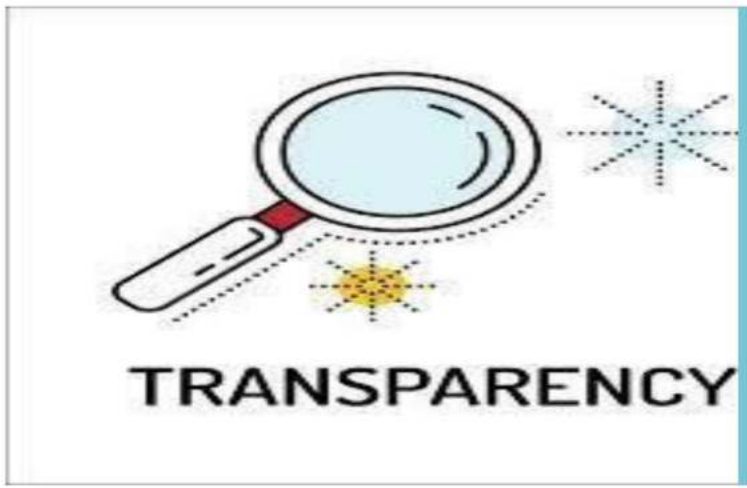
Value-Based Health Care Benefits

PATIENTS	PROVIDERS	PAYERS	SUPPLIERS	SOCIETY
Lower Costs & better outcomes	Higher Patient Satisfaction Rates & Better Care Efficiencies	Stronger Cost Controls & Reduced Risks	Alignment of Prices with Patient Outcomes	Reduced Healthcare Spending & Better Overall Health

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Value = Quality + Outcome of care / Cost of care

The goal from a value-based healthcare system Is transparency enabling consumers to compare the quality and price of healthcare services and make informed choices.



➢ Transparency:

Enable customer to compare the quality and the price of healthcare service and make informed choice to provide the value everyone wants , all stakeholder must agree on compatible definitions and measure of value.

- **Frontline staff should be involved in the process (process owner)**

Everyone in organization committed to and actively involved in continuous improvement of the quality of patient care

Four cornerstones for value based healthcare improvement

- Develop interoperable health information technology (HIT): Sharing electronic health record information requires setting national HIT standards and a certification process.

- Measure and publish quality information.

Four cornerstones for value based healthcare improvement

- Measure and publish price information.

- Promote quality and efficiency of care: offering pay-for-performance incentives to all providers.

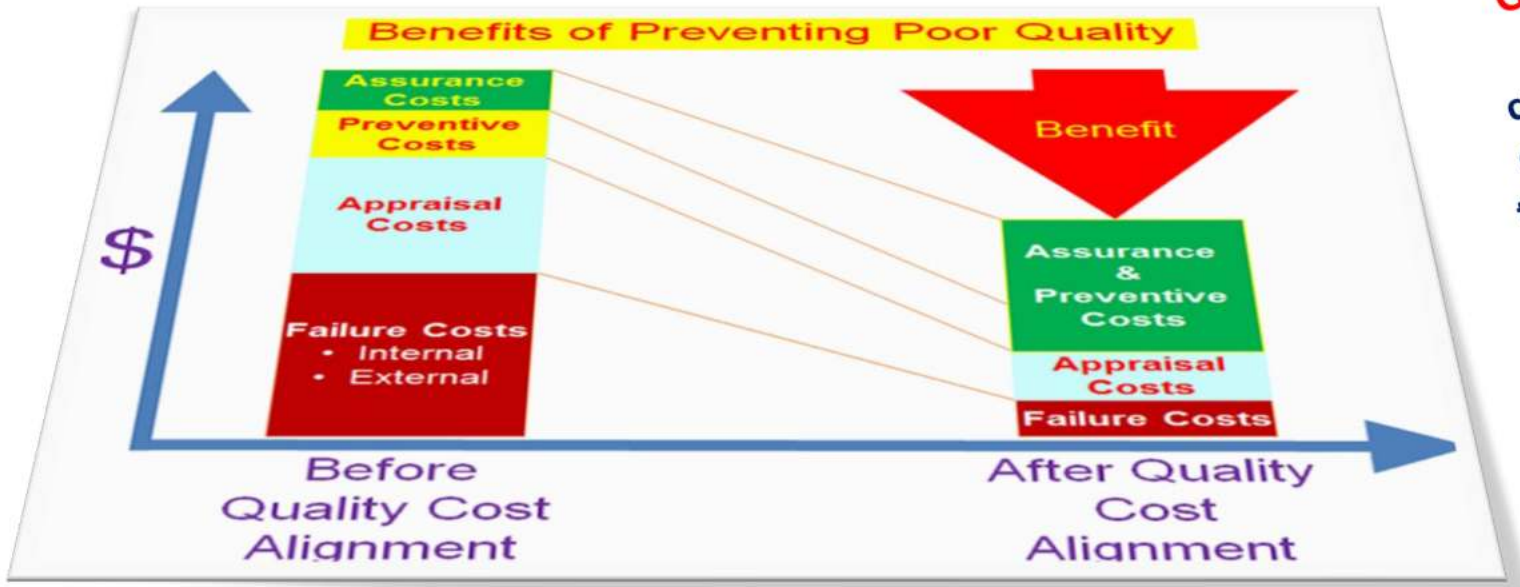
أضعاف التكلفة

Cost of poor quality

- ***Any cost*** **that would not have been expended if quality were perfect" Cost of scrap, rework, reordering replacement parts for defective items, missing items is cost of poor quality.**
- **The total cost of quality is the *cost* of the effort to eliminate errors and defects, *plus* the *cost* of defects that remain. That is, when we spend money to prevent or remove a defect, we save money at the other end, when the customer gets a working product.**

Cost of quality

Poor quality:
Internal: customer do not know about it(rework, scrap)
External : customer know about it (warranty work , lost business)



Good quality:
Preventive
create Q.system in org. as paper work, training , equipment , time to do .

Appraisal
Testing , checklist, inspection

Conformance costs spent **during** the project to avoid failures or to **ensure quality**

Non-Conformance costs spent **during and after** the project because of failures **due to poor quality**

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➢ Integrated healthcare:

Refer to

interprofessional healthcare is an approach characterized by high degree of collaboration and communication among healthcare professional (physician , nurses , insurers , nonclinical servers) in this environment they are tracking data and monitoring and analyzing it for any opportunities of improvement

all care giver will follow guideline and pathway.

Guideline
Systematic and scientific way lead to how to diagnose and treat

pathway
optimal ,sequencing and timing of intervention for the patient

- **Healthcare quality frame work based upon TQM philosophy and continuous improvement.**

TQM

Is a broad management philosophy, espousing quality and leadership commitment that provides the energy and the rationale for implementation of the process of Continuous Quality Improvement (CQI) within the organization wide Quality Strategy (add value to all customers).

