Ethically Meeting the Challenges of a Neurological Diagnosis



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Outline

∞What? Case studies:

- ∞ Stroke, Parkinson's disease,
- ∞Frontotemporal, Cerebellar ataxia, Epilepsy

∞So What? Challenges

- ∞Symptoms, implications of diagnosis
- ∞economic and lifestyle changes, loss/reduction of independence

∞Why?

- ∞Ethical questions
- ∞Critical Thinking



Patient History # 1



- ∞ Onset at 65 years of age
 - ∞Right upper extremity resting tremor for 3 years
- **∞ Bradykinesia, slowed gait and stooped posture**
- ∞ Good response to carbidopa/levodopa
- ∞ End of dose wearing off, resolved with addition of entacapone
- ∞ Recent onset swallowing difficulties
- ∞ Depression but no hallucinations



Patient Examination



Mental Status (MMSE)

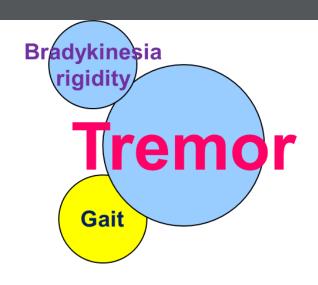
- ∞ Total score 18/30
- ∞ 8/10 orientation
- ∞ 0/5 WORLD backwards and serial 7's
- ∞ 0/3 recall (2/3 with cueing)
- ∞ 7/9 language
 - ∞Could not write a sentence
 - ∞Could not copy design (intersecting pentagons)
- ∞ What is the diagnosis



Typical vs. Atypical PD

∞Typical PD (idiopathic) 70%

- ∞Tremor predominant
- ∞Minimal cognitive changes



∞Atypical PD (symptomatic and PD+ syndromes)

- **∞**Symmetrical
- ∞Gait disability predominant

- Shorter life expectancy





Hoehn and Yahr Staging Severity of PD

Stage I

Tremor, rigidity, or bradykinesia on one side; minimal functional impairment

Stage II

Features of Stage I become bilateral

Stage III

- Bilateral symptoms progress but are still mild to moderate with a mild loss of balance
- Patient can still function independently

Stage IV

- Bilateral symptoms become more severe with significant loss of balance
- Patient requires substantial assistance

Stage V

- Bilateral symptoms are severe
- Patient restricted to a bed or wheelchair



Parkinson's Disease Dementia

∞Readily diagnosable clinical condition

- ∞Develops in the context of established PD
 - ∞Cognitive decline with a typical profile
 - ∞Frequent neuropsychiatric symptoms
 - ∞Functional disability
- ∞Exclusion of other dementias
- **∞Considerable unmet medical need**
- **∞Increased burden for patients and families**



Diagnosis of Mild to Moderate PDD

∞Develops in the context of established PD

- ∞ At least 2 years after a diagnosis of PD
- □ Impairment in more than one cognitive domain
 - ∞ Attention, executive, visuospatial, memory, language
- Decline from premorbid level
- □ Deficits severe enough to impair daily life

∞ Exclusion of other dementias



Differential Diagnosis Between AD and PDD

Diagnosis Considerations	AD	PDD		
Clinical features				
Common presentation	Memory decline	PD features		
Psychotic symptoms	Usually later in disease process	Associated with exposure to PD pharmacotherapy		
Memory decline	Earlier, global, and progressive difficulty in forming memories	Difficulty accessing memories		
Speech impairment	Aphasia, paraphasia	Hypophonia, dysarthria		
PD features				
Tremors at rest	Only late in disease	Present in 75%		
Rigidity	Only late in disease	Common		
Gait abnormality	Late in disease	Early or late in disease		
Response to levodopa	Not applicable	Common		

Weintraub D, et al. Am J Geriatr Psychiatry. 2005;13:844-851.

Ethical Question?

∞Individuals with Parkinson Disease need medication on a schedule

- How do you address in skilled facilities or "hospitals" you have a "window of time"
 before and after scheduled medication where you are "covered".
- ∞Can providers provide a way for patient to self administer medication?
- ∞Is self administration of medications in a "facility" ok?



Patient History #2



- **∞72** year old female
- **∞History of diabetes, hypertension and obese**
- **∞Decreased inability to walk, wheelchair**
- **∞ Depression**
- **∞Frustrated**
- **∞Recent hospitalization**



Patient Examination



∞MMSE (Mental Status)

∞Unable to test

- ∞Able to answer "yes"/ "no" questions w head nod-comprehends questions
- **∞Single words (mostly swear words)**
- **∞Cannot read or write**
- ∞Right hemiplegia
- **∞What is the diagnosis?**



Lacunar Strokes in Basal Gangilia



Figure 26 Coronal brain section (same patient as in Figure 25) showing numerous small lacunes in the heads of both caudate nuclei and in the anterior part of the putamen

Aphasia: Disorder of Declarative Language: Anomia

Туре	Fluency	Comprehension	Repetition
Broca's	0	0	0
Wernicke's	+	0	0
Global	0	0	0
Conduction	+	+	0
Transcortical Motor	0	0	+
Transcortical Sensory	+	0	+
Isolated Speech	0	0	+
Anomic	+	+	+

Vascular Disease/Aprosodias

- Similar to the Aphasias but on the right side of the cerebral hemispheres
- ∞All have problem with gesture like naming for the aphasias
- ∞Problems with expression of feelings (frontal)
- ∞Problems with repeating feeling (frontal-temporal connection)
- ∞Problems with comprehending feeling (temporal)



Ethical Question?

- ∞Individual cannot make needs known with words, but understands and comprehends what is being said.
- ∞Individual also can only use "swear" words when attempting to communicate
- **∞Do you redirect or correct the individual from expressing themselves?**
- **∞Do you keep them isolated so "we" won't be embarrassed by the "words" they are using?**



Patient History #3



- ∞78 year old male
- **∞Car accident 20 years ago**
- **∞History of falls**
- **∞Symptoms are progressively getting worse**
- ∞People accuse him of being "drunk"



Patient Examination



Mental Status (MMSE)

- ∞Total score 29/30
 - ∞10/10 orientation
 - ∞5/5 WORLD backwards and serial 7's
- **∞Postural Tremor**
- **∞Explosive Speech**
- **∞Nystagmus**
- **∞Staggering gait**





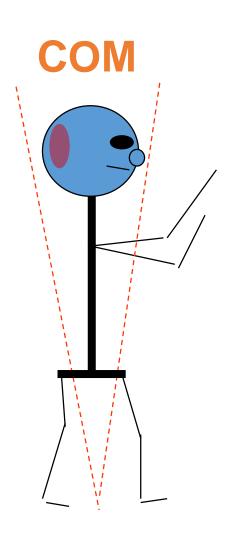
Gait and balance

Sensory input

VESTIBULAR

VISION

SOMATO SENSORY



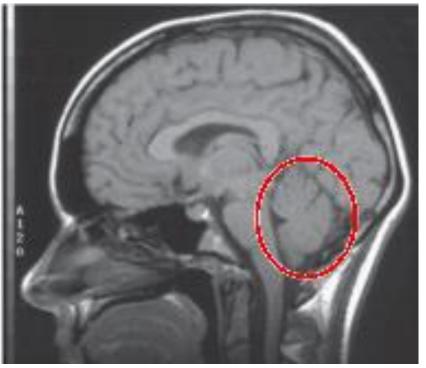
Strategies

HIP

ANKLE STEP

Atrophy vs Normal





Cerebellar Ataxia Cerebellum has atrophied

Normal Cerebellum

Ethical Question

∞Individual looks like they are drunk when they walk and could fall at any time

∞Do you accuse them of drinking?

