Medical Mnemonics: Do they really work? Can they save lives?

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What is a Mnemonic?

Derived from antiquity!

First documented by Roman and Greek philosophers in 500 B.C.

"Mnemonic" stems from Greek words:

- Mneme (memory)
- Mnemon (mindful)
- Mnemosyne (Greek Goddess of Memory)

- Used for memorization of long speeches by Greek poets by means of a *loci et res* (structure and items

Five Types of Memory:

Semantic memory

Not learned from experience: colors, alphabet

Episodic memory

Details of events requiring processes: encoding, consolidation/storage and retrieval.

Procedural memory

We remember how to perform everyday tasks, such as tying shoes

Automatic memory

Unconscious memory enabled by previous experience

Emotional memory

Cue leads to retrieval of a conscious memory about emotional event causing emotional response in new situation.

Purposes of Medical Mnemonics

Remembering content

Complex serious of material

Mental means to recall components of theory

Helpful if there is ***dissociated ideas*** needing recall

Triggering actions

Recall of sets of behaviors

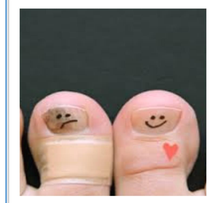
Lists of actions required during complex tasks

Three General Types of Mnemonics:

•Rhymes

•Acronyms (letter strategy)

•Key words or Pegs



Examples of Mnemonics

Remembering material:

Medications that need double checking by two nurses in pediatrics:

D'Bitchen

Digoxin or any cardiac medication

Blood and blood products

Insulins or any hypoglycemic

Chemotherapeutics and related anti-cancer drugs

Heparin or any anticoagulant

Electrolytes

Narcotics

Triggering safe actions:

CAB

Assessment of 12 cranial nerves

Discussion Thoughts

What can be done to improve clinical safety in nursing with mnemonics?

Are there areas of safety concern that warrant further research?

What behaviors would you like to see nurses use universally?

What barriers can you anticipate if mnemonics where introduced at your institution?

What is the relationship between mnemonics and check lists

Previous Study: Code Response

Code Blue Mnemonic

Series of components required without task order

ABCD COPI ME

Skills accuracy: 95% skills accuracy increase ($f(6,36) = 41.01$)

Confidence: All scores increased after intervention ($t(6) = 3.51$, $p<.01$)

Previous Study: Chemotherapy

Series of components of a safety mnemonic

CHEMO SAFE and SOUND

Pre-Chemo:

Consent

Health history and health assessment

Evaluation of patient, VS, clinical status, labs, neutropenia

Make sure parent is around

Organize all supplies, double check chemo the road map

Intro-Chemo

Safe administration

Accurately double check all medications

Fluid and electrolytes safe

Ensure patent central line with blood return

Post-Chemo

Symptoms

Observation

Urine

Need for education at home

Drugs needed for discharge: symptom management

Series of steps to organize a response

Mnemonic provided significant findings

Research findings demonstrated a higher level of recall in both information and in-order tasks

Higher confidence *(t-value -9,862, df 41, p,.001)*

Higher skills performance *(85% increase in accurately performed skills as compared to pre-mnemonic intervention)*

Higher knowledge *(insignificant)*

Ideas for Further Mnemonics

Room safety check

Quality

QSEN

Ideas for Further Research:

Hand-Off's

Just Go Nuts! *(*A nutty idea for patient handoffs. *Brief Patient Safe.* 2006;Nov:5-7.)

* Name of patient, diagnosis, room number
* Unusual or unique; variances identified on the individual care plan including critical lab values, pain management, etc.
* Tubes such as IV, NG, catheters, drains, ostomies
* Safety concerns such as falls, medication reconciliation

- ***Pace*** *(*Schroeder SJ., 2006)

Patient/problem

Assessment/actions

Continuing/changes

Evaluation

- ***Pediatric (****Arora, V. & Johnson, J. 2006)*

Problem list

Expected tasks to be done

Diagnostic one-liner

If/then

Administrative data/advanced directives

Therapeutics

Results and other important facts

IV access/invasive devices

Custody and current issues