
Very Very Good Morning..!!

# Medical Errors

## How Your Healthcare May Be Harming You

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# OLLI Fall 2023 Semester

# October 26, 2023

## SESSION 8

## SOLUTIONS, PREVENTION, REDUCTION, ELIMINATION

# Plan for the Course

- Session 1: Introduction and Definitions
- Session 2: Diagnostic Errors
- Session 3: Medication Errors, Surgical Errors
- Session 4: Communication Errors
- Session 5: US Healthcare System/Industry
- Session 6: Science and Technology
- Session 7: Comparison with Other Countries
- Session 8: Solutions, Reduction, Prevention

# Plan for the Session

- Awareness of harms and Error reporting
- Culture Change and Education
- 4 ways to decrease medical errors
- Communication strategies
- Equity, Equality, Inequity
- Social Determinants of Health (SDH)
- The “Aims” (Triple, Quadruple, Quintuple)
- Quick summary of the course

Awareness
Checklists
Communication
Culture Change
Education
Patient Participation

# AREAS for IMPROVEMENT

# To Err is Human

TEIH

- *TEIH* asserts that the problem is not bad people in healthcare: it is that good people are working in bad systems that need to be safer.
- This report offered a clear, comprehensive and straightforward prescription for raising the level of patient safety in American healthcare.
- It also explained how *patients* can influence the quality of care that they receive in a hospital.

# Awareness

- A problem can’t be tackled if the profession is not aware of its existence.
- The cloak of silence must disappear.
- Errors must be brought out and confronted.
- Prevention, not punishment should be goal.

# Awareness
(Reporting)

2 Types of Reporting systems:

- Mandatory public system for holding health care organizations accountable for their performance.

- Voluntary confidential reporting systems for improving patient safety.

# Awareness

## Mandatory Reporting Systems

Focus on specific cases involving serious harm or death.

May result in fines or penalties for the specific cases.

Ensure a response to specific reports of serious injury.

Hold organizations and providers accountable for maintaining safety.

Enacted by the State in response to the public's right to know.

Provide incentives to health care organizations to implement internal safety systems.

# Awareness

## Mandatory Reporting Systems

Mandatory reporting systems, generally require reporting of sentinel events:

- specific errors
- adverse events causing patient harm
- unanticipated outcomes
- serious patient injury
- death

# Awareness

## Voluntary Reporting Systems

Generally focus on a much broader set of errors.

Focus on errors that resulted in no harm (near misses) or very minimal patient harm.

Report of near misses or adverse events enable organizational improvement.

Strive to detect system weaknesses before serious harm occurs.

Identify error patterns that point to systemic issues that affect healthcare organizations.

Provide information to healthcare entities about their quality improvement efforts.

# Awareness

## Voluntary Reporting Systems

- Voluntary reports encourage giving important information that might reduce future errors.
- Healthcare professionals feel worried, guilty, and depressed after serious errors, are concerned for patient safety and fearful of disciplinary actions.
- The true error frequency may be many times greater than what is actually reported.

# CULTURE CHANGE and EDUCATION

# Error Prevention

- The focus must shift from blaming individuals for past errors to a focus on preventing future errors by designing safety into the system.

- This doesn't mean that individuals can be careless, but must still be vigilant and held responsible for their actions.

# Culture Change

- Physicians have anxiety about malpractice litigation, liability and a defensive behavior toward patients who believe healthcare is only moderately safe.

- Patients are concerned about errors that may affect them if they seek care in hospitals, like:
  - physician errors
  - misdiagnoses
  - medication errors
  - nursing errors
  - wrong test/procedure errors
  - problems with medical equipment

# Culture Change

- All levels of the healthcare dynamic need to change their culture, goals and perceptions.
- Government, hospitals, insurers, providers, patients and the general public need to get together to remodel and recreate a fair, just, equitable, efficient and affordable system.
- A common goal and an open mind without finger-pointing or accusations are vital.

# Education

- All professions of the healthcare team need to be re-educated in their roles and responsibilities.
- Administrators need to understand that good diagnosis and treatment *cannot* fall victim to the bottom line of productivity and earnings
- Patients need to understand that the health care team is made of humans, fallible and prone to stress and burnout.

# To Reduce Medical Errors

- Monitor vulnerable populations at a statistically greater risk.
- Promote interdisciplinary collaboration.
- Engage patients in safety: patients who are more involved with their care tend to get better results.
- Encourage a high-reliability culture committed to safety and always looking for ways to improve.

# Patient Participation

- Patients need to be informed about their healthcare problems and treatment options
- When choosing a therapeutic option, patients should have all the elements to make an accurate decision and give real informed consent.
- Patients should be free to ask questions and voice concerns when their healthcare is involved.
- Inquiry is not disrespectful, it is necessary.

# Patient Participation

- Patients are also responsible for their safety
- Patients need to demand information
- Patients need to prepare for their doctor visits
- Patients must understand before consenting
- Patients need to analyze their healthcare bills

# If your Doctor Isn't Listening

- Spend Time preparing for Appointments
- Ask Specific Questions
- Take someone with You
- Be Relentless
- Give Feedback…and consider moving on

Angela Haupt, TIME Oct 9, 2023

# Universal Protocol (UP)

## The Joint Commission

- A set of minimum requirements which physicians must follow to prevent basic surgical mistakes and prevent human error from harming patients,
- Implementation is required by all accredited hospitals, ambulatory care, and office-based surgical facilities.
- It consists of three key steps:
  - conducting a pre-procedure verification process
  - marking the procedure site
  - performing a time-out

# Checklists

- Serve as constant reminders of routine tasks.
- Break down complex tasks into simple, discrete, individual steps.
- Decrease risk of problematic failures.
- Allow tracking of potential errors.