- Structured approached to overall the org. management adding value to customer long-term success through customer satisfaction

DEFINITION OF TQM

- TQM is a management approach for an organization, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society
- **TQM** Definitions:
  - Focussing on customers satisfaction.
  - Provides best quality product at lowest possible price
  - Prevention of defects, target is zero defects

It is the involvement of the entire organization in a process of quality improvement to provide value.

All functions and all employees have to participate.

Focusing on meeting customer needs and organizational objectives.

Continuous improvement in all work, from high level strategic planning and decision-making, to detailed execution of work elements on the shop floor.

HIGH LEVEL

Key concepts of TQM

- Continuous Quality Improvement (aim of TQM) reflecting in:
  1. Increase Customer Satisfaction.
  2. Increase Productivity.
  3. Increase Profits.
  4. Increase Market share.
  5. Decrease Costs.

key concepts of TQM

- Top management leadership.
- Creating corporate framework for quality
- Transformation of corporate culture.
- Customer focus.
- Process focus.
- Collaborative approach to process improvement.
- Employee education and training.
- Learning by practice and teaching.
- Benchmarking.
- Quality measurement and statistics.
- Recognition and reward.
- Management integration.

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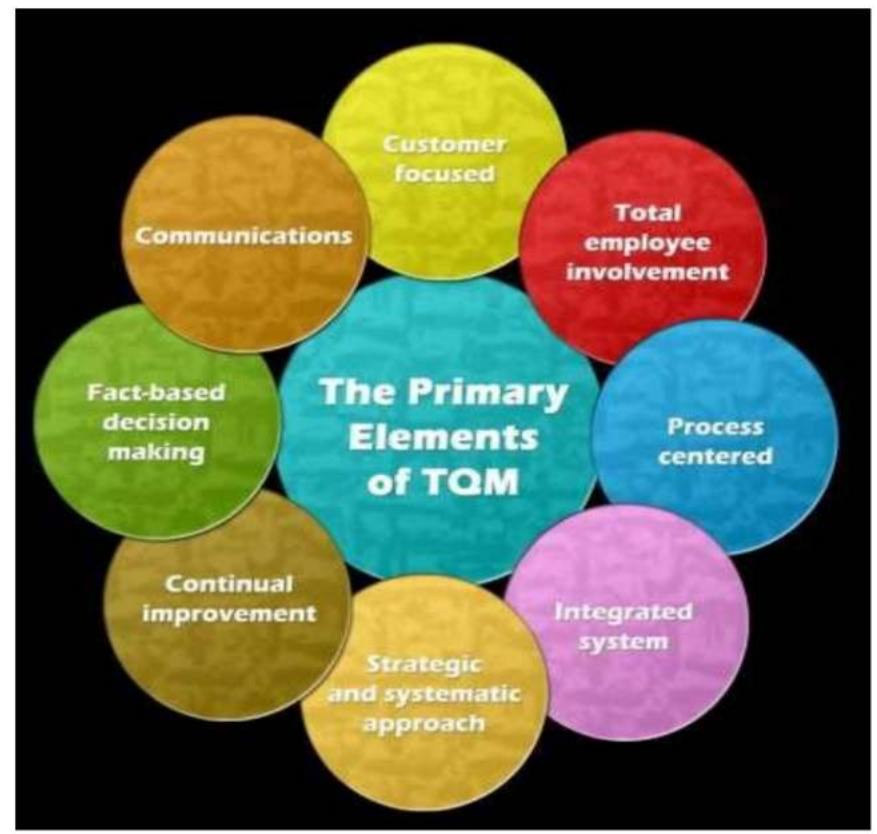
TOTAL QUALITY MANAGEMENT

The **key principles** are:

- Management Commitment.
- Employee Empowerment.
- Fact Based Decision Making.
- Continuous Improvement.
- Customer Focus.
- Organizational Culture.
- Continuous learning.



The ISO 9000:2005 Quality Management Principles


Quality Management Principles
CUSTOMER FOCUS
LEADERSHIP
ENGAGEMENT OF PEOPLE
PROCESS APPROACH
IMPROVEMENT
EVIDENCE-BASED DECISION MAKING
RELATIONSHIP MANAGEMENT

International standards for organization(ISO)

Principle	Description
▪ Customer focus	▪ Understand current and future customer needs & expectations
▪ Leadership	▪ Commitment and establish environment that help employees to become involved in achieving org. objectives
▪ Involvement of people	• at all levels of the organization are fully involved and empowered
▪ Process approach	▪ Processes must be managed by the leaders, and related resources provided
▪ System approach to management	▪ Systems management and systems thinking
▪ Continuous improvement	▪ A continuous focus on performance improvement
▪ Factual approach to decision making	▪ Analysis of data and information will lead to effective decision-making
▪ Mutually beneficial supplier relationships	▪ The organization and its suppliers are interdependent and a good relationship between them creates value for all

QUALITY MANAGEMENT PRINCIPLES

1. Productive work is accomplished through processes." Each person in the organization is a part of one or more processes.

2. Soundcustomer-supplier relationships are absolutely necessary for sound quality management.“

3. "The main source of quality defects is problems in the process."

QUALITY MANAGEMENT PRINCIPLES

4. **Poor quality is costly.**

5. **Understanding the variability of processes is a key to improving quality.**

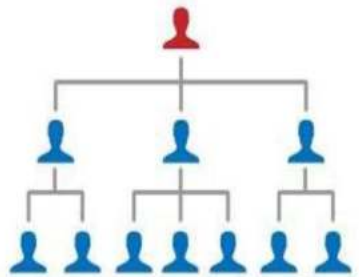
6. **Quality control should focus on the most vital processes.**

7. **The modern approach to quality is thoroughly grounded in scientific and statistical thinking.**

QUALITY MANAGEMENT PRINCIPLES

8. **Total employee involvement is critical.**

9. **New organizational structures can help achieve quality improvement.**



10. **Quality management employs basic, closely interrelated activities:**

- **Quality planning, quality control [quality measurement], and quality improvement.**

Basic principle of total quality management

- Productive work is accomplished through Process
- Source of quality defects in system not individual performance
- Understanding the variability of the process
- Ground on scientific and statistical thinking
- New org. structure can help achieve Q. Improvement
- Sound of customer necessary for sound of quality
- Poor quality is costly
- Focus on the most vital process
- Employee involvement (Quality is responsibility to all)
- Q. Management activities : Planning & Improvement & Control

TQM philosophy promotes

- emphasis on quality, leadership being responsive rather than directive
- Decrease emphasis on inspection, focus on systems rather than individual.
  investment in learning & education.
- long term vision
- Cautions use minimal standards.
- Ongoing quality improvement.