∞Do you restrict them to a wheelchair because "we" are afraid they might fall even though they would like to walk?



Patient History #4



- ∞80 year old female
- **∞Diagnosed with Alzheimer's 5 years ago**
- **∞Moderate stage Alzheimer's**
- ∞Family describes fainting, "funny" spell, some shaking episodes
- **∞After "episodes" sleeping more**



Patient Exam



∞MMSE- 18/30

- ∞A&O x2
- ∞0/5 WORLD backwards and serial 7's
- **∞Decrease ADLs**
- ∞Periods of staring off into space during exam
- **∞Becomes sleepy**
- **∞Difficulty communicating verbally**
- **∞Cannot cooperate to have EEG**
- **∞What is the diagnosis?**



Epilepsy/Seizures in AD/dementia

- ∞Elderly patients @ higher risk of seizures than younger people
- ∞ Dementia patients @ even higher risk than non demented individuals of same age
- **∞Seizures are very hard to diagnosis**
 - ∞Due to problems with communication and cognition
 - ∞One test of whether had seizure is check their memory of events



Epilepsy/Seizures in AD/dementia

- ∞Alzheimer's disease 10%-22% risk of 1 unprovoked seizure in late stage
- ∞Can be treated but with caution!
- ∞Treatment should be done by psychiatrist or neurologist

Important: You have to think of seizures to make the diagnosis!!!



Ethical Question

- ∞Alzheimer's is advancing now they are having seizures
- ∞ Do you treat the epilepsy?
- **∞Do you restrict activities?**



Patient History #5



- ∞ 65 year old white male
- **∞Work deterioration**
- ∞Emotional outburst
- **∞Inappropriate comments**
- **∞Spending excess money from phone solicitors**
- ∞No reported "medical" changes



Patient Exam



Mental Status (MMSE)

- **∞28/30**
- **∞Orientation 10/10**
- ∞ 3/3 registration and recall
- **∞Clock drawing impaired**
- ∞Profound dis-inhibition
- **∞Impaired Luria maneuver**



Notice that the areas circled in red have less white area compared with the other areas. This indicates loss of brain tissue (atrophy). right Frontotemporal left Dementia (FTD) back front Semantic Dementia right (SD) right Progressive Non-Fluent Aphasia (PNFA) right

Picture courtesy of Anne M. Lipton, M.D., Ph.D



Ethical Question

- ∞Memory in individual is not affected, impulsivity is...
- ∞Do you place individual on a locked unit if they have not been declared "incompetent" without their consent?
- ∞ Do you restrict the individual's activities for fear of what they might say?



Receiving the Diagnosis

∞Both patient and caregiver may not be able to hear or understand the diagnosis

- ∞Cognitive impairment
- ∞ Denial
- ∞Family is afraid of the negative impact of diagnosis
- ∞Economic and emotional implications may be overwhelming



Medical Issues For Neurological Patients (ABC's)

∞ Decreased activities of daily living (A)

- Decrease ability to function
- ∞ Loss of Independence

∞Change in behavior (B)

- ∞ Emotional reactions to illness
- ∞ Depression
- ∞ Psychosis
- ∞ Chronic pain

∞Changes in cognition (C)

∞ Dementia



Life Challenges Patient and Family

- ∞ Developing symptoms
- ∞ Receiving the diagnosis
- **∞ Starting medications**
- **∞ Considering and having surgery**
- ∞ Loosing a job
- **∞ Stopping driving**
- **∞ Giving up independent living**
- ∞ Facing end of life issues



Conclusion

- **∞Challenging**
- **∞Understanding of diagnosis**
- **∞Ethical issues**
- **∞Critical thinking**
- **∞Communication**



Resources Parkinson Disease

- **∞Dallas Area Parkinsonism Society: daps.us**
- ∞Parkinson Foundation: <u>www.parkinson.org</u>
- ∞Michael J. Fox: <u>www.michaeljfox.org</u>
- **∞LSVT Global:** <u>www.lsvt.org</u>
- **∞Look in your area for local support groups**



Resources Stroke

- **∞National Stroke Association:** <u>www.stroke.org</u>
- **∞National Institutes of Health: <u>www.stroke.nih.gov</u>**
- **∞American Stroke Association:** www.strokeassociation.org



Resources Frontotemporal Dementia

- ∞FTD Caregiver Support Center: <u>www.ftdsupport.com</u>
- **∞Association for Frontotemporal Dementia:** <u>www.theaftd.org</u>
- **∞The National Institues of Health: <u>www.nih.gov</u>**



Resources: Cerebellar Ataxia

- ∞Mayo Clinic: <u>www.maycoclinic.com</u>
- **∞Third Age:** <u>www.thirdage.com</u>
- **∞The National Institutes of Health:**

www.raredisease.info.nih.gov/cerebellar_ataxia



Resources: Epilepsy/Seizures

- **∞Alzheimer's Association: www.alz.org**
- **∞Epilepsy Foundation:** <u>www.epilepsyfoundation.org</u>
- **∞American Epilepsy Society: <u>www.aesnet.org</u>**
- **∞Local support groups either for epilepsy or Alzheimer's**



Bibliography

- ∞Mittelman MS, et al. *Neurology*. 2006;67:1592-1599.
- ∞Mendez M, Lim G, Drugs Aging. 2003;20(11):791-803
- **∞Clinicaltrials.gov**



THANK YOU!



"When Sugar Isn't So Sweet: Diabetes in Older Adults"

Texas Health Presbyterian Hospital Dallas
NICHE (Geriatric) Department
Stephanie Lindsey, MSN, APRN, AGNP-B







Statistics

- Diabetes disproportionately affects older adults.
- Approximately 25% of Americans over the age of 60 years have diabetes.
- Although the burden of diabetes is often described in terms of its impact on working-aged adults, the disease also affects longevity, functional status, and risk of institutionalization for older patients.



Objectives

- Define Diabetes
- Hyperglycemia
- Hypoglycemia
- Negative Outcomes of Diabetes



- Eating Healthy
- Resources
- Summary





Opening Question

 Does anyone in the room know someone with Diabetes or have Diabetes?





Define Diabetes

 A disease that affects your body's ability to produce or use insulin.





Type I Diabetes

- Type I-your pancreas does not produce insulin
 - "Juvenile diabetes" often diagnosed in children or teens
 - accounts for 5-10 of cases
 - Older adults can develop Type I Diabetes in later life
- Symptoms present suddenly
 - Weight loss, constant thirst and urination, and nausea
- Correct diagnosis with insulin therapy immediately!



Type II Diabetes

- Type II-when the body does not produce enough insulin, or when the cells are unable to use insulin properly, which is called insulin resistance.
 - "Adult onset", generally after the age of 45
 - 90-95 percent of people with diabetes have this type
 - Prevalence increases steadily as more people live longer and grow heavier



Gestational Diabetes

- Pregnant women with prediabetes or insulin resistance are at increased risk for Gestational Diabetes.
- Gestational diabetes usually goes away after

pregnancy





Cause

- Cause of diabetes is unknown
- Possible causes
 - Genetics
 - Diet
 - Obesity
 - Lack of exercise may play a role in developing diabetes, especially Type II diabetes.





