Quality and Safety Tools in Dialysis Practice

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"(..) The healthcare system is extremely complex, and ensuring patient safety requires the ongoing, focused efforts of every member of the healthcare team (…)"

Ulrich; Kear (2014)

"(..) Every system is perfectly designed to achieve the results it gets (…)"

Berwick

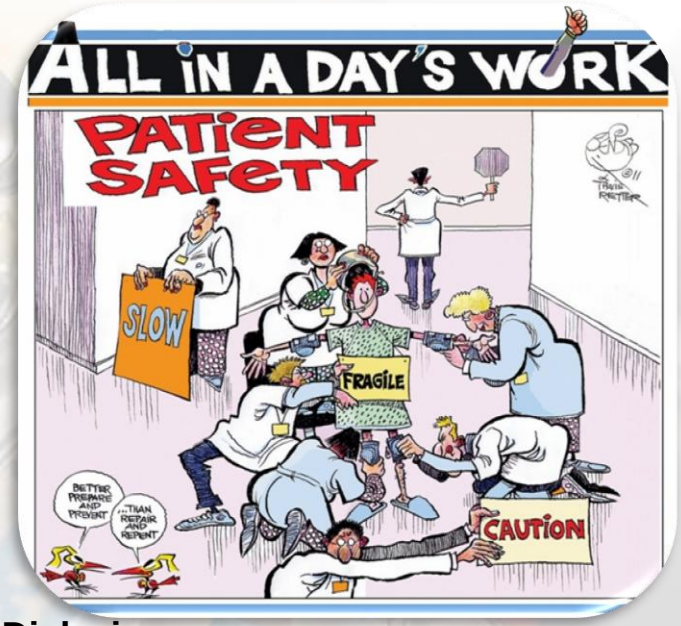
But what fails?

Patient Safety

Patient Safety

- **Patient Safety…**
  - *"(…) is the prevention of errors and adverse effects to patients associated with health care. While health care has become more effective it has also become more complex, with greater use of new technologies, medicines and treatments."*

WHO



Patient Safety

Improved processes of care designed to reduce the risk of error and the effect of medical mistake of our patients…

Dialysis Practice…

WHAT CAN RISK MANAGEMENT OFFER?

Dialysis Practice…

- Complex medical care and technology dependent
  - Routine processes of care are perfomed correctly and competently
  - Ocurrence/recurrence avoidable harms are identified and prevented

Haemodialysis is a tecnhically complex procedure with many potencial sources of error and harm to patients

Risk Management

- Managing all potencial risks!

- Risks are associated to all aspects of healtcare, such as…
  - Organisational strategy, business and financial planning
  - Projects and service developments
  - Purchasing
  - Design of services
  - **Treatment and care delivery**

National Patient Safety Agency,

Risk Management

- How bad?
- What can go wrong?
- **Incident**
- Is there a need for action?
- How often?

Risk Management

- Identify
- Assess
- Analyse
- Manage all potential risk

Quality & Patient Safety in Dialysis Practice

"(…) even a "safe" organization is not error-free (…) Safe organizations antecipate "what-if" events and avoid blaming adverse events on an individual's failure (…)"

Garrick et al (2012)

What can be done?

- Development of a patient safety culture
- Recognizing the risk associated to dialysis practice
- Defending safety as a goal for all policies and procedures
- Commitement of all organization

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RISK MANAGEMENT:

- Joint effort of the institution to identify incidents, their monitoring and analysis with consequent creation of norms and procedures.
- Promotion of added value for minimizing risk during clinical practice based on patient safety
- It implies anticipation, permanent adaptation and flexibility.

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RISK MANAGEMENT:

Patient safety culture	Error orientation culture	Oportunity to learn
Error reporting	No blame system	Training pollicy
Adaptability and innovation hability	Persistence and strategic orientation	Education program

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RISK MANAGEMENT characteristics :

Total sharing and co-responsibility for the efforts made

Key Elements:

Authority
Visibility
Effective Communication
Coordination / Cooperation
Skills
Culture
Continuous learning
Quality Continuous improvement

Total availability and openness to change

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RISK MANAGEMENT:

Steps:

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RISK MANAGEMENT

Let's WORK!