- **Effort should be directed not to finding and fixing the problem in product through end point of production but at finding and fixing problem in work process (strip down the process to find and eliminate the problem)**

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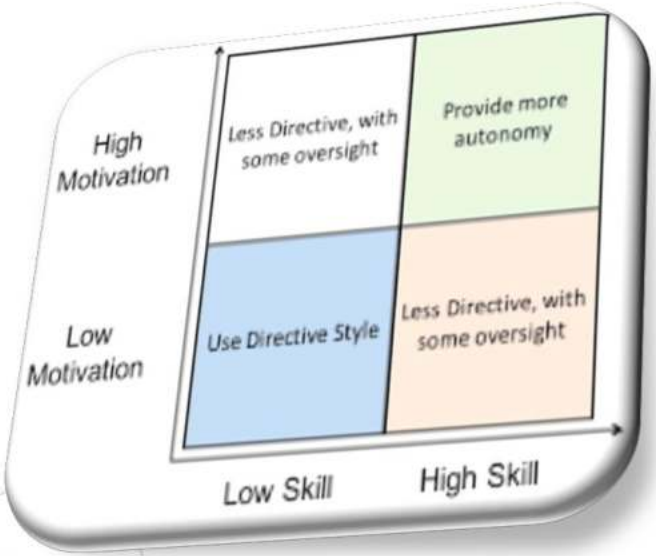
try, inspect, adapt engraved in his behavior and thinking. fully aware of the threats of a business world in tremendous development, **encourages** all employees to be part of this curious and explorational way of adapting to the future; and to shaping the future.

directions, objectives , standard and expectations to employees. most effective **when a task is complex and employees are unskilled or inexperienced**



TQM fosters a belief in the value

Customer	Needs , Expectations
Staff	Involvement
Management	Commitment , Empower staff
Team work	Ownership , Mult experts

Power given to someone to do something

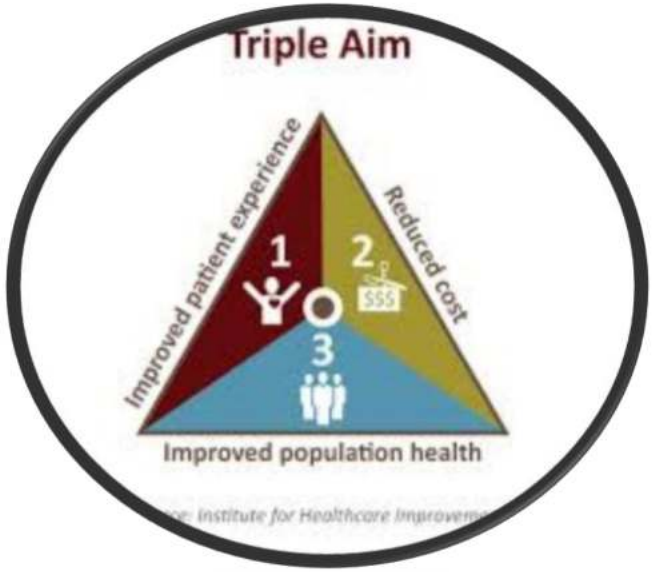
National quality strategy

The National Quality Strategy (NQS) was established in 2011 by the Agency for Healthcare Research & Quality (AHRQ), guided by the Triple Aim of the Institute for Healthcare Improvement (IHI).

IHI's Triple Aim:

1. Better care
2. Healthy people and communities
3. Affordable care

To achieve these aims there are 6 priorities which address the range of healthcare quality concerns.



- 6 priorities which address the range of healthcare quality concerns.

And focus on six priorities:

- Making care safer by reducing harm caused in the delivery of care.
- Ensuring that each person and family are engaged as partners in their care.
- Promoting effective communication and coordination of care.
- Promoting the most effective prevention and treatment practices for the leading causes of mortality, starting with cardiovascular disease.
- Working with communities to promote wide use of best practices to enable healthy living.
- Making quality care more affordable for individuals, families, employers, and governments by developing and spreading new health care delivery models

Table 4: National Quality Strategy Levers (adapted from Agency for Healthcare Research & Quality, 2011)

Lever	Description
Measurement and feedback	Measurement and performance feedback for plans, providers, and others within the organization
Public reporting	Use of comparative treatment results, costs, and patient experiences
Learning and technical assistance	Offer training, tools, guidance, and resources to foster a learning environment aimed at achieving quality improvement goals
Certification, accreditation, and regulation	Meet and maintain safety and quality standards
Consumer incentives and benefit designs	Provide healthy behavior resources for consumers to utilize to make informed decisions
Payment	Reward and incentivize those who provide care that is high quality and patient-centered
Health information technology	Utilize HIT to improve communication, transparency, and efficiency
Innovation and diffusion	Identify and employ innovative quality improvement efforts towards health care with rapid change for the organization and the community
Workplace development	Invest in the people of the organization with lifelong learning initiatives and support

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To achieve the value

1. Offer better value customer experience with more choice of product. (transparency)
2. Offer website displaying healthcare information that is easy to read and understood.
3. Looking to the future especially interaction technology.

Responsibility of healthcare quality professional

- understand, teach, and guide the development and implementation of the Strategy and processes, with the effective use of data and information, to make wise improvements and effect positive change.
- understand the principles of both Total Quality Management and Continuous Quality Improvement.
- They must articulate to all administrative and governing body leaders how TQM philosophy, with the processes of performance measurement, analysis, and improvement; and the development of an effective Healthcare Quality Strategy, are necessary and compatible with the organization's financial health, and, making the Strategic Plan achievable.
- demonstrating the value of quality that is linked to reduced risk, reduced costs, and better patient outcomes

DONABEDIAN PARADIGM

- It is **causal** relationship between structure, process and outcome.