Signs of Diabetes in the Older Adult

- Extreme thirst
- Frequent urination
- Blurry vision
- Extreme hunger or poor appetite
- Increased tiredness
- Unusual weight loss
- Delirium or Confusion





Hyperglycemia

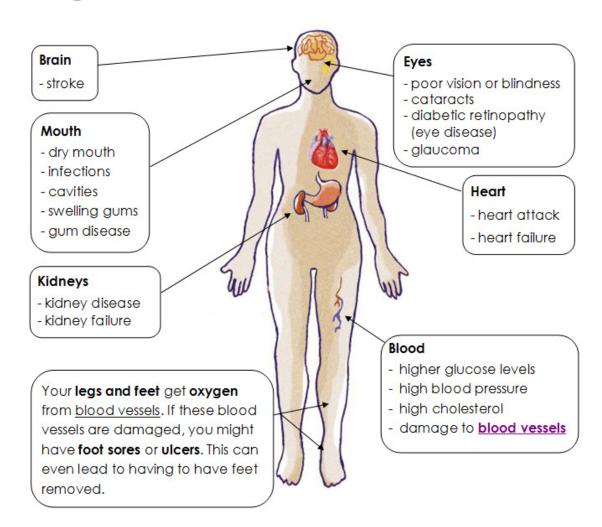
- Polyphagia (frequently hungry)
- Polyuria (frequently urinating)
- Polydipsia (frequently thirsty)
- Blurred vision
- Fatigue and weight loss
- Poor wound healing (cuts, scrapes, etc.)
- Dry mouth and dry or itchy skin
- Impotence (male)
- Recurrent infections such as vaginal yeast infections, groin rash, or external ear infections (swimmers ear)

Hypoglycemia

- At a glucose level < 50 mg/dL the patient is usually symptomatic
- Sweating, shakiness, tachycardia, anxiety, and a sensation of hunger
- Weakness, tiredness, or dizziness; inappropriate behavior (sometimes mistaken for inebriation), difficulty with concentration; confusion; blurred vision; and, in extreme cases, coma and death



Negative Outcomes of Diabetes





Barriers to effective management

- Cognitive dysfunction
- Depression
- Physical disabilities
- Polypharmacy
- Complex insulin regimens
- Fluctuations in their glucose levels
- Fixed income





Barriers-Physical Disabilities

- Deconditioning
 - Inability to cook, shop, or prepare meals
 - Unsafe driving to appointments
 - Inability to exercise
 - Weakness related poor muscle strength, coupled with diabetic neuropathy is dangerous
- Vision Impairment
 - Inability to read insulin or see pills
 - Blurred vision misunderstood for diabetic neuropathy

Barriers-Fixed Income

- Most seniors are on Medicare and Supplemental Insurance for prescription coverage (\$650)
- According to U.S. Census Bureau the median household income for Dallas seniors is \$34,405. It includes the average social security benefit of \$15,763/year and the average retirement income of \$23,096/year.
- The cost of healthy eating is slightly more costly



Barriers-Fluctuations in Glucose Levels

- Acute infections or exacerbation of heart disease or other chronic diseases
- Falls or deconditioning
- Illness or death in the family, caregiver stress of aging spouse
- Infections (Pneumonia and urinary tract infections)



Barriers-Cognitive Impairment

- Poor decision making
 - Difficulty managing medications
 - Difficulty planning meals
- Poor appetite
- Inability to remember if one has eaten





Target Range for Older Adults

- Weigh the risk of hypoglycemia with the benefits of tighter glycemic control
- Avoiding hypoglycemia dizziness or weakness increases the risk of falls and serious injury
- Avoid high blood glucose levels dehydration, poor wound healing, urinary incontinence, and hyperglycemic hyperosmolar coma.



So what does that mean in #'S???

- 7% to 7.5% for elders with type 2 diabetes who don't have major comorbidities
 - fasting glucoses should be between 140 and 150 mg/d
- Medication-treated frail older adults with life expectancy less than 10 years
 - fasting glucoses should be between 160 and 170 mg/dL
- For frail (or elderly) patients the recommend an A1c range of 7.6% to 8.5%
 - estimated average glucose of 200 mg/dL is acceptable



Know your Medications

Type I Diabetes Medications

- Short-acting insulin
 - Regular
- Rapid-acting insulins
 - Novolog
- Long-acting insulins
 - Lantus and Levemir
- Combination insulins
 - NovoLog Mix 70/30 (insulin aspart protamine-insulin aspart)

Type II Diabetes Medications

- Metformin (Glucophage)
- Glipizide (Glucotrol)
- Metformin-sitagliptin (Janumet)
- Saxagliptin (Onglyza)
- Liraglutide (Victoza)
- Canagliflozin (Invokana)
- Glimepiride (Amaryl)
- Pioglitazone (Actos)



Eating Healthy

- Carbohydrate conscious
- Meal preparation planning
- Low in sugar (including sugar from fruit) and saturated fats
- Protein-Rich Foods and Fat
- Full-fat dairy products
- Sprinkling a little sugar on foods
 - For older adults with poor appetite



Lifestyle Modifications

- Eat as healthy as possible
- Exercise as able
- Ask provider if Cholesterol therapy is warranted
- Reduce or abstain from tobacco
- Stress Management
- Infection prevention



Support Resources

- Family and Church
- Meals on Wheels
- Chronic Disease Management Support Groups
- Primary care providers
- http://www.diabetes.org
- Certified Diabetes Educator(CDE) to supplement a physician's care



Summary

- Define Diabetes
- List signs and symptoms of Hypo/Hyperglycemia
- List negative outcomes
- List barriers for the older adult
- Identify healthy foods
- Resources



Reference (s)

Codella, R., Terruzzi, I., & Luzi, L. (2017). Sugars, exercise and health. *Journal Of Affective Disorders*, 22476-86. doi:10.1016/j.jad.2016.10.035

http://www.diabetes.org

- Kuan Y, Huang K, Lin C, Hu C, Kao C. Effects of metformin exposure on neurodegenerative diseases in elderly patients with type 2 diabetes mellitus. *Progress In Neuro Psychopharmacology & Biological Psychiatry* [serial online]. October 15, 2017;79:77-83. Available from: Academic Search Complete, Ipswich, MA. Accessed October 6, 2017
- Rivas-Urbina, A., Benitez, S., Perez, A., & Sanchez-Quesada, J. L. (2018). Modified low-density lipoproteins as biomarkers in diabetes and metabolic syndrome. *Frontiers In Bioscience (Landmark Edition)*, 231220-1240.
- Soffer, M. D., Factor, S. H., Rosenman, A., Levy, C., & Stone, J. (2017). Improving postpartum glucose monitoring in women with gestational diabetes. *Journal Of Maternal-Fetal &Neonatal Medicine*, 30(24), 3014-3019. doi:10.1080/14767058.2016.1271411



Questions





PAIN MANAGEMENT AND THE OPIOID CRISIS DALLAS AREA GERONTOLOGICAL SOCIETY ANNUAL FALL FORUM 2017

Alexander Peralta, M.D., HMDC, DABHPM
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Harold Simmons Inpatient Center at
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Pain Management and the Opioid Crisis

OBJECTIVES:

- Describe national guidelines and define pharmacological basis of opiates used in pain management
- 2. Identify major categories of pain
- 3. Provide signs, symptoms of Substance Use Disorder
- 4. Discuss general principles of treatment of patients with SUD



Palliative Care Definition

- The goal of palliative care is to prevent and relieve suffering and to support the best possible quality of life for patients and their families, regardless of the stage of the disease or the need for other therapies. Palliative care is both a philosophy of care and an organized, highly structured system for delivering care. Palliative care expands traditional disease-model medical treatments to include the goals of enhancing quality of life for patient and family, optimizing function, helping with decision-making and providing opportunities for personal growth. As such, it can be delivered concurrently with life-prolonging care or as the main focus of care.
 - National Census Project for Quality Palliative Care. Executive Summary, Clinical Practice Guidelines for Quality Palliative Care, Jour of Palliative Medicine, 2004.