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RENAL PATIENTS …

- Are particularly at risk of complications because of:
  - Age
  - Associated comorbidities
  - Immunocompromised from renal failure or immunosuppression
- Receive complex treatments

Dialysis Practice

- **Incidents** on renal units are most commonly related to:
  - Access related events
  - Blood incidentes
  - Medications errors
  - Equipment and device failure
  - Health care associated infeccion
  - Patient falls

Dialysis Practice - Incidents

Access Related Events

- Access infiltration
- Clotting haemodialysis circuit
- Access needle dislodgment
- Poor blood flow
- Difficult cannulation
- Inadequality clamp access lines
- Failure to cap catheter ports

Dialysis Practice - Incidents

ACCESS RELATED EVENTS

- Vascular access is a critical issue
- Relatively simple seeming decisions about placement and use of hemodialysis access can have profound implications

- Staff tried more than twice to insert needles before getting assistance
- Access infiltration usually happens at the beginning of the treatment
- Dislodgement of the access needle and cateter disconnections are pottencialy life-threatening events

Dialysis Practice - Incidents

ACCESS RELATED EVENTS

Risk Management Strategies:

- Reporting all the errors
- Staff and patient education
- Clear policies known by all healthcare team
- Training needling and fixing all the lines
- Audits / check list

Dialysis Practice - Incidents

BLOOD INCIDENTES

- Excess blood loss
- Prolonged access bleeding after dialysis
- Haemolysis associated with haemodialysis

- High risk of inadequate tightening of the connector between the dialyser and the lines if the machine is not visible
- High risk of exsanguination during washback procedure if the process is not carried out correctly
- Bleeding can occur from fistula needling sites and from removal of femoral dialysis lines
- Haemolysis is a potencial source of morbidity and could go unrecognised

Dialysis Practice - Incidents

BLOOD INCIDENTS

Risk Management Strategies:

- Reporting all the errors
- Staff and patient education
- Training
- Protocols/pratical guidelines for vascular acess

Dialysis Practice - Incidents

MEDICATION ERRORS

- Deviation from dialysis prescription
- Allergic reactions and medication
- Medication omissions
- Errors of medication prescribing
- Errors of dosage

Dialysis Practice - Incidents

MEDICATION ERRORS

- Complex multidrug regimens
- High risk related whith transitioning between health departments
- High risk medication – IV Heparin
- Necessary adjustement for medication – restrictions and dosing changes required for dialysis patients

Dialysis Practice - Incidents

MEDICATION ERRORS

Risk Management Strategies:

- Reporting all the errors
- Staff education:
  - Communication, all team envolved
  - Follow the right of medication administration
- Review of medication lists
- Medication reconciliation
- Double check
- Electronic medical records
- Patient education

Dialysis Practice - Incidents

EQUIPMENT AND DEVICE FAILURE

- Dialysis membrane bio-incompatibility
- Roller pump-induced hemolysis

- Sometimes treatments are finished earlier because of problems with the dialysis equipment

Dialysis Practice - Incidents

EQUIPMENT AND DEVIDE FAILURE

Risk Management Strategies:

- Reporting all the errors
- Staff and patient education
- Trainning
- Check-list
- Pratice guidelines

Dialysis Practice - Incidents

HEALTH CARE ASSOCIATED INFECTION

- Bloodstream and other infections are leading causes of death and hospitalization among hemodialysis patients
- Improper hand and glove hygiene are troubling

Dialysis Practice - Incidents

HEALTH CARE ASSOCIATED INFECTION

Risk Management Strategies:

- Reporting all the errors
- Staff and patient education:
  - Hand and harm hygiene policy and techniques improvement
  - Hemodialysis access procedures
  - Adherence to sterile techniques
- Training
- International procedures
- Check-lists