# Wrong Site, Procedure, Patient Errors

## Prevention

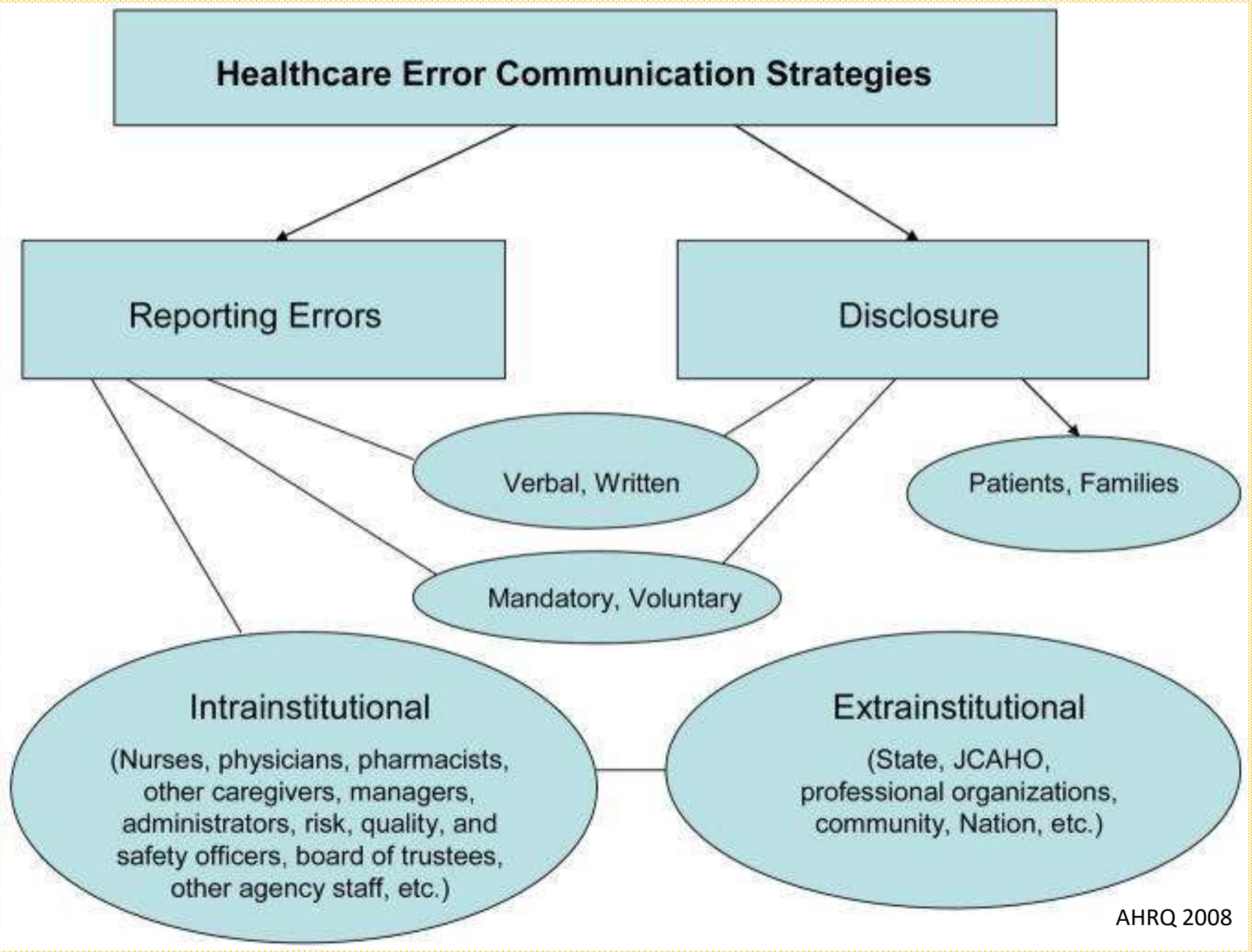
- Many cases of Wrong Site Procedure Patient Errors (WSPEs) may still occur despite full adherence to the UP.
- Errors may happen before the patient reaches the OR, during the timeout, and in the OR during the procedure.
- Preventing WSPEs depends on combining system solutions, strong teamwork, safety culture, and individual vigilance.
- .

In February 2009, the Centers for Medicare and Medicaid Services (CMS) announced that hospitals will not be reimbursed for **any** costs associated with WSPEs.

# COMMUNICATION STRATEGIES

# Communication

- The healthcare team must engage in constant and complete communication.
- Proper communication enhances healthcare team integration and efficiency.
- Hierarchy aside, communication must occur at an equal level, encouraging all team members to express concerns, doubts, ideas and solutions.


Healthcare Error Communication Strategies
Reporting Errors
Disclosure
Verbal, Written
Patients, Families
Mandatory, Voluntary
Intrainstitutional
(Nurses, physicians, pharmacists, other caregivers, managers, administrators, risk, quality, and safety officers, board of trustees, other agency staff, etc.)
Extrainstitutional
(State, JCAHO, professional organizations, community, Nation, etc.)