Structure

is the arrangement of parts or elements of the Care system that facilitate care. It is the evidence of organization's capacity to provide care to patients. e.g. resources, staff number, staff qualifications, Ps & Ps,
medical record information, settings of care, organizational chart, and accreditation status

process

refer to the procedure , methods , means , or sequences of steps of providing or delivering care and producing outcomes.
refer to activities that act on an "input" from "suppliers" to produce an output for a customer e.g
clinical process
care delivery process
administrative and management process

Types of process
Patient flow
Information flow
Material flow

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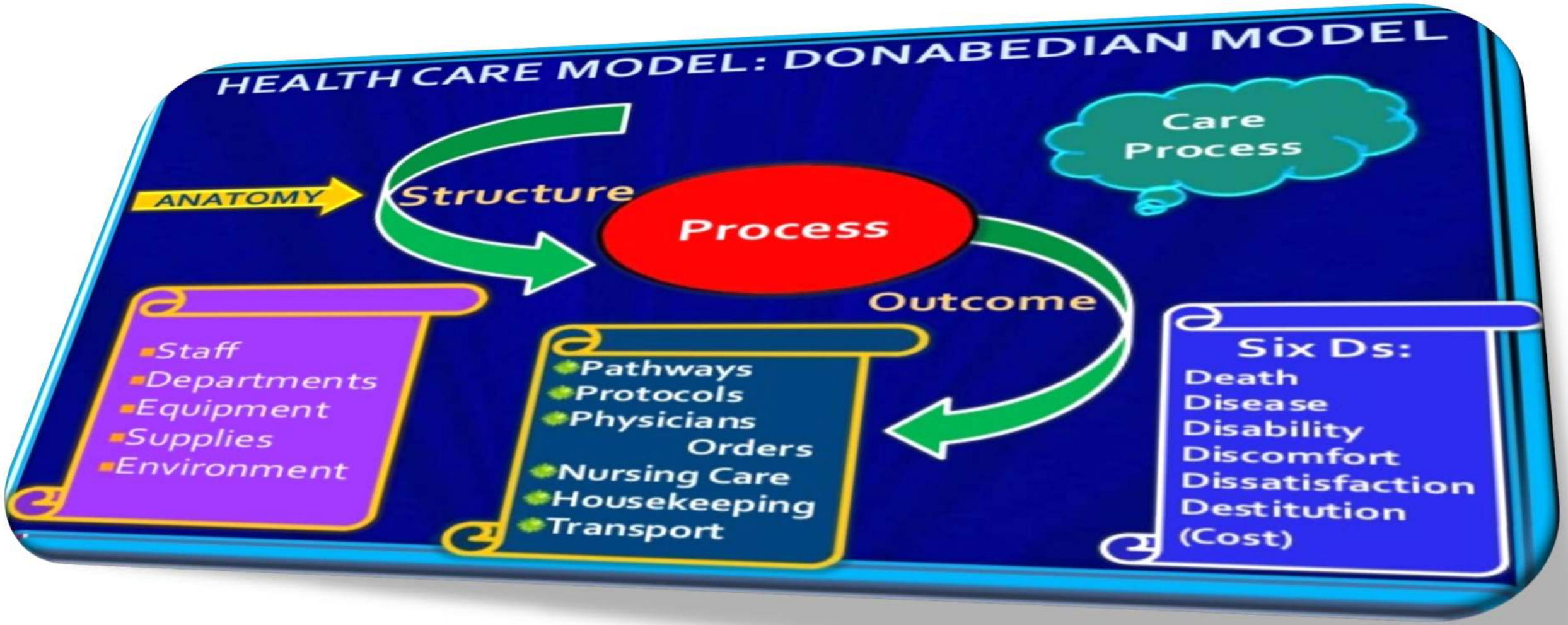

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"Process variation"

any change or deviation in form, condition, appearance, extent, etc., from the usual state or assumed standard either in the whole process or in a step of the process.

Special (assignable & extrinsic) cause variation	Common (random & intrinsic) cause variation
▪ Extrinsic of the usual process. ▪ Related to Identifiable factors can be tracked to root cause. ▪ Refer to sentinel event, unique, one time occurrences, out of the ordinary circumstances, outliers & tails. ▪ More easy to identified & resolved. ▪ may be positive or negative. ▪ **Response**: root cause analysis (RCA).	▪ Intrinsic to the process itself. ▪ Related to situations within process, chronic, noise & inliers. ▪ More time consuming, more difficult. ▪ **Response**: no focus, monitoring, process redesign & improvement (aim to reduce variation).

Process reliability

- DEF:

probability that each step of the process will occur when, where, and how it needs to occur.

- failure-free operation over time.
- Reliability Rate (PR): the probability of success in HC (delivering desired outcome) by measuring compliance with performance measures (KPIs).

Example:

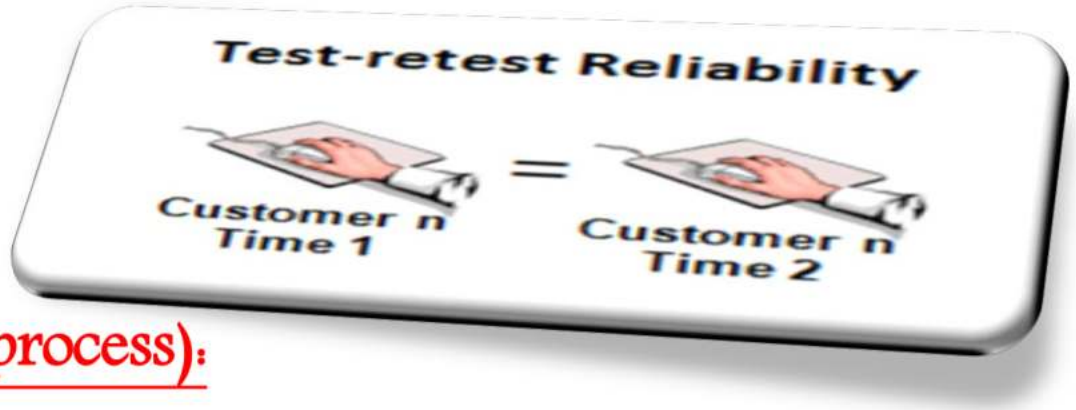
medication administration process consisted from 4 steps (((Step1 (99%) step 2 (95%) step 3 (90%) & step 4 (95%)))))

PR= 0.99*0.95*0.90*0.95= 80% (20% probability of failure)

➢ How to improve process reliability?

1) Reduce the number of steps (lean):

Medication administration process in 3 steps
PR= 0.99*0.95*0.95= 90% (10% probability of failure)



2) Improve the reliability of individual steps (redesign process):

Compliance of staff in Medication administration process increase
PR= 0.99*0.95*0.95*0.95= 85% (15% probability of failure)

- Process Breakthrough improvement:

is any sudden or significant solution to problems that leads to further advances, significant improvement or removal of barriers to progress.