Hospice and Palliative Medicine

 Palliative care is operationalized through effective management of pain and other distressing symptoms, while incorporating psychosocial and spiritual care with consideration of patient/family needs, preferences, values, beliefs, and culture. Evaluation and treatment should be comprehensive and patientcentered with a focus on the central role of the family unit in decision making. Palliative care affirms life by supporting the patient and family's goals for the future, including their hopes for cure or life-prolongation, as well as their hopes for peace and dignity throughout the course of illness, the dying process, and death.



Hospice and Palliative Medicine

Palliative care aims to guide and assist the patient and family in making decisions that enable them to work toward their goals during whatever time they have remaining. Comprehensive palliative care services often require the expertise of various providers to adequately assess and treat the complex needs of seriously ill patients and their families. Leadership, collaboration, coordination, and communication are key elements for effective integration of these disciplines and services (NCP 2004).



National Consensus Project - Clinical Practice Guidelines for Quality Palliative Care

GOALS:

- Facilitate the development and continuing improvement of clinical Palliative care programs providing care to patients and families with life-threatening and debilitating illness.
- Establish uniformly accepted definitions of the essential elements in palliative care that promote quality, consistency, and reliability of these services.
- Establish national goals for access to quality palliative care.
- Foster performance measurement and quality improvement initiatives in palliative care services.
- Foster continuity of palliative care across settings (home, residential care, hospital, hospice).
 - National Census Project for Quality Palliative Care. Executive Summary, Clinical Practice Guidelines for Quality Palliative Care, Jour of Palliative Medicine, 2004



Domains of Quality Palliative Care

- Structure and Process of Care
- Physical Aspects of Care
- Psychological and Psychiatric Aspects of Care
- Social Aspects of Care
- Spiritual, Religious and Existential Aspects of Care
- Cultural Aspects of Care
- Care of the Imminently Dying Patient
- Ethical and Legal Aspects of Care.
 - National Census Project for Quality Palliative Care. Executive Summary, Clinical Practice Guidelines for Quality Palliative Care, Jour of Palliative Medicine, 2004



Patients at Risk for Pain

- Cancer
- Non-cancer illness:
 - Dementia
 - Cardiovascular disease
 - Pulmonary disease
 - Neurological disease: stroke, ALS, MS, Muscular Dystrophy, mentally impaired
 - End Stage Organ Disease: Renal, Liver
 - -AIDS
 - Osteoarthritis, RA, Vertebral Compression Fx.
 - Congenital Anomalies Trisomy's, SMA, Leukodystrophies, Sickle Cell Disease, etc.

Barriers to Pain Management

PATIENT

- "Wimp"
- Fear of adverse drug effects/events
- Fear of addiction
- Other illness or disease/pathology
- Knowledge deficit

CAREGIVER

- Knowledge deficit
- Fear of opioids
- -Legal pressure
- -Pain as a "symptom"
- Fear of addiction
- -PRN



Receptor affinity of opioid analgesics

Receptor Type:	<u>mu</u>	kappa	delta	<u>NMDAI</u>
Morphine	Α	-	-	-
Fentanyl	Α	-	_	-
Hydromorphone	Α	-	_	-
oxycodone	Α	A(?)	_	-
methadone	Α	-	Α	Α
pentazocine	_	Α	_	_
Stadol, Nubain	-	Α	-	-
Ketamine	A(?)	-	A(?)	Α
Dextromethorphan	A(?)	-	A(?)	Α

A=strong agonist -= negligible. modified by A. Peralta from Twycross R et al. *Palliative Care Formulary*. 1998.

Definitions of Pain

- "...an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage." I.A.S.P.
 - Merskey H (Ed.). Classification of chronic pain: Description of chronic pain syndromes and definitions of pain terms. *Pain* 1986; Suppl 3:S217.
- Pain is what the experiencing person says it is, existing whenever he or she says it does."
 - Margo McCaffery, RN, Pioneer in Pain Management



Definitions of Pain

- Acute Pain usually follows injury to the body and disappears when the injury heals. Often, but not always, associated with autonomic nervous system stimulation, i.e., tachycardia, hypertension, diaphoresis, mydriasis and pallor. It is rarely justified to defer analgesia until a diagnosis is made.
 - Pace S, Burke TF. IV morphine for early pain relief in patients with acute abdominal pain.
 Acad Emerg Med 1996; 3:1086-1092
- Cancer Pain may be acute, chronic or intermittent, and usually has a definable cause, i.e., tumor progression or treatment.

Definitions of Pain

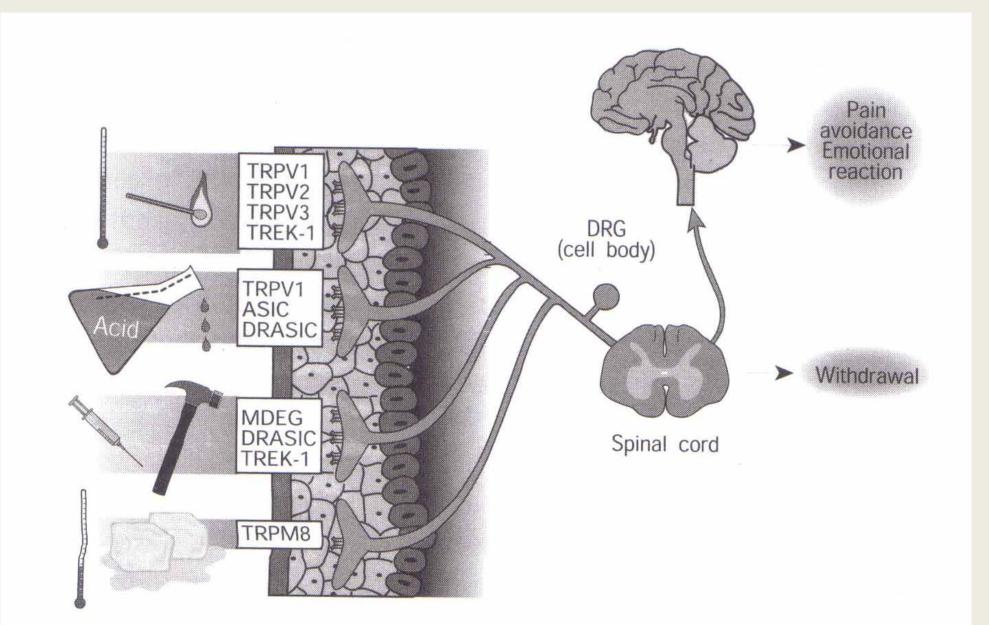
- Chronic Pain is rarely accompanied with signs of sympathetic stimulation. It is important to address all domains of suffering in treating chronic pain: physical, social, psychological, spiritual. Acute pain may be superimposed over chronic pain causing a crescendo/ decrescendo clinical picture. Lack of objective signs of chronic pain may cause the inexperienced clinician to discount the patient's level of pain.
 - Modified from Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain.
 American Pain Society 1999;4th ed.:4.
- Chronic pain may be accompanied by: anxiety, hostility, loneliness, depression, insomnia, anorexia, frustration, anger, and/or suicidal ideation.

