Clinical Pearls, Memory Aids, Mnemonics, and a Few Smiles

Bryan L. Burke, Jr., MD, FAAP

University of Arkansas for Medical Sciences and Arkansas Children’s Hospital

Disclosures

• I have nothing to disclose.
• I do have some things to confess, but this may not be the appropriate venue...
How People Think is Interesting

• Some doctors expressed confusion over my request for clinical pearls, memory aids, and mnemonics – “I don’t think that way”.
• Some doctors were thrilled to share their favorite ones – “I use them all the time”.
• A good psychologist could probably explain the different thought patterns.
• I fall into the “use them all the time” camp.

Memory – As Time Goes By

• “It is fortunate that our clinical acumen improves in direct proportion to our inability to remember what we just read.”
• From Murray Feingold, MD, Professor of Pediatrics at Boston University and Physician in Chief at the National Birth Defects Center in Boston and the Joseph F. Kennedy Memorial Hospital for Children in Boston.

One Thing to Which Dr. Feingold Could Not Get Accustomed

• “Certain academic types who, although they have never been out in the real world, continually puff on their pipes, stare at the ceiling, and slowly but pedantically pontificate and criticize the physician in practice.”

Dr. Feingold’s Things that Never Change

• “Quoting an article that is poorly documented but agrees with your clinical impression.”
• “Finding fault with the methodology or statistical analysis of an article that does not agree with your clinical impression.”
• “You are more likely to get into trouble clinically when you start feeling too confident about your diagnostic abilities.”
The New Language of Medicine

• Patients are customers or consumers.
• Doctors and nurses are health care providers.
• These words demean patients, doctors, and nurses.
• These words are economic and reductionistic.
• These words endanger the essence of medicine.

The New Language of Medicine

• Customers must rely on caveat emptor – “let the buyer beware”.
• Such a sentiment fosters an adversarial relationship – not one of trust.
• Makes a mockery of the bond between the healer and the sick.
The New Language of Medicine

- Patient derives from patiens, to suffer or bear an affliction.
- Doctor derives from docere, to teach.
- Nurse derives from nutrire, to nurture.
- The new words ignore the essential psychological, spiritual, and humanistic dimensions – the very things that make medicine a calling and not a job.

Hartzband and Groopman, NEJM, October 13, 2011.

“Essentially” – the perfect screen for ignorance

- Question – “How do the lungs sound?”
- Answer – “Essentially, clear.”
- “Essentially” is used medically as a screen for uncertainty.
- The response to “Do you like Razorback football?” would never be “Essentially, yes.”, because both parties would be hearing and speaking English, without obfuscation.

Vital Signs and Thermodynamics

• Patients who are reported to “not have a temperature” violate a basic law of thermodynamics.
• Perhaps equivalent to patients who do not have an elevated temperature.


Patient Presentation Advice

• “When you begin to present the physical examination findings, the first words out of your mouth should be the patient’s vital signs. If they were unimportant, they would be called inconsequential signs.”
• From Thomas Dungan, Pediatric Cardiologist at Arkansas Children’s Hospital, 1977. Advice given to me as a JMS, during a particularly poor patient presentation on my part.
Penicillin Allergy in the First Year of Life

- “Every child less than 1 year old purported to have a penicillin allergy had a case of roseola.”
- From J.O. Cooper, an El Dorado, Arkansas General Pediatrician, early 1960s, as relayed by Dale Dildy MD, an ACH General Pediatrician – 2011.

Dealing with Uncertainty While Making a Difficult Diagnosis

- Always tell the patient “I don’t know the diagnosis... yet.”
- Tells the truth.
- Conveys confidence that the diagnosis will be found.
- Conveys hope – incredibly important.
- From Newt Dildy MD, a Nashville, Arkansas family doctor, early 1960s.
Abbreviation Engendered Confusion

• “Don’t swab a child’s sore throat if the epidemiology and clinical setting are viral.”
• 10% are carriers for Group A Strep so you’ll just be treating folks with a viral pharyngitis.
• The abbreviation in Pen VK (Penicillin V Potassium) – oral penicillin - does not stand for “virus killer”.
• Dan McGee, again.