outcome

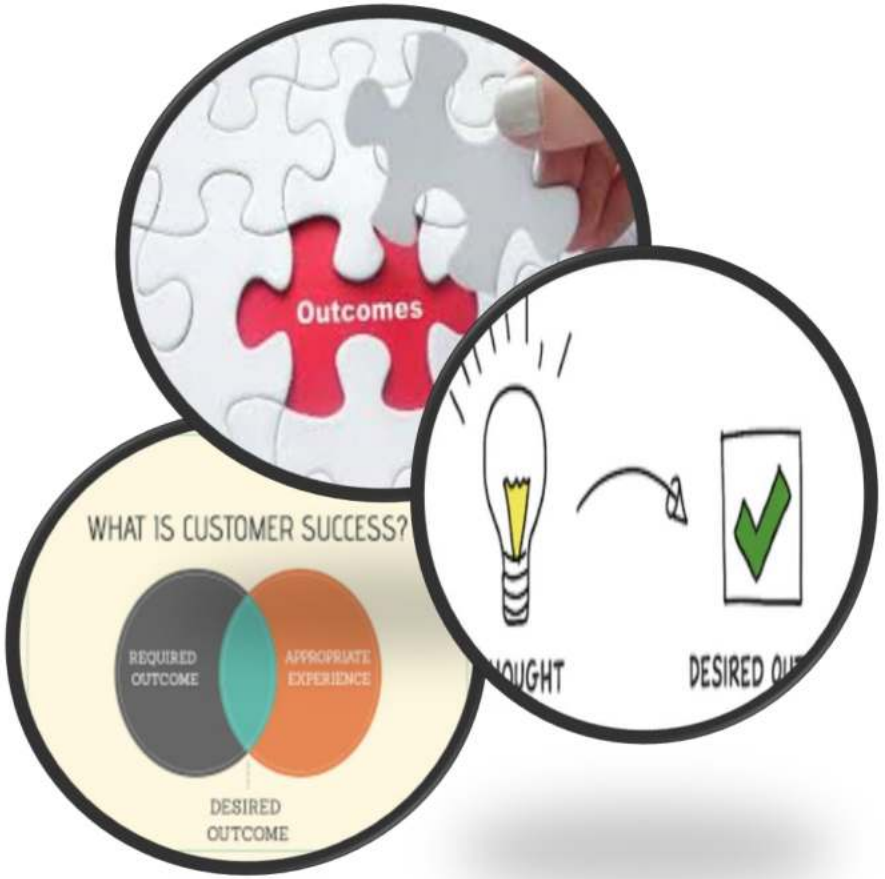
the results of care whether adverse or beneficial, or it is the product of the process.

Type of outcome:

Clinical outcome	Functional outcome	Perceived outcome
▪ short term results of process ▪ Mortality& morbidity rates, infection rate	▪ long-term health status ▪ Activities of the daily living status(ADL) ▪ The patient progress to meet objectives	▪ Patient/family satisfaction and knowledge ▪ Peer accountability
Control blood sugar level	▪ Patient back to normal activity, diet, sport & medications & follow up	▪ Patient satisfied with new life style

- **Factors affect the degree to which healthcare services achieve desired outcome:**

1. Disease process & severity.
2. Care process.
3. Patient compliance.
4. Random & unidentified variables.



Important Roles and Quality Functions

Quality Role	Important Functions of Role
Quality Management (QM)	▪ Organizational systems assessment ▪ Clinical performance monitoring (compliance to standards) ▪ Patient outcomes and care delivery process measurement, analysis, interpretation, and reporting ▪ Patient safety planning, program implementation, Measurement ▪ Organization performance improvement process
Patient Safety Management (PS)	▪ Patient safety planning, program implementation. ▪ process measurement, analysis, interpretation, and reporting.
Utilization Management (UM)	▪ Review medical necessity and appropriateness ▪ Resource allocation: timeliness, appropriateness, efficiency, and cost ▪ Role of Case Management/Discharge Planning in some organizations
Risk Management (RM)	▪ Clinical occurrences, Environmental and claims ▪ Mitigation of the effects of negative outcomes on both the organization and the patient

Quality Role	Important Functions of Role
Infection Control (IC)	▪ Surveillance & prevention
Practitioner credentialing, privileging & competency appraisal	▪ Medical Staff at time of appointment and reappointment ▪ All independent practitioners, specific requirements & depending on the setting
Continuing medical/clinical education	▪ Orientation of quality management program, performance standards, policies, procedures, and documentation standards
Professionals performing any of the first four components (QM, UM, RM, and IC)	▪ Data collection, summarization, and aggregation ▪ Information analysis, display, and presentation ▪ Information interpretation, sharing, and use ▪ Ongoing communications within the organization ▪ Effectiveness oversight

Wise improvement…

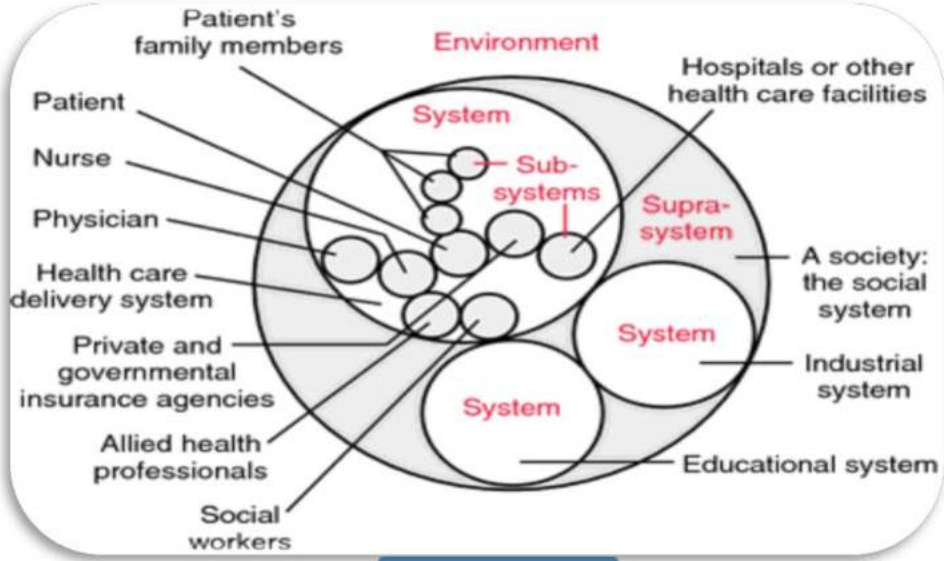
System thinking

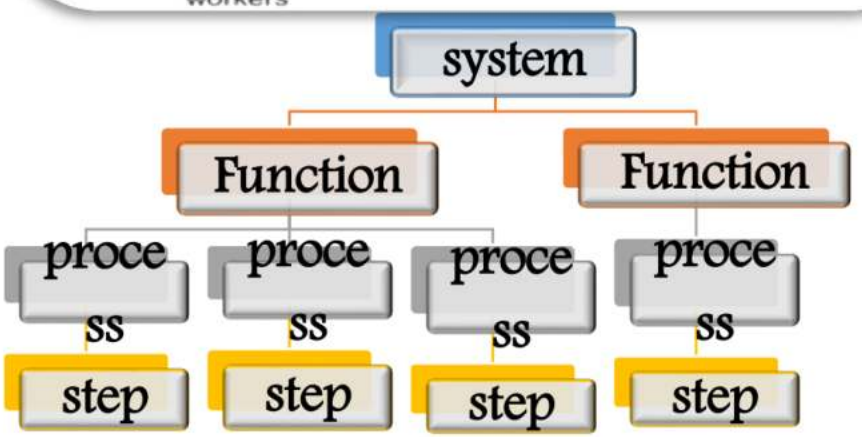
System:

whole elements continually affect each other over time hang together) and operate toward a common purpose.