Major Categories of Pain

- Nociceptive CNS and peripheral afferent pathways modulated via spinal cord (dorsal horn)
 - Somatic aching, constant, localized e.g., musculoskeletal
 - Visceral sharp, crescendo/decrescendo, e.g., cholecystitis, renal stones, intestinal obstruction, MI
- Neuropathic ischemia, destruction or encroachment of nerve by disease or tumor
 - paroxysmal shooting or shock-like pain on a background of burning, aching sensation

Major Categories of Pain

- Inflammatory response to tissue damage that potentiate pain.
 - Proinflammatory mediators -→ peripheral sensitization
 - Phenotypic switch
 - Central sensitization
- Soft tissue pain pressure ulcers, burns
- Intracranial pressure pain brain tumor edema and hemorrhage



Nociceptive Pain

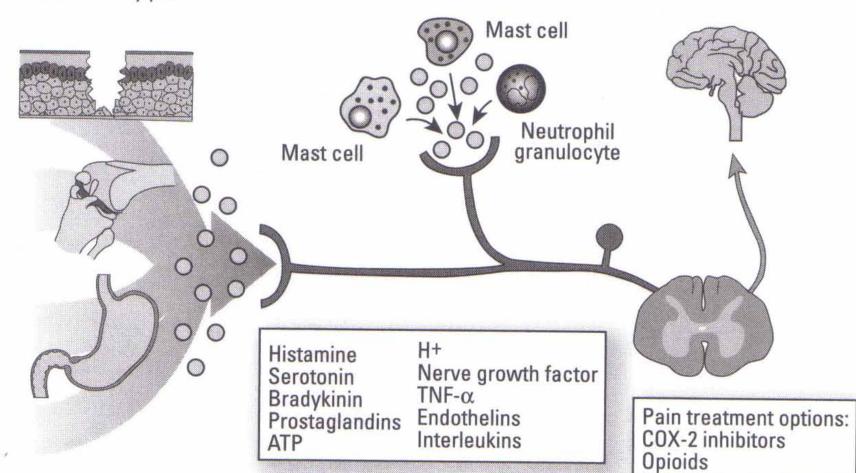
- Thermal (Heat sensitive) receptors to afferent pathways
 - -TRPV1 Transient Receptor Potential channel Vanilloid 1
 - -TRPV2 Transient Receptor Potential channel Vanilloid 2
 - -TRPV3 Transient Receptor Potential channel Vanilloid 3
 - TREK-1 Heat-activated background K+ channel
- Acid sensitive receptors to afferent pathways
 - TRPV1 Transient Receptor Potential channel Vanilloid 1
 - -ASIC Acid-Sensing Ion Channel
 - -DRASIC Doral Root Acid-sensing Ion Channel subtype
 - Samad TA. New Understanding of the Link between Acute Pain and Chronic Pain: Can We Prevent Long-Term Sequelae? From The Spectrum of Pain, Carr DB;Dec 2004:16-27.



Nociceptive Pain

- Mechanical receptors to afferent pathways
 - MDEG Mammalian neuronal Degenerin ion channel
 - DRASIC- Dorsal Root Acid-Sensing Ion Channel subtype
 - TREK-1 Heat-activated background K+ channel
- Thermal receptors (cold sensitive) to afferent pathways
 - TRPM8 Long Transient Receptor Potential channel
 Melastatin

Inflammatory pain



Types of Neuropathic Pain

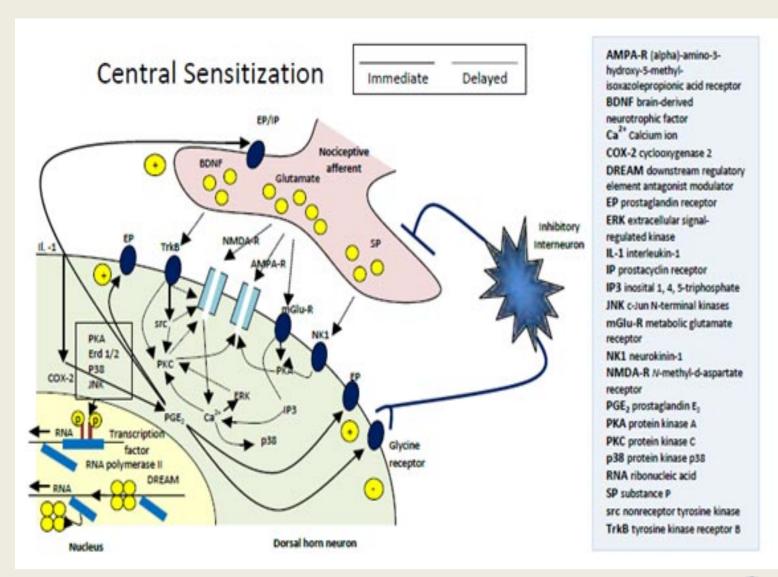
- Deafferentation- Phantom-type pain usually localized numbness, tingling or burning sensation
- Dysesthesia (continuous) an unpleasant abnormal sensation produced by a normal stimulus, e.g., constant burning of the hand due to malignant brachial plexopathy
- Allodynia Pain resulting from a non-noxious stimulus to normal skin, e.g., pain on light touch or placement of clothing
 - Thermal allodynia
 - Mechanical allodynia
 - Chemical allodynia



Neuropathic Pain

- Peripheral Sensitization → central sensitization → prolonged central sensitization → CNS aberrations → chronic pain.
- The sustained input from peripheral neurons ->
 inhibitory interneuron death
- Inhibitory interneuron are replaced by new afferent excitatory neurons → aberrant excitatory synaptic connections (spasticity)
- These structural changes → fixed sensitization
 → neuropathic pain (commonly) which is unresponsive to most analgesic medications







Opioid Crisis

Opioid Addiction

- Opioids are a class of drugs that include the illicit drug heroin as well as the licit prescription pain relievers oxycodone, hydrocodone, codeine, morphine, fentanyl and others.
- Opioids are chemically related and interact with opioid receptors on nerve cells in the brain and nervous system to produce pleasurable effects and relieve pain.1
- Addiction is a primary, chronic and relapsing brain disease characterized by an individual pathologically pursuing reward and/or relief by substance use and other behaviors.
- Of the 20.5 million Americans 12 or older that had a substance use disorder in 2015, 2
- million had a substance use disorder involving prescription pain relievers and 591,000 had a substance use disorder involving heroin.
- It is estimated that 23% of individuals who use heroin develop opioid addiction.

Opioid Crisis

- National Opioid Overdose Epidemic
- Drug overdose is the leading cause of accidental death in the US, with 52,404 lethal drug overdoses in 2015. Opioid addiction is driving this epidemic, with 20,101 overdose deaths related to prescription pain relievers, and 12,990 overdose deaths related to heroin in 2015.
- From 1999 to 2008, overdose death rates, sales and substance use disorder treatment admissions related to prescription pain relievers increased in parallel. The overdose death rate in 2008 was nearly four times the 1999 rate; sales of prescription pain relievers has increased exponentially.
- More than 70 persons die of opioid overdose daily.



Drugs involved in overdose death – USA 2016

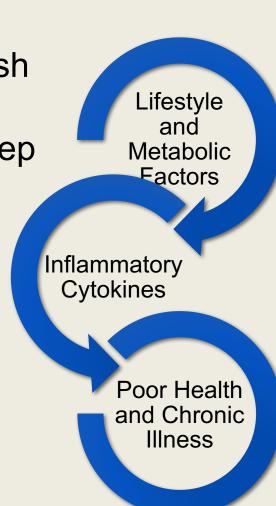
- 1. Synthetic opioids 20, 145 or 2.30 deaths per hour
- 2. Heroine 15, 446 or 1.76 deaths per hour
- 3. Natural and semi-synthetic 14,427 or 1.65 deaths per hour
- 4. Cocaine 10,619 or 1.21 deaths per hour
- 5. Methamphetamine 7, 663 or 0.87 deaths per hour
- 6. Methadone 3,314 or 0.378 deaths per hour
- Total deaths = 71, 614 or 8.17 death per hour or 204.25 per day

National Center for Health Statistics; Center for Disease Control and Prevention CDC WONDER 2016