Hoarseness and Sore Throats

• “Never swab the throat of anyone who is hoarse.”
• Hoarseness and laryngitis are always caused by viruses – never by Group A Strep.
• The patient doesn’t need to come to the office, pay for the visit and the throat swab, pay for the penicillin, and risk Stevens-Johnson syndrome.
• Tom Ed Townsend, General Pediatrician and Arkansas’ Senior Pediatrician, Pine Bluff, Arkansas, 1979.
Keeping Up With the Literature - The Circle of Academic Life

• Med Student – Reads entire article but does not know what any of it means.
• Intern – Uses journal as a pillow during nights on call.
• Resident – Would like to read entire article but eats dinner instead.
• Chief Resident – Skips articles entirely and reads the classifieds.

Keeping Up With the Literature – The Circle of Academic Life

• Junior Attending – Reads and analyzes entire article in order to pimp medical students.
• Senior Attending – Reads abstracts and quotes the literature liberally.
• Research Attending – Reads entire article, reanalyzes statistics, and looks up all references, usually in lieu of sex.
Keeping Up With the Literature – The Circle of Academic Life

• Chief of Service – Reads references to see if he was cited anywhere.
• Private Attending – Doesn’t buy journals but looks for articles that make it into *Time or Newsweek*.
• Emeritus attending – Reads entire article but does not understand what any of it means.

Howard Bennett MD. February 19, 1992 JAMA – A Piece of My Mind.

TAILS for Microcytic Anemia

• Thalassemia
• Anemia of Chronic Disease
• Iron Deficiency
• Lead poisoning
• Sideroblastic anemia
• From Christine Barrett MD, Chief Resident at Arkansas Children’s Hospital, 2011.
PMS & Nephritic/Nephrotic Syndrome with Decreased Complement Levels

- PMS – “You are depressed when you have PMS.”
- Post-streptococcal glomerulonephritis
- Membranoproliferative glomerulonephritis
- Systemic Lupus with nephritis.
- Christine Barrett MD, Chief Resident at Arkansas Children’s Hospital – 2011.

Best Opening Paragraph in a Letter from a Consultant to a Referring MD

- Thank you very much for the referral of ___, indeed a complicated patient who history reminds me of, in its complexity, a young man whom I had the duty of caring for in collaboration with one of the endocrinologists at ___ hospital. He finally said to me “I have decided that if when I die I go to heaven, God will explain ___ to me. On the other hand, if I go to hell, God will make me take care of ___.
- Source cannot be revealed but I still have the 1993 letter – Bryan Burke MD.
The Six “Hypos” of Newborn Metabolic Acidosis

- Hypothermia
- Hypoglycemia
- Hypoxia
- Hypoperfusion
- Hypoantibioticemia
- Hypoenzymosis
- From Robert Arrington MD, Arkansas Children’s Hospital Neonatologist, late 1970s.

The Nine Blood Vessels Involved in a Nuchal Cord

- Umbilical vein, 2 umbilical arteries, 2 external jugular veins, 2 internal jugular veins, and 2 carotid arteries.
- By the way, what is a tight nuchal cord?
- Explanation of the pathophysiology.
- How this explanation helps.
- From Robert Arrington MD, Arkansas Children’s Hospital Neonatologist, 2005.
Acute Treatment of Hypokalemia — “See a Big K Drop”

- Calcium gluconate
- Albuterol
- Bicarbonate
- Insulin
- Glucose
- Kayexelate
- Diuretic (potassium wasting)
- Dialysis

From David Mills MD, General Pediatrician, Medical University of South Carolina, 2011.

“SOAR” to Evaluate Ears

- **See** – can you see the eardrum. Do what is needed to get a good view.
- **Ossicles** – poorly seen the drum is likely bulging. Well seen it’s likely retracted.
- **Air** – if present you know there’s an effusion because air and water are interfacing.
- **Red** – least important. Brilliant red with angry injection? White or yellow due to pus?

Beth Simpson MD, General Pediatrician, Children’s Mercy Hospital in Kansas City, 2011.
SLUBI – the overlooked part of the differential diagnosis

- SLUBI – Self-limited undiagnosed benign illness.
- “Lots of weird things just go away without us ever figuring out what they are. It’s good to have a name for it.”
- Thomas Newman MD, General Pediatrician and Researcher extraordinaire, University of California - San Francisco, 2011.

