L1-PATIENT SAFETY

1- patient safety

Learning objective:

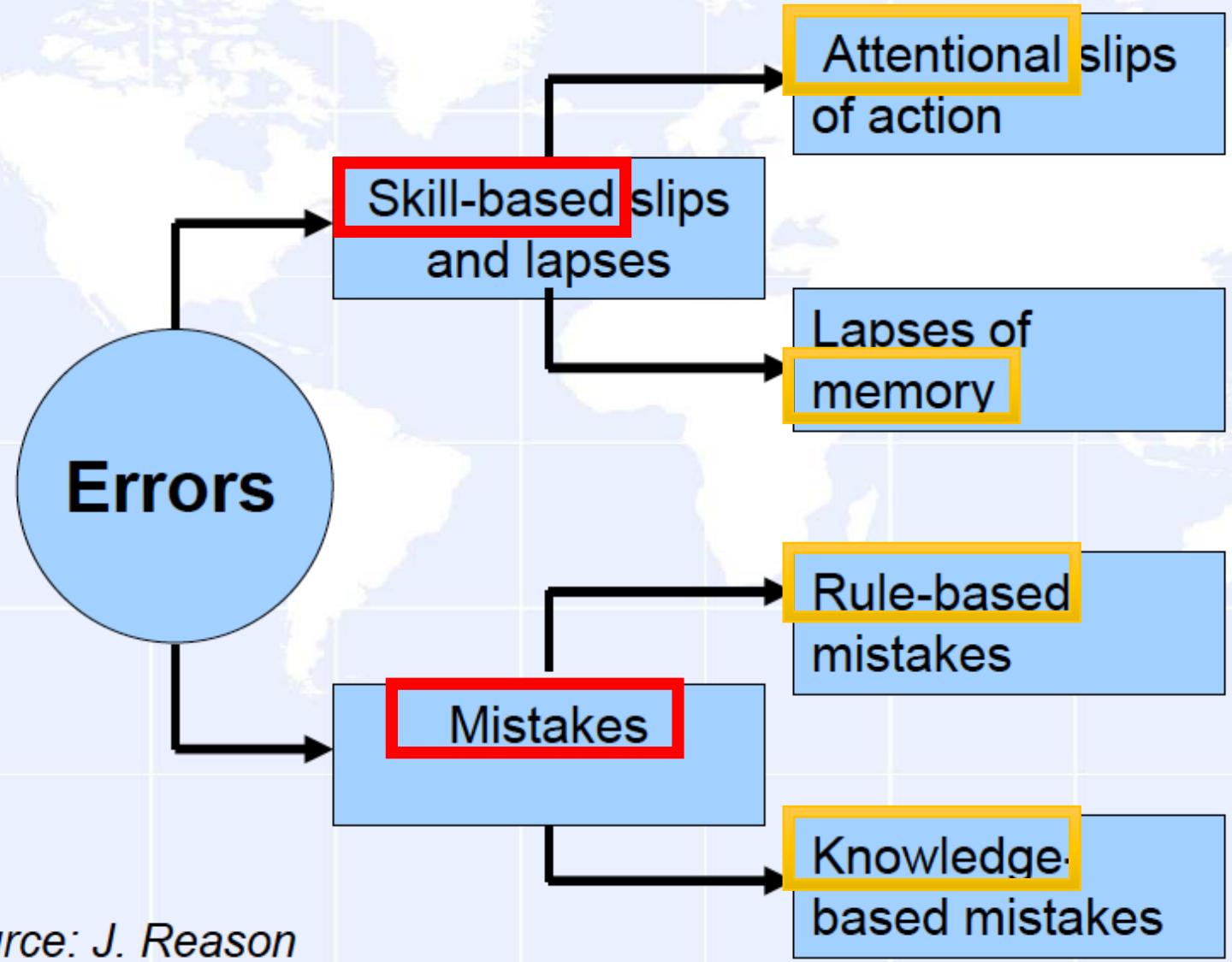
- Understand the discipline of patient safety and its role in minimizing the incidence and impact of adverse events, and maximizing recovery from them.
- Understand human factors and its relationship to patient safety.