Challenges in chronic pain management

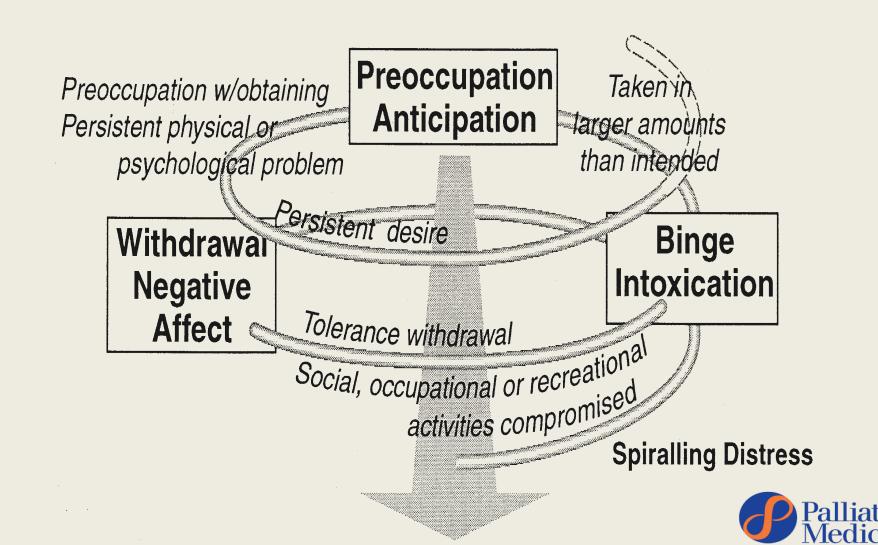
- Fatigue
- Midday Energy Crash
- Insomnia
- Lack of Enough Sleep
- Abdominal fat
- Weight Gain
- Body Aches
- Acute pain
- Foggy Headed
- Short Term
- Memory



- Anxiety
- Depression
- Hopelessness
- Constantly Worried
- Feeling Overcommitted
- Apathy
- Flat Affect
- Burn Out
- Compassion Fatigue Syndrome
- Cravings



Criteria for Substance Dependence (DSM-IV)



Addiction

Definition of drug addiction

 Drug addiction is a chronically relapsing disorder that is defined by two major characteristics: a compulsion to take the drug with a narrowing of the behavioral repertoire toward excessive drug intake, and a loss of control in limiting intake (American Psychiatric Association 1994; World Health Organization 1992).

 Koob GF, Le Moal M. Drug Addiction, Dysregulation of Reward, and Allostasis. Pubs. Elsevier Science Inc. Neuropsychopharmacology.2001; 24:97-129.

Definition of drug addiction

 Drug addiction is not a static phenomenon, and as with other bio-behavioral dysregulation, such as compulsive gambling and binge eating, there are different components that constitute a cycle or circle of evergrowing pathology (Baumeister et al. 1994). Derived from social psychology and conceptualized as sources of self-regulation failures, the addiction cycle has been described as having three components: preoccupationanticipation, binge-intoxication, and withdrawal-negative affect (Koob and Le Moal 1997).



Stress Factor

 A state of stress is associated with various external and internal challenges to the body and brain, usually termed stressors, and the construct of stress may represent the extreme pathological continuum of overactivation of the normal activational (arousal) or emotional systems of the body (Hennessy and Levine 1979). Such arousal-activational mechanisms trigger biological and behavioral strategies of coping and control that mobilize many organismic and central nervous system mechanisms, whose failure leads to illness (McEwen 1998a; Schulkin et al. 1994; Sterling and Eyer 1981).

Homeostasis

•Homeostasis, in principle, corresponds to the mechanism that maintain stability within the physiological systems and hold all the parameters of the organisms internal milieu within limits that allow an organism to survive (Bernard 1865; Cannon and Rosenblueth 1933; Sterling and Eyer 1988).



ALLOSTASIS

Involves the whole brain and body instead of simply local feedbacks, is far more complex than homeostasis. All parameters of a given domain (e.g., blood pressure, or in the central nervous system reward function) are controlled by numerous mutually interacting signals. When demands become chronic, the brain-body system tonically adapts at essentially all levels of organization implying wide-spread changes in set points, and entry into a relaxed condition may create an unpleasant state of withdrawal from one's physiological regulation.

 Koob GF, Le Moal M. Drug Addiction, Dysregulation of Reward, and Allostasis. Pubs. Elsevier Science Inc. Neuropsychopharmacology. 2001; 24:97-129.

ALLOSTASIS

Such changes in hormones, opioids, transmitters, and so on, provide a physiological basis for the individual to continue to seek a condition of high demand (Sterling and Eyer 1988), and a stabilized new level of activity far from homeostatic equilibrium. However, when chronic arousal, repeated stress and negative affective states impose prolonged regulations far from normality, there is no margin left for responding to additional challenges, no opportunity for relaxation, and no capacity for more responsiveness.



Pseudoaddiction

- Pseudoaddiction is when a patient has not been adequately titrated to the necessary level of opioids to relieve her pain or a drug-seeking behavior that simulates true addiction, which occurs in patients with pain who are receiving inadequate pain medication.
 - Segen's Medical Dictionary. © 2012 Farlex



Substance Abuse Challenges

- The American Society of for Addition Medicine (ASAM) issued the "Four C's" as useful criteria to emphasize the psychological characteristics of Rx medication abuse.
 - -Loss of Control over the use of medications
 - Compulsive use of medications
 - -Continued use despite harm
 - Cravings for drugs
 - Olsen Y, Alford DP. Chronic Pain Management in Patients With Substance Use Disorders. John Hopkins Advance Studies in Medicine, March 2006;6(3):111-122.

Risks, Signs and Symptoms of Substance Use Disorder - DSM-5: SUD

Pain Control	 Longer periods and larger amounts Failure to reduce use Excessive time Cravings
Social impairment	5. Problems with work/school/family6. Interpersonal problems7. Decreases in social/recreational activities
Risky Use	8. Repeated use dangerous situations9. Worsening physical/psychological problems
Tolerance	10. Increased amount for same desired effect
Withdrawal	11. Response to abrupt cessation
Note: must meet ≥ 2 of three criteria to	be diagnosed with SUD
Severity: Mild = 2-3 Moderate = 4-6 American Psychiatric Association, <i>Diagnostic and</i> American Psychiatric Publishing, Inc.;2013.Hasin DS	Severe = \geq 6 symptoms Statistical Manual of Mental Disorders. Fifth Edition. Arlington, VA et al. Am J Psychiatry. 2013;170(8):834-851

FDA Approved Pharmacotherapies

- Opiate overdose: intranasal naloxone
- Opiate-relapse prevention: Methadone, naltrexone, buprenorphine
- Mechanisms:
 - Methadone full Mu opioid agonist, involves crosstolerance with high doses
 - Naltrexone blocks Mu opioid receptor and blocks euphoria
 - Buprenorphine partial opioid agonist, Blocks euphoria at high doses



Naloxone administered by Non-medical Persons to Prevent Opiate Overdose Deaths

- Auto-injector
 - Take-home, hand-held, single use
 - Has visual and voice instructions for he user to give this injection
 - Available without a prescription in some states
 - To obtain a supply of naloxone : StopOverdose.org
 - Cost approximately \$100.00
- Intranasal
 - Easier
 - Cost approximately \$37.50

Maxwell S, et al. J Addict Dis 2006.25(3):89-96

US Food and Drug Administration . www.accessdata.fda.gov/scripts/cder/drugsatfda

General Principles of Treatment

- Psychotherapy Maximize non-pharmacological strategies:
 - Enhance self-efficacy
 - Decrease helplessness and dependency
 - Enhance coping strategies
- Prevention of Relapse:
 - Avoid high-risk situations
 - Anticipate minor relapses
 - Recover from relapses
 - Identify triggers