AHRQ 2008

# CLINICAL COMMUNICATION AND COLLABORATION Platforms (CC&C)

# Clinical Communication and Collaboration (CC&C) platforms

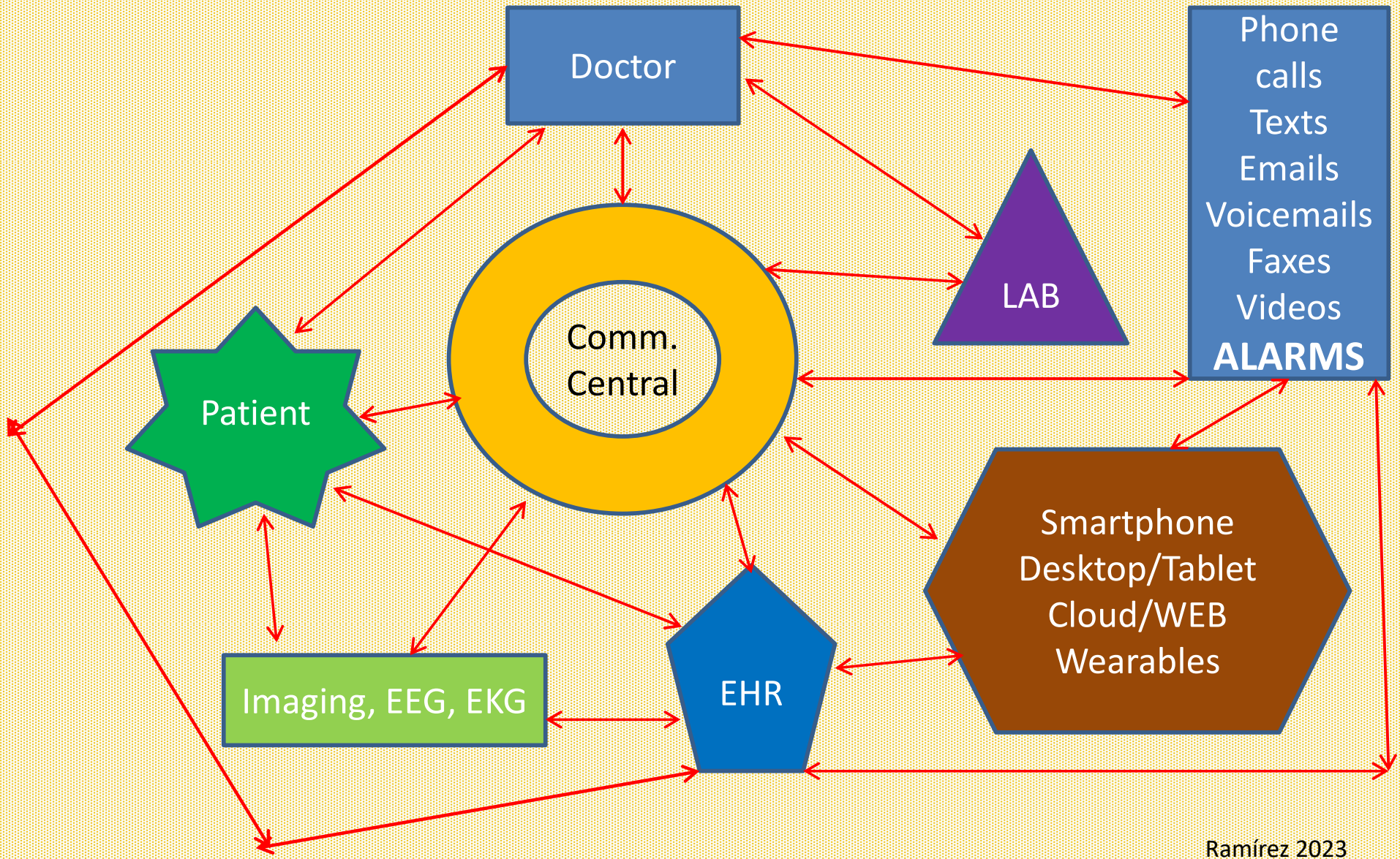
- Communication strategies are important, but staff also need to be given the appropriate tools.
- Many hospitals rely on outdated communication technologies such as landlines, pagers and faxes.
- They are not using mobile devices, and their communication is not integrated with the Electronic Health Records (EHRs).

# Clinical Communication and Collaboration (CC&C) platforms

Institutional IT systems used by clinicians and support staff to:

- communicate and collaborate on patient-related activities
- share real-time patient information
- capture alarms and notifications
- optimize patient throughputs and transitions

# Clinical Communication and Collaboration (CC&C) Platforms

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# Clinical Communication and Collaboration (CC&C) platforms

Coordinate the activities of the care team to:

- improve care measures
- speed clinical workflows
- enhance patient experience
- support patient safety
- smooth transitions of care
- increase patient throughput

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# Patient Throughput

- The process of admitting, treating, and discharging patients, and the facility's efficiency in doing it.
- Ineffective operation can cause a significant loss of time, money, and resources, and impact the care of patients.
- A dedicated patient flow or transport team can give 7K hours back to nursing staff every year.
- Better nurse-to-patient ratios can impact nursing burnout, readmission rates and patient satisfaction.

# Clinical Communication and Collaboration

(CC&C) Platforms Uses

- Quick consultations.
- Accurately transferring information about patients to new shift staff (patient handoffs).
- Communicating with patients and their families.
- Instantly sending audio/video alerts from the EHR to clinicians via mobile devices.

# Clinical Communication and Collaboration (CC&C) platforms

## Utilizing hospitals have:

- Improved patient safety.
- Reduced medical errors.
- Increased productivity.
- Reduced patient wait times.
- Increased patient throughput.
- Significantly cut costs.

# HIPAA-Compliant Text Messaging

- Written information to the patient, reduces the chance of misunderstandings and enhances patient comprehension and treatment options.
- There is a permanent record of the shared information , which eliminates forgetfulness, and misunderstandings.
- Templates and checklists for different types of handovers can be designed.

# Pitfalls of Text Messaging

- Older generations of healthcare personnel do not have great touch-typing skills for:
  - Regular keyboards in computers
  - Digital keyboards in tablets
  - Thumb-keyboards in phones
- Technology like spell-check or text completion may cause errors that may go undetected.
- Oral “texting” also fraught with risks.
- Smoke signals not allowed in hospitals.

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# Questions? 1

# 4 WAYS to DECREASE MEDICAL ERRORS

# Ways to Decrease Medical Errors

## 1. Monitor vulnerable patients:

Patients in isolation who have less contact with healthcare professionals. → Patients with limited English proficiency or low health literacy. → The 45% of the US population with at least 1 chronic illness. → The 36% of U.S. adults taking 5 or more medicines. → Patients with many touchpoints in the system who have more opportunities for error.

# Ways to Decrease Medical Errors

## 1. Monitor vulnerable patients:

- Some work processes within a hospital are more vulnerable to errors, and improvements to equipment or procedures may make a difference.

- Improve and streamline communication among links in the patient care chain (e.g., monitoring patient handoffs), looking for the weakest link.

# Order Processing

## Steps

- Ordering
- Transcribing
- Dispensing
- Administration

A study of inpatient medication errors found that about **90%** occurred at the ordering or transcribing stage, with various causes:

- poor handwriting
- ambiguous abbreviations
- lack of knowledge of the ordering clinician

# Ways to Decrease Medical Errors

## 2. Promote Inter-professional collaboration

- In many hospitals, pharmacists are relegated to the basement, with limited face-to-face contact with their colleagues in other departments, and even less with the patients they're helping to treat.

- A recent 5-hospital study on preparation of chemotherapy solutions and parenteral nutrition showed that 1 in 10 products were prepared incorrectly prior to dispensing.