Definitions

- **Patient Safety**
  - Absence of preventable harm: avoidance of errors in clinical care resulting in injury to our patients .
  - a discipline in the health care sector that applies safety science methods toward the goal of achieving a trustworthy system of health care delivery. Patient safety is also an attribute of health care systems; it minimizes the incidence and impact of, and maximizes recovery from, adverse events.
- **error**
  - The failure of a planned action to achieve its intended outcome .
  - A deviation between what was actually done and what should have been done.
  - James Reason stated a definition that may be easier to remember is: “Doing the wrong thing when meaning to do the right thing”.
  - “Doing the wrong thing when meaning to do the right thing.” A more formal definition is: “Planned sequences of mental or physical activities that fail to achieve their intended outcomes, when these failures cannot be attributed to the intervention of some chance agency.”
- **Violation** (انتهاك و خرق القوانين)

A deliberate deviation from an accepted protocol or standard of care.

Summary of the principal error types



Source: J. Reason

Situations associated with an increased risk of error	Individual factors that predispose to error
• unfamiliarity with the task. **(Especially if combined with lack of supervision)** • inexperience . **(Especially if combined with lack of supervision)** • shortage of time. • inadequate checking. • poor procedures. • poor human equipment interface.	○ Limited memory capacity. ○ Fatigue, Illness ○ Hunger, Stress ○ Language or cultural factors ○ Hazardous attitudes

Person approach to errors :	**Multiple factors approach to errors :**
• See errors as the product of carelessness. • Remedial measures directed primarily at the error-maker : Naming , Blaming , Shaming , Retraining.	• Patient factors • Provider factors • Task factors • Technology and tool factors • Team factors • Environmental factors • Organizational factors

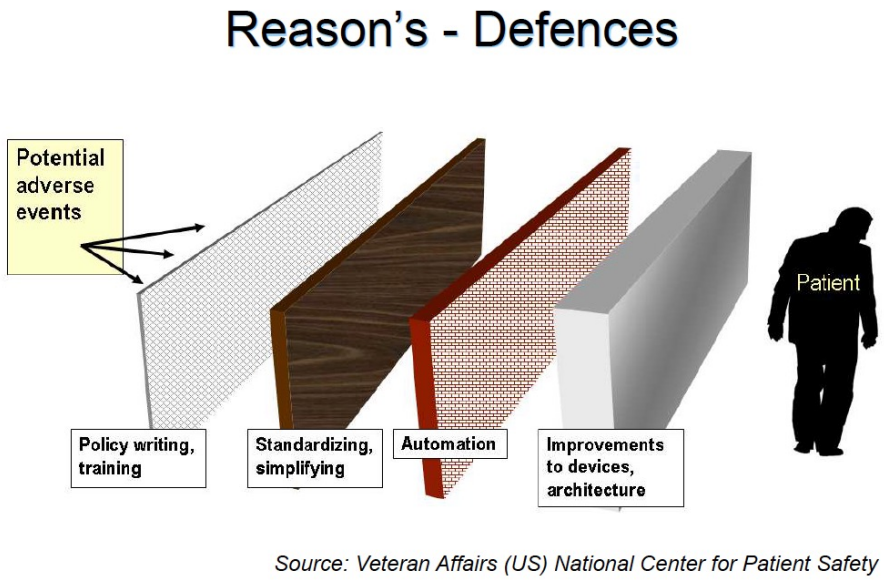
Errors and outcomes are not inextricably linked:

- Harm can befall a patient in the form of a **complication** of care without an error having occurred.
- Many errors occur that have no consequence for the patient as they are recognized before harm occurs.

Regardless of people **experience**, **intelligence**, **motivation** or **vigilance**, they make silly mistakes.

Examples adversely affect patient safety

- Prescribing and dispensing.
- Hand-over/hand-off information.
- Move patients.
- Order medications electronically.
- Prepare medication.



Source: Veteran Affairs (US) National Center for Patient Safety

If all of these tasks become easier for the health-care provider, then **patient safety** can improve.

Human factors & importance in health care

Human factors :

- Acknowledges The universal nature of **human fallibility** and The **inevitability** of error.
- Assumes that errors **will occur.**
- Designs things in the workplace to try to **minimize** the likelihood of error or its consequences.