The Secret of Looking Like a Smart Doctor

- “Be the third doctor to evaluate the child.”
- Generally takes about 2 weeks to get to the third doctor.
- 95% of kids get well by then no matter what you do, so whatever you do you’ll look smart.
- For that other 5%, they’ll develop a rash, cough, fever, bloody diarrhea or something that will lead you to the correct diagnosis - thus you will look smarter than the first 2 docs who saw the child.
The Secret of Looking Like a Smart Doctor

- That’s why we (private practice pediatricians) so frequently look better than the family practice or ER doc from whom the child first sought care.
- That’s why academic centers so frequently look better than pediatricians in private practice – by the time the patient gets there they are either about to get well or so sick you can figure out what they have.
- Tom Ed Townsend, General Pediatrician and Arkansas’ Senior Pediatrician, Pine Bluff Arkansas, mid-1980s.

The Most Underused Diagnostic Tool

- Time. “If the patient is stable, watch the disease’s progress.” In addition...
- “Repeating your H & P always represents a good investment of your time. New symptoms and signs will occur, or the patient may remember something they had forgotten. Nothing else will get you to the right diagnosis as quickly, and you won’t order a bunch of fool expensive tests that won’t help the patient and may harm them.”
- Dr. Townsend, again.
**VITAMINS-P Approach to Decreased Level of Consciousnes**

- Vascular
- Infectious
- Toxins
- Accidents
- Metabolic & Migraine
- Intussusception – 30% have decreased LOC as the first sign.
- Neoplasm
- Syncope and Seizures
- Psychiatric

From an article I can’t find, read many years ago – Bryan Burke.

---

**TMP/SMX Dosing and Shakespeare – Who Says Iambic Pentameter is Dead?**

- The correct dose for liquid TMP/SMX – “One teaspoon twice a day for every ten kilos you weigh”.
- Never more that four teaspoons twice a day, as that equals an adult TMP/SMX-DS tablet.
- Bryan Burke, Junior Medical Student, Arkansas Children’s Hospital, 1977.
CRASH-F: The Diagnostic Secret of Kawasaki Syndrome

- C – Conjunctivitis
- R – Rash
- A – Adenopathy, cervical.
- S – Strawberry tongue.
- H – Hands and feet, swollen and then peeling.
- F – Fever for 5 days.
- From Carrie Drazba MD, General Pediatrician at Rush Children’s Hospital, Chicago, 2011.

Home Delivery and Water Births

- Home Delivery is for pizza.
- Water Births are for whales.
- From Marilyn Escobedo MD, University of Oklahoma Neonatologist, 2011.
- From these two opinions alone I could be convinced to vote for her for President – such common sense is needed in Washington.
Takayasu Disease = Pulseless Disease

- Therefore when you have Takayasu Disease, I can’t Tak’a yu pulse.
- From Dale Alverson MD, Neonatologist at the University of New Mexico – 2011.

Hand & Finger Aid for Cyanotic Heart Disease

- Thumb – one – for truncus arteriosus.
- Two crossed fingers for transposition of the great arteries
- Three fingers for “tri”cupid atresia.
- Four fingers for tetralogy of Fallot.
- Five fingers wiggling along around for total anomalous pulmonary venous return.
- Multiple contributors - the first was Ann Kellams MD, General Pediatrician, University of Virginia.
Secret of Success

• “It’s not your aptitude but your attitude that determines your altitude.”
• Robert Fiser MD, again.

Psychological/Psychiatric Therapy – How to Explain a Touchy Subject

• “I’ve met a few people who needed therapy, but far more that could benefit from therapy.”
• You don’t need therapy (you’re not crazy).
• You could benefit from therapy (a trained empathetic listener to help you sort through your problems).
• Makes some patients open to therapy who otherwise would not be.
• From Christopher Funes MD, Our Lady of the Lake Pediatric Residency, Baton Rouge, LA – 2011. (Most beautiful residency name ever.)
Hematuria Differential - ABCDEFGKIJK

- Anatomic: cysts/tumors
- Bladder: cystitis
- Cancer: Wilms tumor
- Drug: cyclophosphamide
- Exercise induced
- Factitious: Munchausen
- Glomerulonephritis
- Heme: bleeding diathesis or SS disease
- Infection: UTI
- Injury
- Kidney stones or hypercalciuria

Melinda Clark MD, General Pediatrician, Albany Medical Center; Albany, New York – 2011.