# Ways to Decrease Medical Errors

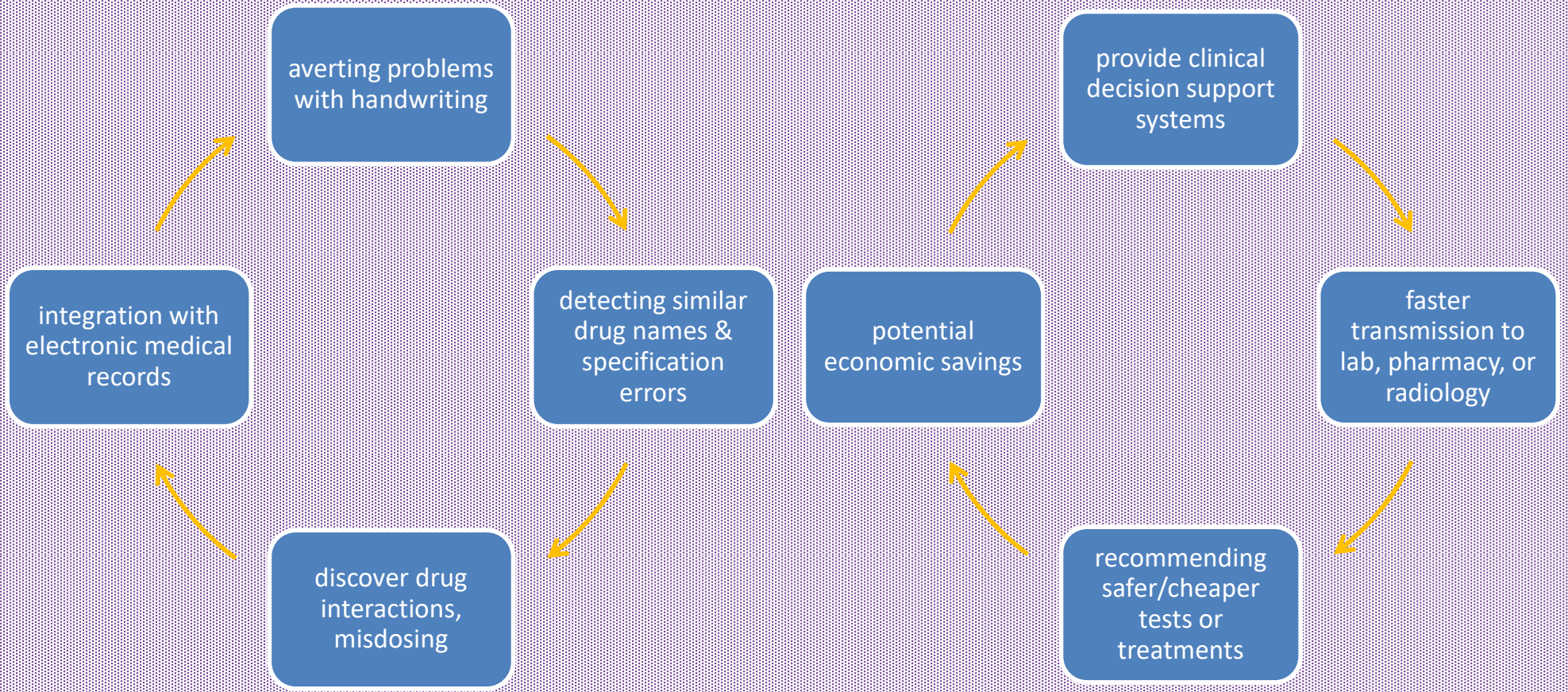
## 2. Promote inter-professional collaboration

- Position pharmacists as permanent or rotating resources in vulnerable hospital departments, such as the ER or ICUs.
- On the patient floor, pharmacists may provide more comprehensive patient counseling, and may detect and correct 83% of medication dispensing errors.
- They may serve as a second pair of eyes for nursing and physician staff, and oversee new automated technology which can initially make hospitals more vulnerable to errors.

# CPOE

Computerized provider order entry (CPOE), is a system in which clinicians themselves place orders electronically, which are then transmitted directly to the recipient (nurse, pharmacist, RT, X-ray tech, PT, etc.).

# CPOE
## Advantages



# CPOE

## Unintended Consequences

| | | |
|---|---|---|
| More or new work for clinicians | Unfavorable workflow issues | Never-ending system demands |
| Problems related to persistence of paper orders | Unfavorable changes in communication patterns and practices | Negative feelings toward the new technology |
| Generation of new types of errors | Overdependence on the technology | Changes in hospital's power structure, organizational culture, or professional roles |

# Ways to Decrease Medical Errors

## 3. Engage patients in safety

- Having patients and their caregivers take an active role in reducing medical errors is difficult due to a lack of time, awareness, or knowledge.

- Hospitals try to empower patients to be their own advocates by:
  - providing literature with tips they may have not considered
  - ensuring the doctor knows about medications they're taking
  - getting documented agreement and consent for what's going to be done from the patient, the doctor, and the person performing the procedure
  - increasing contact with pharmacists regarding their meds
  - encouraging them to educate themselves on their condition and the different treatment options available to them

# Ways to Decrease Medical Errors

## 4.Encourage a High Reliability Culture

- It's imperative to ensure that errors that have already occurred are accurately reported, but many hospitals have created a "punishment" culture which unintentionally discourages accurate reporting.

- Targeting behaviors rather than individuals allows healthcare leaders to ensure staff members come forward with knowledge of past medical errors, and for detecting future errors within their organizations.

# Ways to Decrease Medical Errors

## 4.Encourage a High Reliability Culture

- Reporting systems should make it easy for healthcare professionals to report errors when they occur and worry about secondary details later.
- It is helpful to engage an objective outside group to track and analyze errors because their perspective may catch systemic issues that may have been missed by those inside the organization.
- These tactics will help hospitals collect accurate data, and address the most dangerous errors for the quickest improvement in patient safety.

Triple Aim

Quadruple Aim

Quintuple Aim

# THE DESIRABLE "AIMS"

# Triple Aim

- In 2007, the Institute for Healthcare Improvement (IHI) developed a framework to help healthcare systems optimize performance.