Why applying human factors is important for patient safety :

- Importance of human factors has been recognized for a long time in: aviation, manufacturing, military.
- Human factors only recently acknowledged as **an essential part of patient safety.**
- A major contributor to **adverse events** in health care.
- All health-care workers need to have a **basic understanding** of human factors principles.

knowledge of human factors in practice

- ✓Apply **human factors thinking** to your **work environment.**
- ✓Avoid **reliance on memory.**
- ✓Make things **visible.**
- ✓**Review** and **simplify processes.**
- ✓**Standardize** common processes and procedures.
- ✓Routinely **use checklists.**
- ✓Decrease reliance on **vigilance.**

2- medication safety

- Medications can greatly improve health when used **wisely** and **correctly.**
- Medication use has become **increasingly complex** in recent times.
- Remember that using medications to help patients is **not a risk-free activity.**
- Medication error is a major cause of **preventable** **patient harm.** (**illness suffering** and **financial cost)**
- As future health-care workers, we have an **important role** in making **medication use safe.**
- Know your responsibilities and work hard to make medication use safe for your patients.

How can drug administration go wrong?	How can prescribing go wrong?
• **Wrong** patient, route, time, dose, drug. • Omission and **failure to administer**. • Inadequate **documentation**.	• **Inadequate knowledge** about drug indications and contraindications. • Not considering **individual patient factors**, such as allergies, pregnancy, co-morbidities, other medications. • **Wrong** patient, dose, time, drug, route. • Inadequate **communication** (written, verbal). • **Documentation** - illegible, incomplete, ambiguous. • Mathematical error when **calculating dosage** • Incorrect **data entry** when using computerized prescribing e.g. duplication, omission, wrong number.

Which patients are most at risk of medication error?	In what situations are staff most likely to contribute to a medication error?
○ Patients on **multiple medications**. ○ Patients with **another condition**, e.g. renal impairment, pregnancy. ○ Patients who **cannot communicate** well. ○ Patients who have **more than one doctor.** ○ Patients who do **not take an active role** in their **own medication use.** ○ **Children** and **babies** (dose calculations required).	○ Inexperience. ○ Rushing. ○ Doing two things **at once**. ○ Interruptions. ○ Fatigue, boredom. ○ Being on "**automatic pilot**" leading to failure to check and double-check. ○ **Lack** of **checking** and double checking habits. ○ **Poor teamwork** and/or **communication** between colleagues. ○ **Reluctance** to use **memory aids**.

Drugs factors lead to medication errors

Ambiguous nomenclature

Tegretol 100mg	Tegreto 1100 mg
S/C	S/L
1.0 mg	10 mg
.1 mg	1 mg

Look-a-like and sound-a-like medications

Avanza (mirtazapine, antidepressant);

Avandia (rosiglitazone, diabetes medicine)

Celebrex (celecoxib, anti-inflammatory);

Cerebryx (fosphenytoin, anticonvulsant);

Celexa (Citalpram, antidepressant)

Ways to Improve medication safety

Safer medication use by :

- Use generic names.
- Tailor prescribing for individual patients.
- **Learn and practice** collecting complete medication histories.
- Know the high-risk medications and take precautions.
- **Be very familiar** with the medications you prescribe.
- Use memory aids.
- Remember the **5 Rs.**
- Communicate clearly.
- Develop **checking habits**.
- Encourage patients to be **actively involved.**
- Report and learn from errors.

Encourage patients to be actively involved in the process by :

- When prescribing a new medication provide patients with the following information:
  - **Name**, **purpose** and **action** of the medication.
  - **Dose**, **route** and administration **schedule**.
  - Special **instructions**, **directions** and **precautions**.
  - Common **side-effects** and **interactions**.
  - How the medication will be **monitored**.
- Encourage patients to keep a **written record** of their medications and allergies.
- Encourage patients to **present this information** whenever they consult a doctor.

Avoiding ambiguous nomenclature by :

- Avoid trailing zeros,
  e.g. write 1 not 1.0
- Use leading zeros,
  e.g. write 0.1 not .1
- Know accepted local terminology.
- Write neatly, print if necessary.