Process:

flow or sequence of activities (steps) operate toward a common purpose. Change in step in a process does not necessarily change other steps.





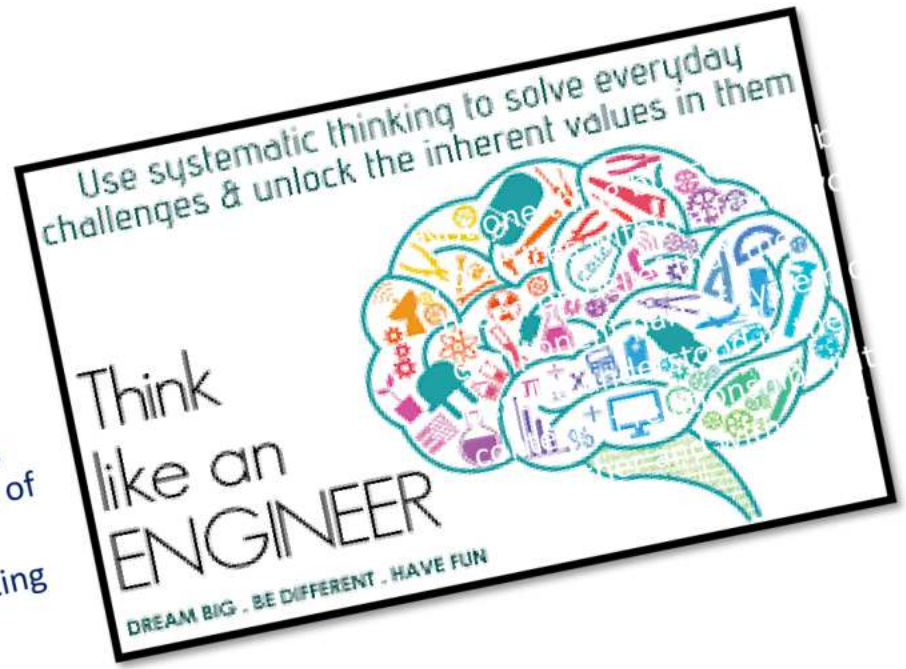
System thinking

- Approach of system analysis help a person to view system from abroad perspective that include seeing overall structure ,pattern and cycles in system rather than seeing only specific event in the system

- The ability or skills to perform problem solving in complex system

- Way to optimize every things u do

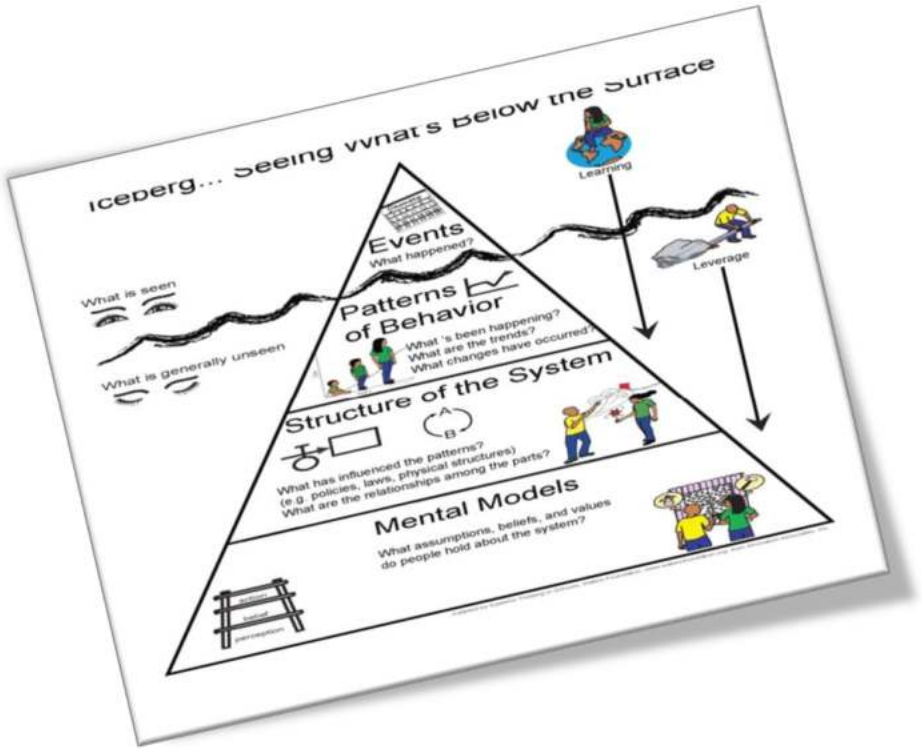
  - Problem solving approach , viewing problems as apart of an overall system rather than reacting to specific part.



- System structure:

  the pattern of interrelationships among all key components of the system, e.g.: Process flows, attitudes, decisions & hierarchy.