Chronic Cough in Infants - CRADLE

- Cystic fibrosis
- Respiratory infections – pertussis, rings, slings, and airway things
- Aspiration – TE fistula, GE reflux, swallowing disorder
- Dyskinetic cilia
- Lung, airway, and vascular malformations, laryngotracheomalacia, vocal cord dysfunction
- Edema – CHF.

Melinda Clark, MD – again.
Fine Motor Development and the Alphabet

• “Children learn to copy geometric patterns in alphabetical order.”
• Circle, Cross, Square, Triangle, and Diamond – until you get to the diamond, which is obviously two triangles.
• From Judith Ann Theriot, MD – Director of the General Pediatric Clinical Research Unit, University of Louisville – 2011.

ADD and Tick-Associated Infections in the SE area of the USA

• “All children with Tick-Associated Infections in the SE area of the United States suffer from ‘ADD’ – Acute Doxycycline Deficiency”.
• From Richard Jacobs MD, Chair of the Department of Pediatrics, Arkansas Children’s Hospital – 2011.
Argyll-Robinson Pupil of Syphilitic Lues

• Like a Lady of the Night – accommodating but not responsive.
• Do you remember what accommodation is?
• Pupillary constriction when focusing on a near object. These pupils constrict with accommodation but not in response to light.
• Stanford Shulman MD, Pediatric Infectious Disease, Northwest University, Chicago, 2011.

Definition of a 2 year old

• A psychotic dwarf with a good prognosis.
• From Lenore Parks MD, General Pediatrician, Wake Forest University School of Medicine – 2011.
NAVEL for Femoral Anatomy

• From lateral to medial: nerve, artery, vein, empty space, lymphatics.
• From Jim Marcin MD, Pediatric Intensivist, University of California at Davis in Sacramento, 2011.

Establishing Rapport with an Angry Teenager

• Ask them whose idea it was to come to clinic.
• Acknowledge they do not want to be there.
• Tell them you’ll get them out as quickly as possible.
• Ask them how they see their parents’ concerns.
• From Gene Shatz MD, Adolescent Medicine, Helen DeVos Children’s Hospital in Grand Rapids, MI – 2011.
DiGeorge Syndrome and CATCH-22

- Congenital heart (Right-sided arch, conotruncal defect, ASD, VSD)
- Abnormal facies
- Thymic absence
- Cleft palate
- Hypocalcemia
- Deletion at 22q
- From Annie Church MD, Chief of General Pediatrics, University of Tennessee at Chattanooga – 2011.

MUDPILES and Increased Anion GAP Acidosis

- Methanol
- Uremia
- Diabetic ketoacidosis
- Paraldehyde and propylene glycol
- Iron,isoniazid, infection, inborn errors of metabolism

Annie Church again, the first of many with this response.
Five P Approach to FTT

- **Peeing** – chronic UTI, RTA, renal damage.
- **Pooping** – CF, Hirschsprung, malabsorption.
- **Pumping** – CHF.
- **Pituitary** – cortisol, growth hormone deficiency, hyper or hypothyroidism.
- **Parenting** – easily the biggest category.
- From Greg Trowbridge, General Pediatrician, Helen DeVos Children’s Hospital – 2011.

NAACPs of Eosinophilia

- **Neoplasm**
- **Allergy**
- **Asthma**
- **Cortisol Deficiency**
- **Parasites**
- From Greg Trowbridge, again.
How to Decide if a Patient is Ready for Discharge

• “I’ve always felt that if you went into a hospital and yelled ‘fire’, anyone who could get up and leave probably didn’t need to be there.”
• Works well even on those less than 12 months old if you imagine they can walk.
• From Tom Ed Townsend, MD, General Pediatrician and Arkansas’ Senior Pediatrician – 1978.

The Secret of Life

• Two twins – one always optimistic and happy, the other always pessimistic and sad.
• Requires more than I can put on a slide, so allow me to tell you the story.
• From Tom Ed Townsend, MD, General Pediatrician and Arkansas’ Senior Pediatrician – the mid 1980s.