Administration involves :

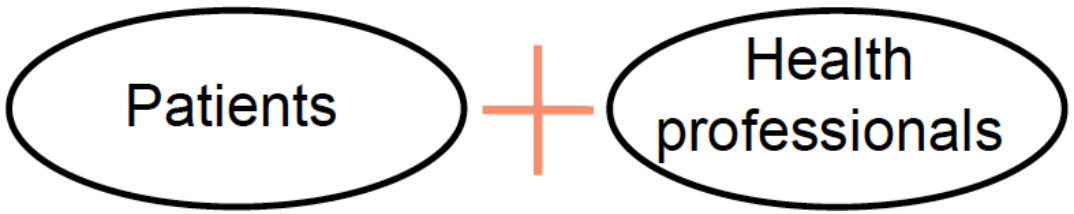
- Obtaining the medication in a **ready-to-use** form; may involve counting, calculating, mixing, labeling or preparing in some way.
- Checking for **allergies**.
- Giving the **Right Medication** to the **Right Patient**, in the **Right Dose**, via the **Right Route**, at the **Right Time**.
- **Documentation**.

Understanding the multiple factors involved in failures

Students should:

- Avoid blaming
- Practise evidenced-based care
- Maintain continuity of care for patients
- Be aware of the importance of self-care
- Act ethically every day

Communicating with Patients: Applying Knowledge & Expertise



- experience of illness
- social circumstances
- attitude to risk
- values
- preferences

- diagnosis disease
- etiology
- prognosis
- treatment options
- outcome probabilities

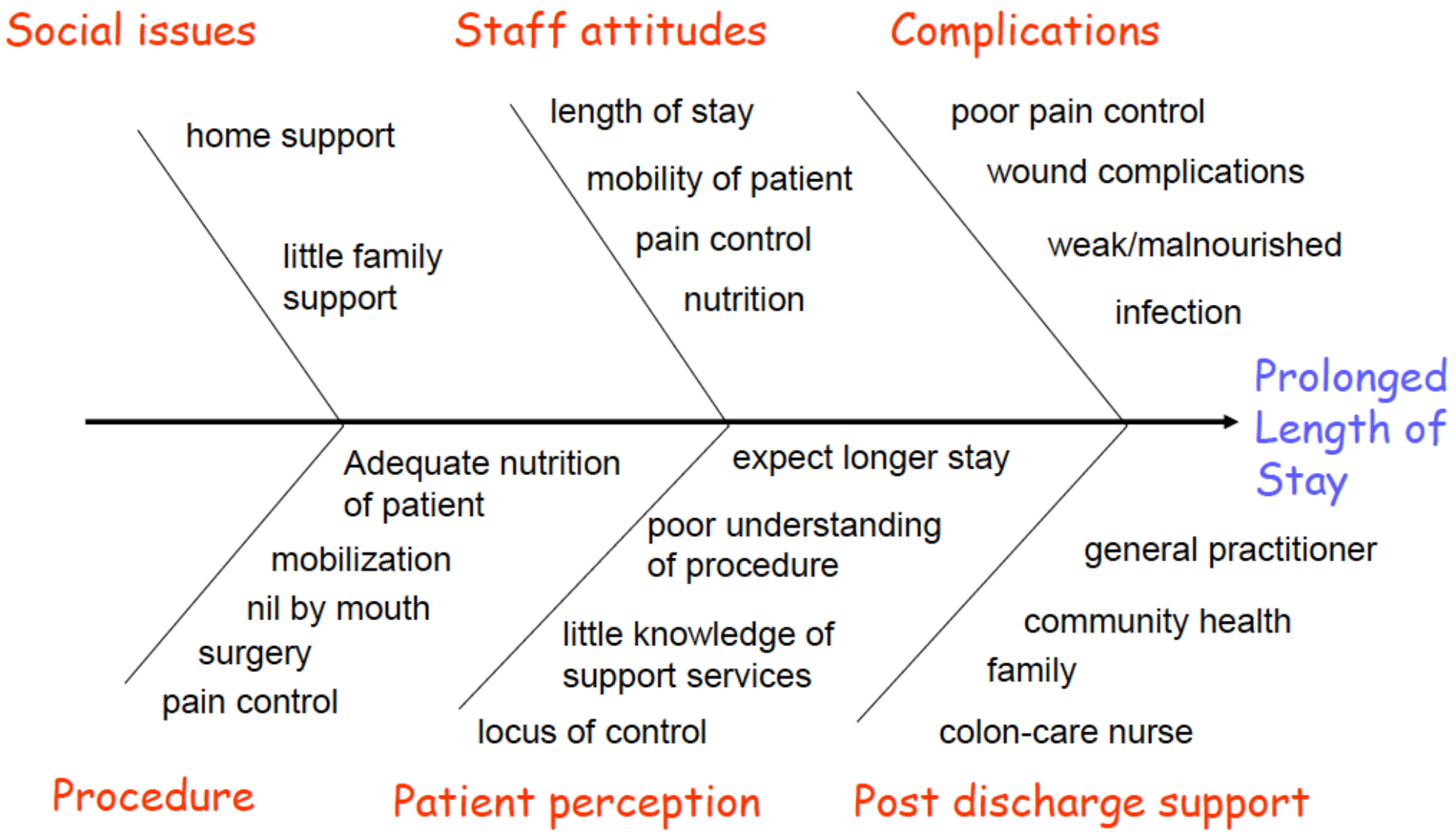
Source: A. Coulter, Picker Institute 2001