Dialysis Practice - Incidents

PATIENT FALLS

- Elderly patients – risk for fall more prevalente
- Associated risk factors such as:
  - Age
  - Diabetes
  - Motor strength
  - Medication used
  - Previous fall episodes
  - Visual impairment
- Orthostatic hypotension after dialysis

Dialysis Practice - Incidents

PATIENT FALLS

Risk Management Strategies:

- Reporting all the falls
- Staff education
- Monitoring orthostatic blood preassure
- Transfers helps or assisting mobilization
- Environmental improvement

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RISK MANAGEMENT

In conclusion…

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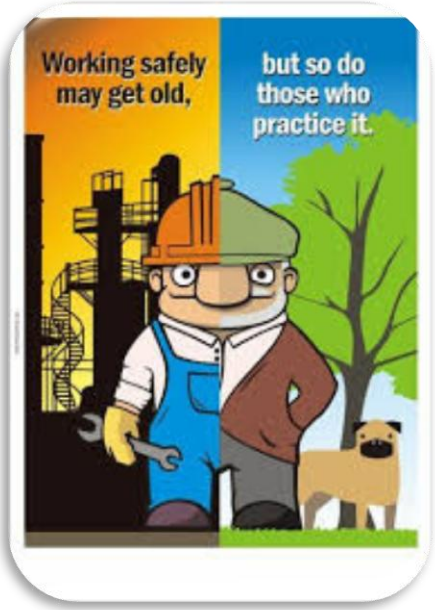
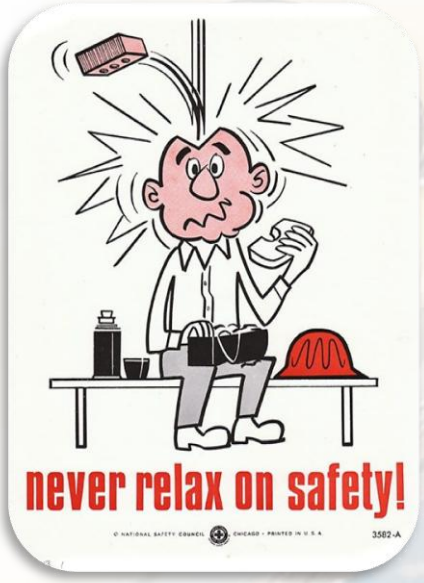
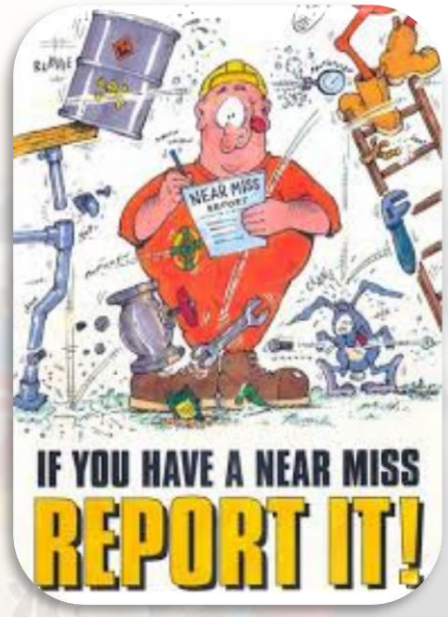
RISK MANAGEMENT

- Errors in dialysis practice can cause harm and injuries
- All team must be involved in patient safety

- **Risk Management Department** must be implemented







Quality & Patient Safety in Dialysis Practice

RISK MANAGEMENT Department

- Identification and evaluation of risks
- Incident reporting system and its analysis
- Quality and clinical internal and external audits
- Monitoring of clinical indicators
- Professional training:
  - Simulation
  - Multidisciplinary training
  - Crew resource management
- Implementation of national and international projects
- Development of human factors such as communication
- Patient Safety Goals: Development and monitoring

Quality & Patient Safety in Dialysis Practice

RISK MANAGEMENT Department

"(..) Knowledge does grow here and there by accumulation, but far often knowledge grows by the recognition of error (…)"

Karl Popper

Thanks…