Centre for Addiction and Mental Health. 9.2 Relapse prevention of substance use problems 2012



Pharmacotherapy: New Tools for Addictions

- Long-acting depot medications
 - -Depot naltrexone: Opiates or alcohol

- Partial agonists
 - -Buprenorphine: Opiates

OPRM 1= opioid receptor Mu1 gen. Hulse GK. British Jour Clin Pharmacol. 2013;76(5):632-641



Substance Abuse Challenges

- Prevalence of chronic pain in addicted populations
- Under treatment of chronic pain in patients with substance use disorders
 - Patient-level factors
 - -Physician-level factors
 - -System-level factors



Substance Abuse Challenges

- Treatment considerations for chronic pain in patients with substance use disorders
 - -Trust in the patient-physician relationship
 - -Goals of treatment and the interdisciplinary team
- Treatment options for chronic pain in patients with substance use disorders
 - Non-pharmacologic therapies
 - Physical therapy with McKenzie Methodology
 - Acupuncture
 - TENS
 - Massage therapy, hydrotherapy, yoga- breathing exercises
 - Cognitive-behavior therapies including spiritual nourishment
 - Pharmacologic therapies

Substance Abuse Challenges

- Monitoring for and response to aberrant drugtaking behavior (instead of drug-seeking)
- Assessing response to therapy
 - -Analgesia (pain relief)
 - -ADL (psychological functioning)
 - -Adverse effects
 - Aberrant drug-taking behavior
- Use of contracts/agreements
- Use of toxicology testing
- Pill count
- Differential Dx of aberrant drug-taking behavior

Risk factors for aberrant drug-taking behavior:

- -Multiple MVA as the driver
- -Family history of substance abuse
- -History of legal problems
- Nicotine dependence
- -High opioid doses
- -Fewer side effects from opioids
- -Mental health disorders
- -History of previous or active substance abuse

Risk factors for aberrant drug-taking behavior:

- Many medical disorders
- Younger age
- -Untreated pain
- Prior history of opioid detoxification
- History of termination or limited care from multiple physicians/dentists
- Personal belief of own addiction
- -History of childhood sexual abuse
- -Unwillingness to sign an opioid agreement

Dr. Carl Jung 1930 lecture

 He stated that it is a tragedy in our part of the world that developmental tasks of the second half of life seem unknown to most people. We lead our lives with the erroneous apprehension that continuing with the tasks of the first half of life is all there is. As a consequence, many of us meet our death as half-developed individuals, exhibiting signs of depression, despair, fear of death, and disgust with ourselves and others, together with feeling that life has been uncompleted or wasted. Jung implies that other cultures might be better aware of the special developmental tasks of the second half of life.

Integrative Modalities

- Touch therapy
- Music thanatology harps, drumming, etc
- Reflexology
- Hypnosis
- Meditation mind and therapeutic touch – Reiki
- Chinese herbalist pharmacognosy
- Massage therapy

- Literature prose and poems
- Yoga breathing exercising, Tai Chi
- Dance thanatology
- Synchronicity connectivity
- Mandala symbolism
- Sand therapy and sand play



Ethical Issues in Palliative Medicine

•As medical professionals we must be cognizant that our clinical clarity in treating diseases sometimes becomes absent when caring for patients receiving palliative and hospice care; therefore, we must be willing to accept the uncertainty in the dynamic care of patients and consistently focus on providing comfort both physically and psycho-spiritually.



Healing and Spiritually

- Healing is a state of mind when our body, mind and spirit are in harmony with our most inner self. We call this an epiphany - the oneness of self. Where deep touches deep and oneness flourishes. Developing the practice of healing and letting the healing in is paramount. Stephen Levine - Healing into Life and Death
- Spiritually could how we philosophically orient ourselves in nostalgic and practical ways to an unseen order.
 Modified by Alexander Peralta MD
 - Juan Lorenzo Hinojosa, PhD, Theologian, paraphrased from Varieties of Religious Experiences
 by William James







Working Together as a Community: Preventing Readmissions

Thursday, October 19, 2017 3:00pm – 4:00pm







TMF Quality Innovation Network Quality Improvement Organization

Coordination of Care and Medication Safety Project





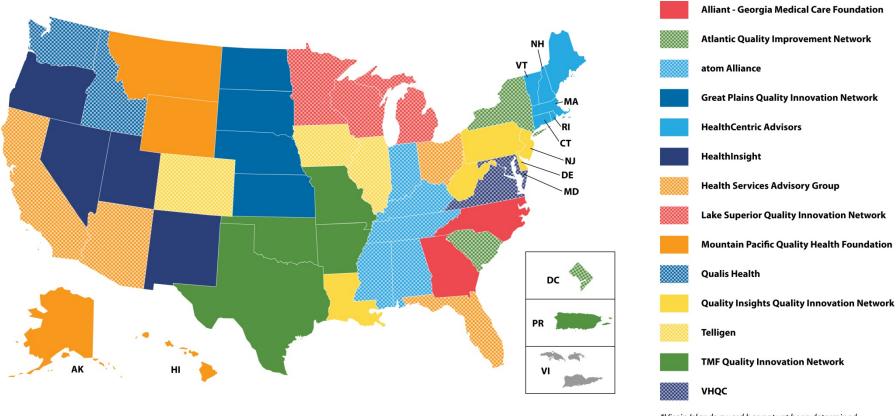


About TMF QIN

- TMF Health Quality Institute focuses on improving lives by improving the quality of health care through contracts with federal, state and local governments, as well as private organizations.
- For nearly 40 years, TMF has helped health care providers and practitioners in a variety of settings improve care for their patients.
- We provide quality improvement services in these states: Arkansas, Missouri, Oklahoma, Puerto Rico and Texas.



11th SOW QIN-QIO Map



^{*}Virgin Islands award has not yet been determined



What is a QIO? Quality Improvement Organization

A Quality Improvement Organization (QIO) is a group of health quality experts, clinicians, and consumers organized to improve the quality of care delivered to people with Medicare.



Okay...So What Does That Mean?

CMS identifies the core functions of the QIO Program as:

Improving quality of care for beneficiaries

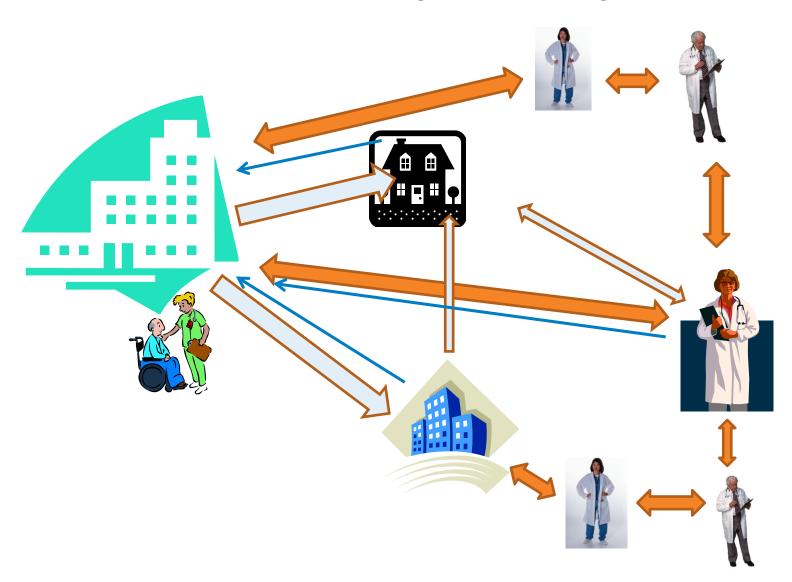
 Ensuring that Medicare pays only for services and goods that are reasonable and necessary