3- patients and caregivers Engaging

Learning objective

Understand the ways in which patients and caregivers can be involved as partners in health care, both in preventing harm and learning from an adverse event.

Cause and effect diagram



Accelerated Recovery Colectomy Surgery (ARCS), North Coast Area Health Service, Australia

How to apply patient safety thinking to all health-care activities

1. **Develop relationships with patients.**
2. **Understand the multiple factors involved in failures.**
3. **Avoid blaming when an error occurs.**
4. **Practice evidence-based care.**
5. **Maintain continuity of care for patients.**
6. **Be aware of the importance of self-care.**
7. **Act ethically every day.**
8. **The delivery of safe health care.**

- The success of a patient's care depends on understanding the entire health system available to that particular patient.
- An understanding of systems will help the health-care providers appreciate how different parts of the health system are connected and how continuity of care for the patient is dependent on all parts of the system communicating in an effective and timely manner.

Patients have important role in **minimizing adverse events**, they should be **involved** in their health care (depending on which tasks).

Gaining an informed consent	SPIKES (communication)	Cultural competence
○ The diagnosis. ○ The degree of uncertainty in the diagnosis. ○ Risks involved in the treatment. ○ The benefits of the treatment and the risks of not having the treatment. ○ Information on recovery time. ○ Name, position, qualifications and experience of health workers who are providing the care and treatment. ○ Availability and costs of any service required after discharge from hospital.	○ **S**harpen your listening skills. ○ **P**ay attention to patient perceptions. ○ **I**nvite the patient to discuss details. ○ **K**now the facts. ○ **E**xplore emotions and deliver empathy. ○ **S**trategize next steps with patient or family.	○ Understand cultural differences. ○ Know one's own cultural values. ○ Understand that people have different ways of interpreting the world. ○ Know that cultural beliefs impact on health. ○ Be willing to fit in with the patient's cultural or ethnic background.

- **Teams** represent a pragmatic way to improve patient care.
- Teams can improve care at the level of: the **organization**, the **patient** – **outcomes** and **safety**, the **team as a whole**, the individual team **member**.
- **Incident reporting/monitoring** is Involves collecting and analyzing information about any event that could have harmed or did harm anyone in the organization.
- A fundamental component of an organization's ability to learn from error.
- Successful **strategies** include:
  - ✓anonymous reporting.
  - ✓timely feedback.
  - ✓open acknowledgement of successes resulting from incident reporting.
  - ✓reporting of near misses.
- "free" lessons can be learned and system improvements can be instituted as a result of the investigation but at no "cost" to a patient.

Summery

- **Patient Safety**: the reduction of risk of unnecessary harm associated with health care to an acceptable minimum. (*WHO-ICPS, 2009)*
- **A violation** is a deviation from safe operating procedures, standards or rules (J. Reason)
- Understand the ways in which patients and caregivers can be involved as partners in health care, both in **preventing** harm and **learning** from an adverse event.
- **Economic costs** associated with unsafe care.
- **Medication errors** are common and cause **preventable** human suffering and financial cost.

Done by: Ethar alqarni