- Before the Triple Aim, these goals were often held in opposition (e.g., creating a better experience would necessarily increase costs).

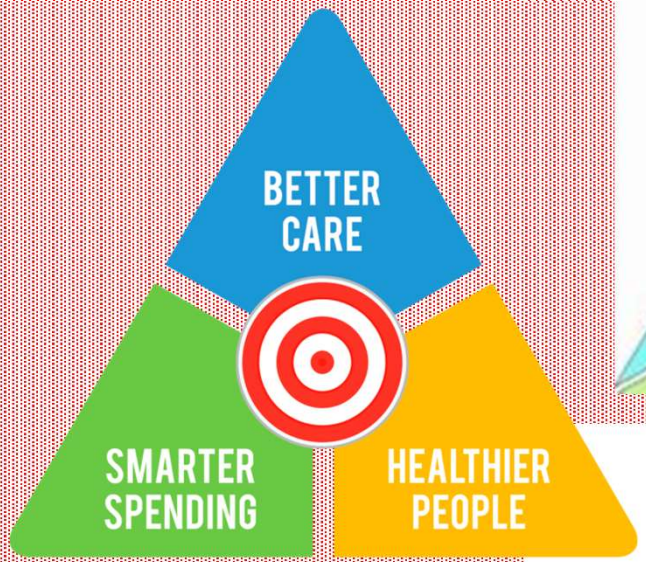
- The breakthrough was the proposition that the aims could be reinforcing of one another.

# Triple Aim

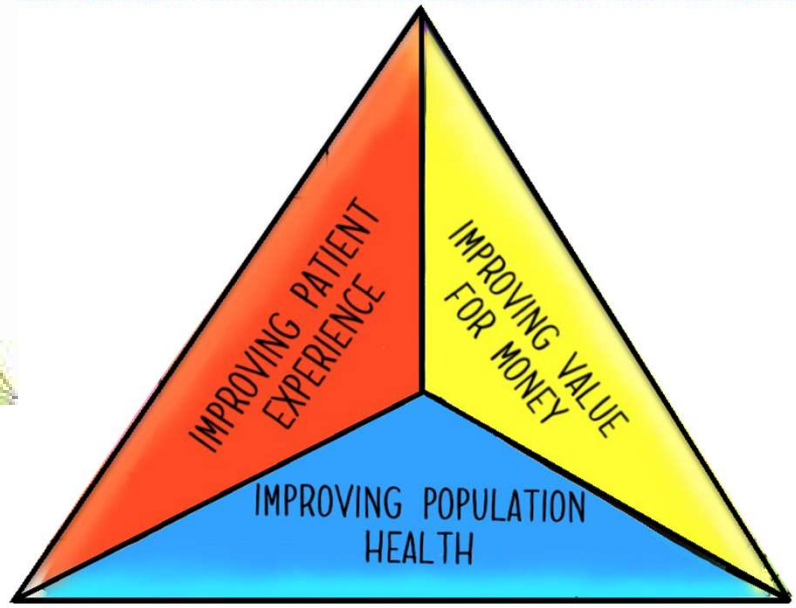
- Since it uses a three-pronged approach, the IHI called it the Triple Aim.

- The Triple Aim's three areas of focus are:
  - 1. improving patient experience
  - 2. reducing the per capita costs of health care
  - 3. improving the health of populations overall

# Triple Aim









The Triple Aim+

# Triple Aim

- The components of the Triple Aim components are not steps, so healthcare organizations should pursue all 3 prongs of the Triple Aim at the same time.

- IHI made 5 recommendations to health organizations:
  - involve individuals and families in design of care models
  - redesign primary care services and structures
  - improve disease prevention and health promotion
  - build a cost-control platform
  - support system integration and execution

# Quadruple Aim

- Many have turned the Triple Aim into the Quadruple Aim.

- For some, the 4th Aim is:
  - attaining joy in work
  - pursuing health equity
  - maintaining readiness (Military)

# Quadruple Aim



# Cautions from IHI

- The Triple Aim is *about patients.*
- We haven't finished pursuing the Triple Aim.
- Don't lose focus.
- Measure what matters.
- Don't ignore equity and joy in work and expect to secure Triple Aim outcomes.

# Quintuple Aim

- It is proposed that Health Equity become the 5th Aim, because quality improvement without health equity is a hollow victory.

- Health equity is "the state in which everyone has the opportunity to attain their full health potential and no one is disadvantaged from achieving this potential due to social position or other socially determined circumstances."

# Populations affected by Health Inequities

- Black, Latino, Native American, or LGBTQ
- individuals in rural communities
- individuals living in poverty
- individuals with disabilities
- older persons

# Quintuple Aim

Health care leaders and practitioners must consider measures of health equity, and the underlying causes of inequities:

- racism
- discrimination
- mistrust
- food insecurity
- housing instability

Social Determinants of Health (SDHs)