Levels of system



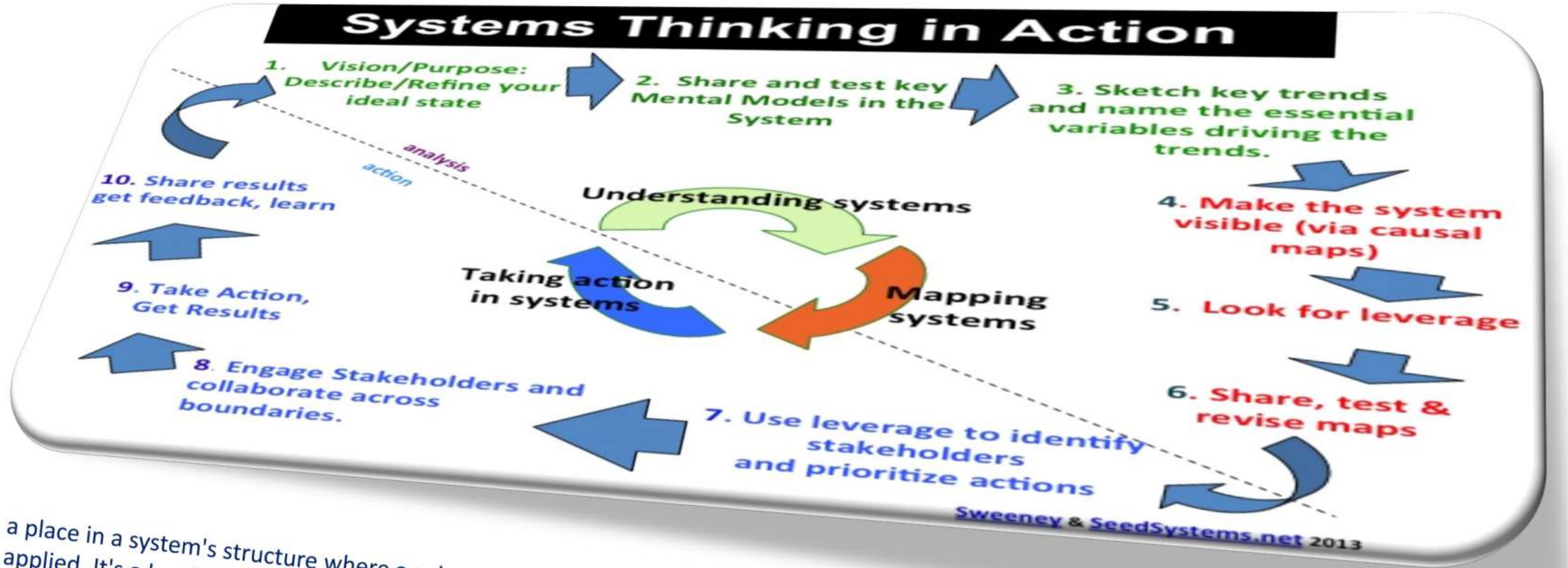
- 4 level in systems:
  1. Events (occurrences).
  2. Pattern or behavior (trend).
  3. Systematic structure (interrelationship)
  4. Mental models (beliefs & assumptions, mind set about the ways of work gets done).

The goal of the system:

is **maximize the output** of the system **not** output of each of its components, **So** we must **optimize** rather than maximize **performance** of each components to maximize the output of the system.

How to use system thinking

- Define the problem accurately without jumping to conclusions
- Look for causes (5 whys)
- Look for causes (5 whys)
- Apply pattern of performance to fill the gap
- Determine the strategies for solutions
- Redesign the system

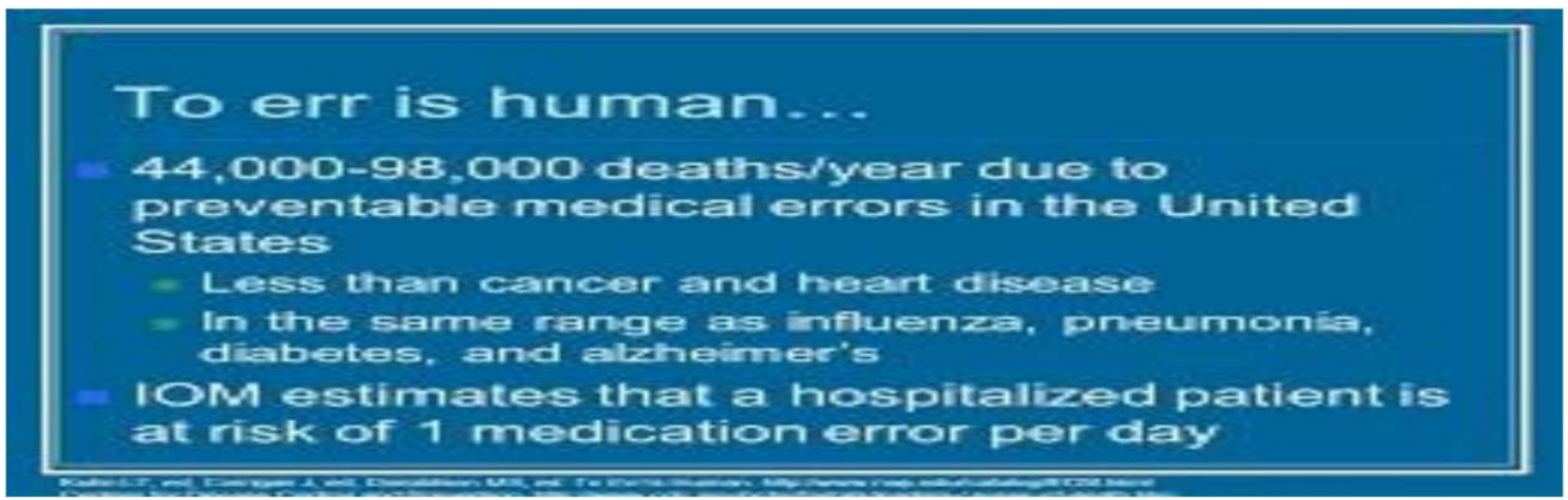


a place in a system's structure where a solution element can be applied. It's a low **leverage point** if a small amount of change force causes a small change in system behavior . It's a high **leverage point** if a small amount of change force causes a large change in system behavior

party that has an interest in a company and can either affect or be affected by the business. The primary **stakeholders** in a typical corporation are its investors, employees, customers

IOM Reports

- 1999: To Err is Human
- At least 44,000 and perhaps as many as 98,000 Americans die in hospitals each year as a result of medical errors



- One death in every 343 to 764 admissions.

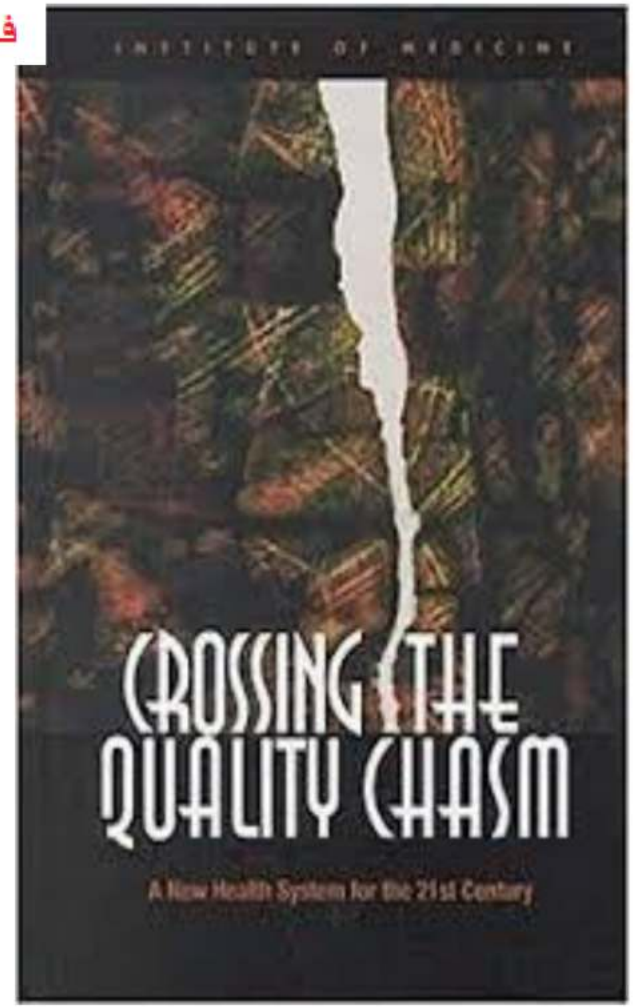
2001: Crossing the Quality Chasm

متشابكة

-The report described America's health system as "a tangled, highly fragmented web that often wastes resources by duplicating efforts."