# Social Determinants of Health (SDH Summary)

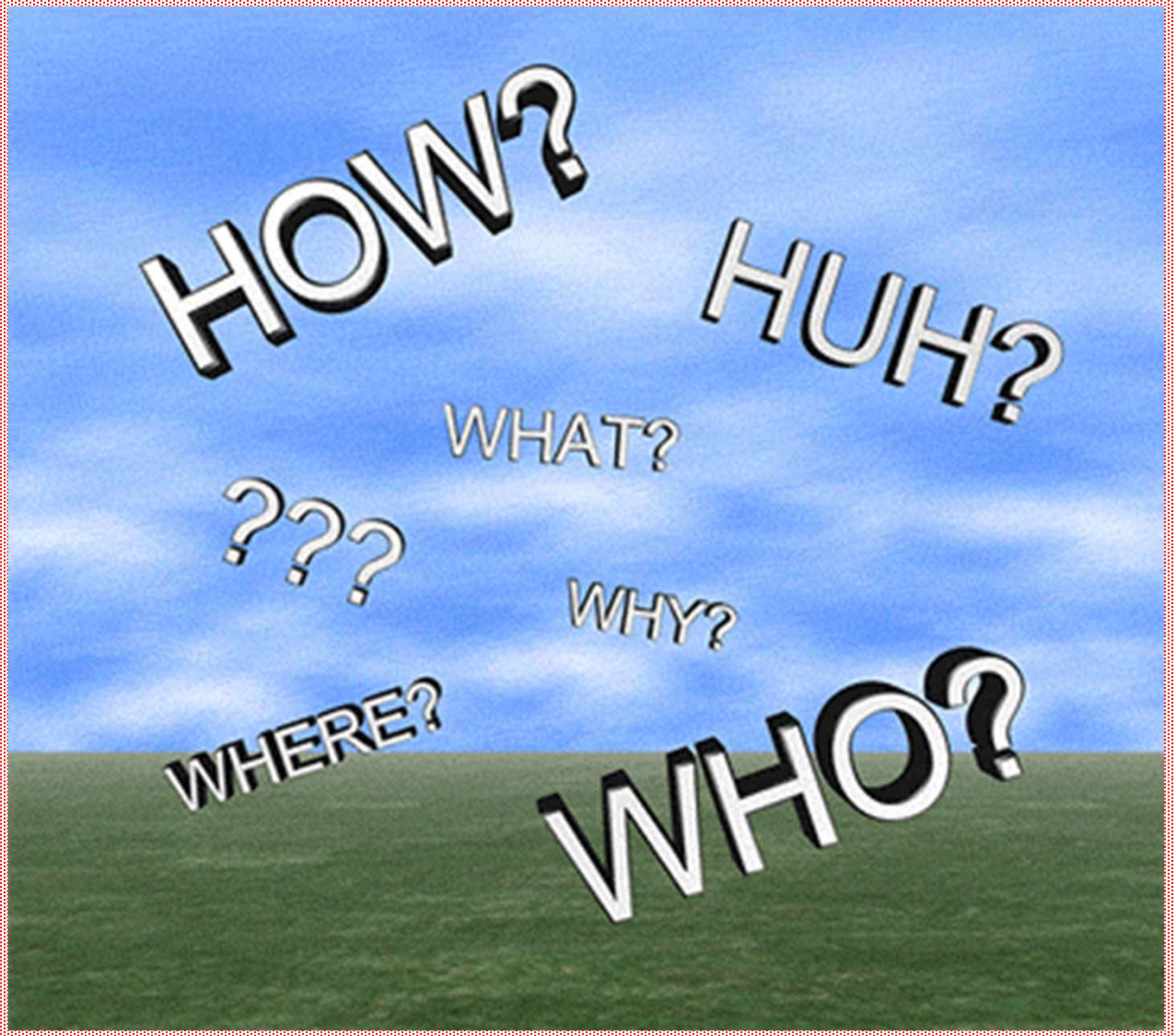
| Economic Stability | Healthcare | Neighborhood & Environment | Education | Social & Community Context |
|---|---|---|---|---|
| Economic Harmony | Availability | Housing | Literacy | Community Resources |
| Concentrated Poverty | Accessibility | Parks & Playgrounds | Funding | Recreation & Leisure Activities |
| Job Training & Availability | Affordability | Ambulatory Ability and Ease | Elementary Education | Transportation Options/Costs |
| Availability of Food | Health Literacy | Segregation, Discrimination | Higher Education | Incarceration |
| Safe Housing | Insurance | Social Norms and Support | Libraries | Safety |
| Poverty Stresses | Provider Adequacy | Worksites | Technology | Trash, Toxins, Hazards |

Ramírez 2019

# Quintuple Aim



# Questions? 2



# EQUITY AND INEQUITY

# Concepts: Equity and Inequity

- **Equality:** Fairness and justice promote and ensure that everyone gets the same things in order to enjoy full, healthy lives.
- **Equity:** Absence of differences among groups of people, in social, economic, demographic or geographic factors.
- **Inequity:** Presence of *avoidable, unfair, and unjust* differences involving more than lack of equal access to needed resources.

WHO, 2009

# Health Inequities & Health Equality

Inequities = Disparities

**Health Inequities**

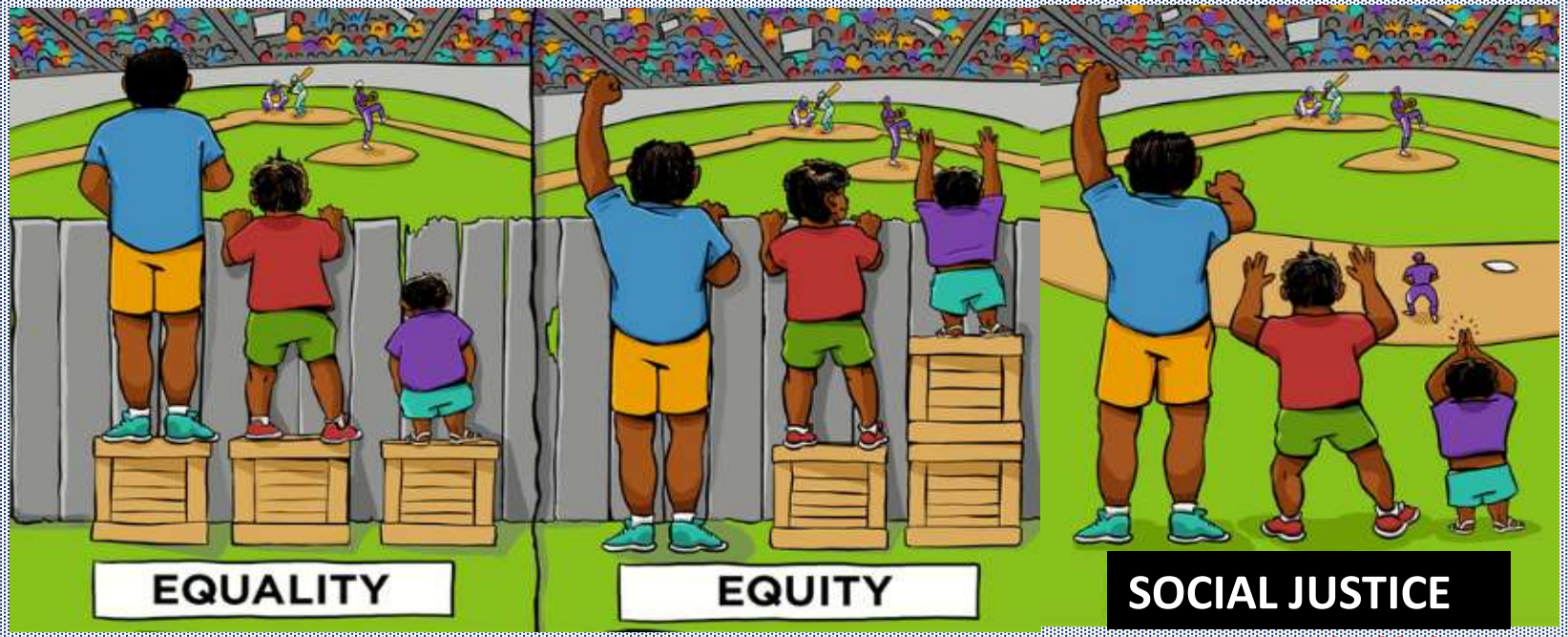
- Unfair differences infringing on fairness and human rights.
- Social, economic or environmental disadvantages.
- Adversely affect many groups of people.