- Should create new monitor and track quality in **six key areas (IOM aims or attributes of care).**

فجوة

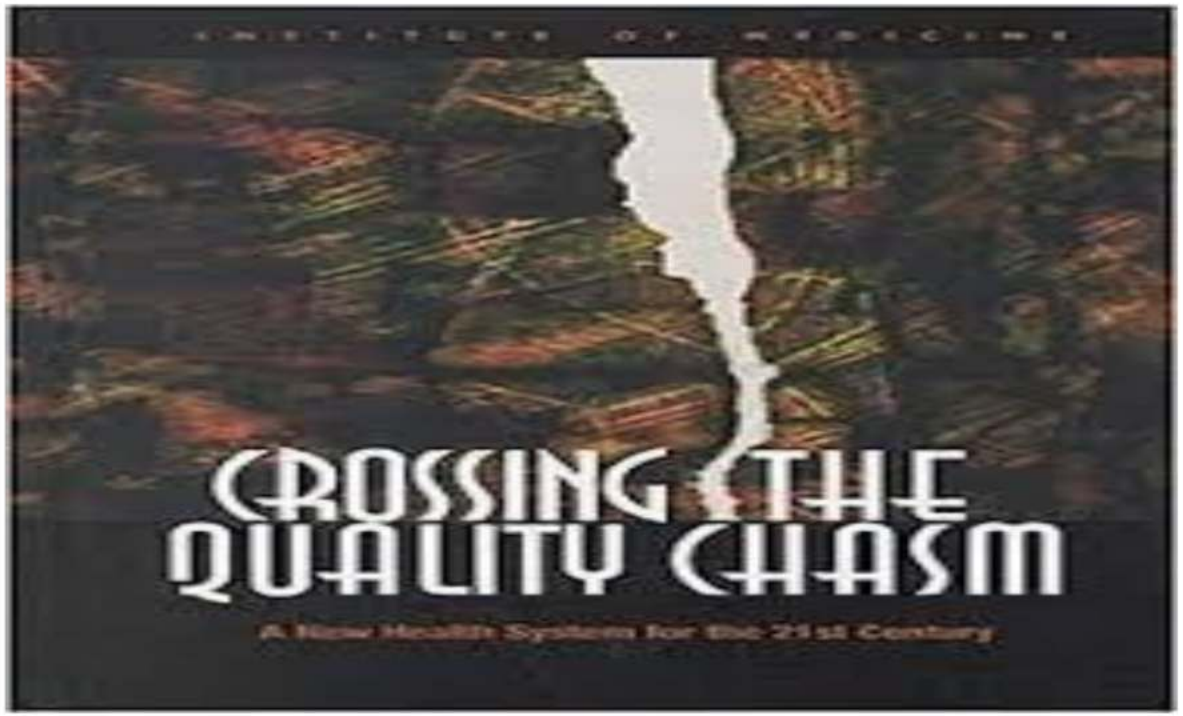


سمات

Six key areas (IOM aims or attributes of care)

STEEEP

1. Safe care.
2. Timely care.
3. Effective care.
4. Efficient care.
5. Equitable care.
6. Patient-centered care.



Institute of Medicine: *Crossing the Quality Chasm* (2001)

10 Simple Rules

in many forms and at all times

1. Care based on continuous healing relationships
2. Care based on patient needs and values
3. Patient as the source of control
4. Patient access to medical information and clinical knowledge
5. Evidence-based decision making
6. Patient safety
7. Transparency of information
8. Anticipation of needs
9. Continuous decrease in waste
10. Cooperation among clinicians

IOM Aims and HIT

Health care should be:

- Safe
- Effective
- Patient-centered
- Timely
- Efficient
- Equitable

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Designed by/ Belal Ahmed

Chapter(1) Healthcare Quality Concepts

Thoughts on quality

Quality definition :
- Doing right things in the right way first time and every time
- Customer's satisfactions
- compliance with standards

right things + Right decisions

in the right way = Compliance to standards , instructions & policies and procedures

definition of quality

Key Dimension:
- Appropriateness
- Availability (accessible and obtainable)
- Competence(skills Knowledge Attitude)
- Continuity
- Prevention-Early detection
- Safety
- Respect/Caring
- Timeliness
- Effectiveness(desired outcomes)
- Efficacy (Capacity- quantities)
- Efficiency (Resources for some)

Three Aspects Of Quality (MAP):
- Measurable (Adhere to standard)
- Appreciative (Peer review)
- Perceptive (customer Satisfaction)

The Concept Of Value: V = Q + O / S

History of Quality





Healthcare delivery settings

- Emergency Care
- Acute Inpatient Care
- Ambulatory Care
- Home Care
- Hospice Care
- Transitional Care

Healthcare organization specialists re-engineering for redesign, R&D

Healthcare Framework

Structure | Process | Outcome

Structure	Process	Outcome
- Professionals - Facilities - Technologies - Resources - Organizations	- Diagnosis - Therapy - Interaction - Leadership - Management	- Clinical - Functional - Perceptive

Three Never:
- Never take action before review process.
- Never review structure before review process.
- Never take assumption without evidence.

The concept of customer

Type of customer:
- Internal Customer (Surgeon request CT from Radiologist)
- External Customer (Patient need treatment from Doctor)

The quality Umbrella (Quality Management)

Continuous Quality Improvement Demands

1- Top commitment
2- Suitable organization culture
3- Customer focus
4- Ongoing pursuit of customer satisfaction
5- Systems and processes focus
6- Constant learning and improving

TQM Philosophy promotes:

1- An increased top-down and bottom-up emphasis on quality
2- A decreased emphasis on inspection, surveillance, and discipline and a focus on systems rather than individuals
3- A substantially increased investment of managerial time, capital and technical expertise.
4- An increased investment in education
5- Long term vision
6- Cautious use of minimal standards of care
7- Continuous, ongoing quality improvement

Thanks a lot