**Health Equality**

- Inequities eliminated by treating all equally.
- Equity is the process and the means.
- Equality is the outcome.

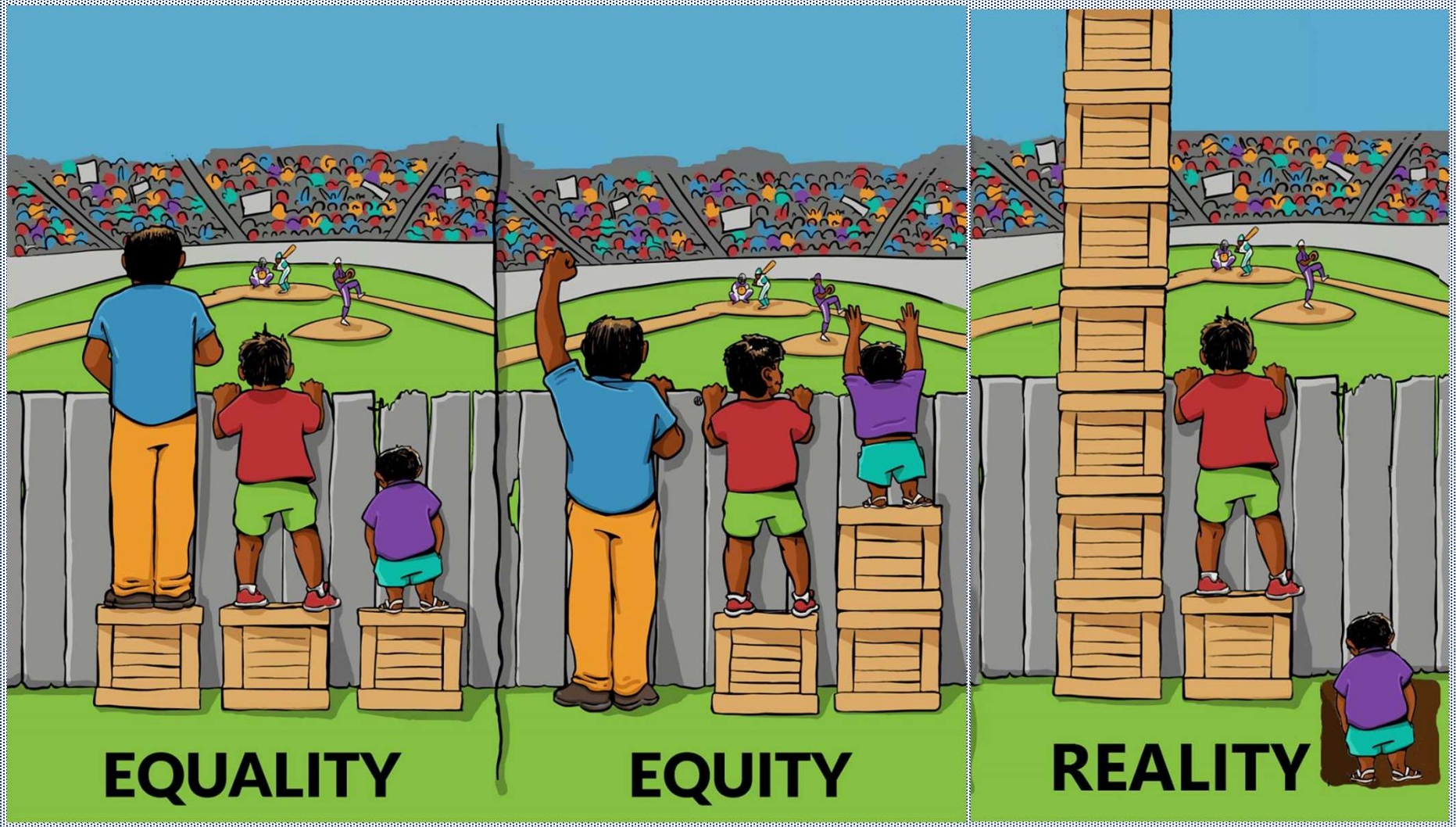
# Equality, Equity and Social Justice


Robert Wood Johnson Foundation 2017




Angus Maguire 2018

# Equality-Equity-Reality




Made by Andrew, a Facebook user in Canada

# Fixing US Healthcare

- The root cause of our maddening mess is that insurers and government programs like Medicare and Medicaid pay for actions, not results:
  - inconsistent and unsafe care
  - unintelligible medical bills
  - inscrutable and incomprehensible insurance plans
  - unreasonable drug prices
- They "pay" for every pill, MRI, lab test and operation, whether or not any of that makes us healthier.

# Fixing US Healthcare

- Massive growth in the industry has generated an obscene amount of waste, from many unnecessary operations and procedures to more expensive drugs.
- When people are compensated for doing something, independent of the results, they tend to do more and more of it.
- The primary motivation becomes getting paid, which may or may not get you healthy; that's backwards and very dangerous.

# Fixing US Healthcare

- U.S. healthcare needs to be more effective
  - pay for results, not action
  - run healthcare delivery systems like businesses competing to deliver better health at lower costs
  - demand that other health industries also compete on making people healthier at lower costs
  - learn from the successes of employer-driven and government-run health systems

- Another solution is universal health insurance which guarantees every citizen access to complete healthcare whenever they need it.

# Fixing US Healthcare

## 6 big challenges lie ahead:

- rightsizing after the telehealth explosion
- adjusting to changing clinical trials
- encouraging digital relationships that ease physician burdens
- forecasting for an uncertain 2024 and beyond
- reshaping health portfolios for growth
- building a resilient and responsive supply chain for long-term health

# Fixing US Healthcare

Harvard Business Review suggests 5 priorities:

- focus on prevention, not just treating sickness
- tackle racial disparities
- expand telehealth and in-home services
- build integrated systems
- adopt value-based care

# QUICK SUMMARY of the COURSE

# To Err is Human

- The IOM 1999 report "To Err is Human" laid the framework for analyzing healthcare errors.
- It concentrated on system errors, rather than individual failures.
- Highlighted several areas:
  - Medication
  - Communication
  - Surgery

# Surgical Errors

- **WSPE**s: **W**rong **S**ide, **W**rong **S**ite, **W**rong **P**atient, **W**rong **P**rocedure **E**rrors
- The joint Commission's Universal Protocol
- Checklists
- Communication

# Doctor's Thinking & Education

- Inductive vs Deductive reasoning
- Mnemonics for patient evaluation
- Shortcut heuristics and biases
- Clinical maxims
- Procrustean assignment

# Diagnostic Errors

- ER misdiagnosis
- The Chief Complaint
- Clinical Pathways
- Cookbook Medicine
- Differential Diagnosis

# Communication Errors

- Patient handoffs
- Miscommunicated orders
- Incorrect communication provider-patient
- Health Literacy
- Language and culture

# Medication Errors

- The “5 Rights” and their “5 wrongs”
- Prescriber, Pharmacist and Patient errors
- Misinterpreted abbreviations or drug names
- Food-Medication interactions
- Adverse Drug Events

# Science and Technology

- Cost of technological advances
- Medical Reversal of Published findings
- Robot-assisted surgery
- Telehealth and the “Digital Hospital”
- The Internet and Dr. Google

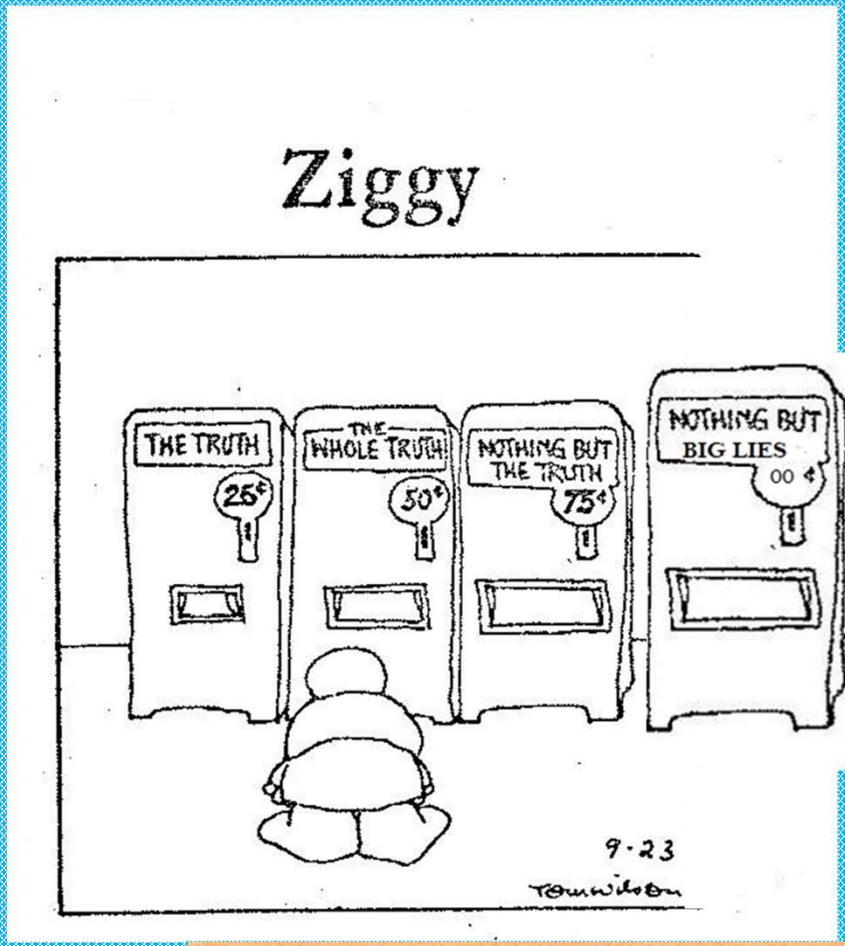
# Mirror, Mirror Report

- USA is last in healthcare outcomes
- USA is last overall for the 5 measured fields
- USA has lowest life expectancy at birth
- USA has highest cost, least bang for the buck
- Universal Healthcare

# Disjointed Health Industry

- Many unconnected entities
- Profit motive
- Lack of standardization
- Enticement for wasteful spending
- Unequal access and service

# Course Cartoons





# Final Questions?


Thank
you

Thank you very much for taking my OLLI course. I hope that you have found it enjoyable and worthwhile as a learning experience. I realize that sometimes there is a lot of stuff on the screen, but since all of the slides ae available on the website, I feel that you can go back at any time and recheck any bit of information that you might want to review, especially tables or graphs. My intention is not to give you a lot of information about one issue, but rather to give you a smorgasbord of items for you to choose to nosh on in depth.

I submitted a course proposal for the Spring 2024 Semester which starts Monday February 26th, 2024.
It is going to be a 2.0 version of my September, 2020 Course entitled: *Plagues, Pestilences, Poxes and Pandemics,* with updated information about the causes and spread of the plague, information about Covid19, its vaccines, mortality and social consequences of the pandemic.
It will include in-depth comparisons and contrasts with the 1914 Spanish Flu pandemic, and recent data about malaria, syphilis and others.
If it gets accepted, I would much enjoy seeing you as participants. As always, THANK YOU, and don't forget to fill out your evaluation.


Bye!
Bye!
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