Readmissions Network

- Reduce hospital readmission rates in the Medicare program by 20 percent
- Reduce hospital admission rates in the Medicare program by 20 percent
- Increase community tenure by increasing the number of days spent at home by Medicare Fee-for-Service (FFS) beneficiaries by 10 percent
- Reduce the prevalence of adverse drug events, emergency department visits and observation stays or readmissions occurring as a result of the care transitions process

It's Not a Hospital Project









Roll Call

- Acute Care (Hospitals)
- Skilled Nursing Facilities
- Long Term Acute Care
- Home Health
- Hospice
- Home Care
- Dialysis Centers
- Senior Independent/Assisted Living
- Physicians/NP/PA (Providers)
- United Way/AAA/NCOG
- Dallas/Fort Worth Hospital Council
- Seniors Blue Book (Communication)
- Meals on Wheels/GA Foods/Abbott
- University/Medical School Programs

- Churches/Religious Not-for-Profits
- Community Partners/Stakeholders
 - Senior Source
- Acute Care Pharmacy
- Community Pharmacy
- Infusion
- Accountable Care Organizations (ACO)
- HIIN
 - > DFWHC HIIN
 - > Premier
 - Vizient

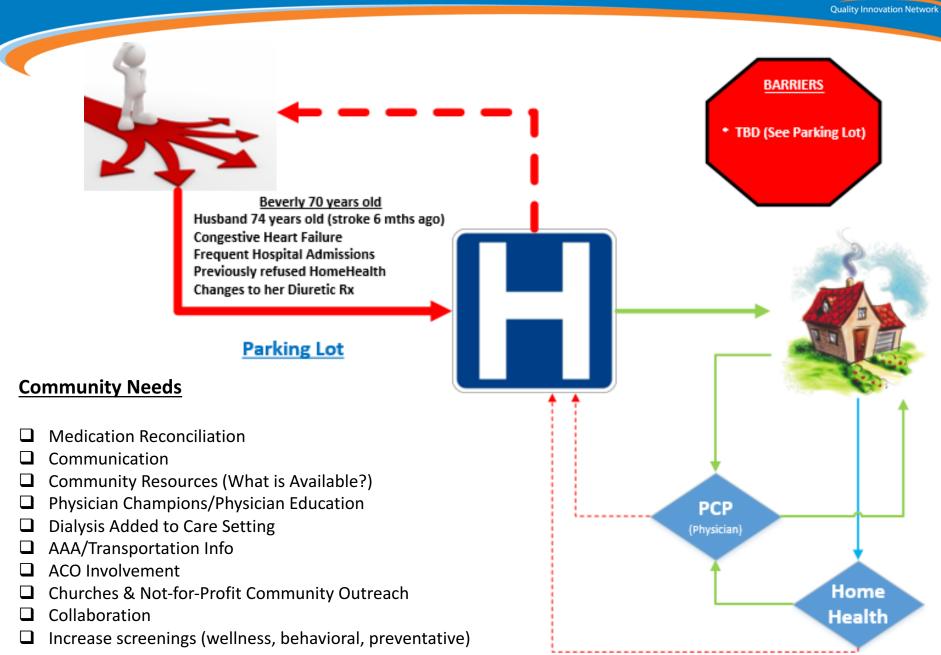


What Can Dallas Do?

Care coordination is "the deliberate integration of patient care activities between two or more participants involved in a patient's care to facilitate the appropriate delivery of health care services."





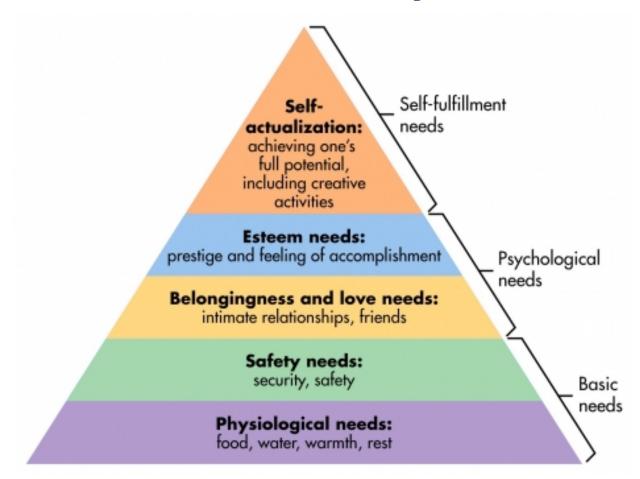




PATIENT-CENTERED CARE



Maslow's Hierarchy of Needs

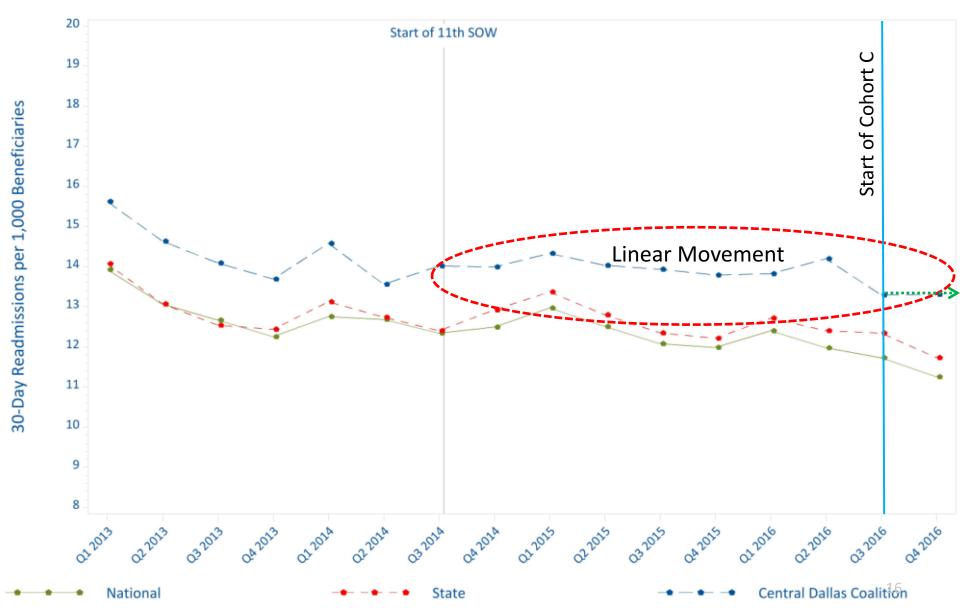




Data:

National Scorecard
QIN (5 State Region)
State
Community
Provider

Texas
Central Dallas Coalition
Quarterly 30-Day Readmissions per 1,000 Beneficiaries





Central Dallas Readmission Rates by Provider Type

	Setting	Number of Discharges	% of All Discharges	30-day Readmits	Rate of 30-day Readmits
	Home Health Agency	1,011	15.1%	172	17.0%
	Home	3,588	53.6%	720	20.1%
	Hospices	239	3.6%	11	4.6%
Your Community	Inpatient Rehabilitation Facility	389	5.8%	64	16.5%
	Long-Term Acute Care	234	3.5%	31	13.3%
	Nursing Home	1,233	18.4%	241	19.6%
	All	6,694	100.0%	1,239	18.5%

Source: Medicare FFS Claims. Time Period: 05/01/2016 – 07/31/2016

Why Post-Acute Care is an Important Part of the Evolving Healthcare Marketplace

Demographics and Demand for Post-Acute Services are Growing

- Aging Demographics
- Post-Acute Utilization is increasing
- Increasing Incidence of Chronic Disease
- Imperative to get Patients Home more quickly and to Coordinate Delivery of Care Through a Full Episode

Post-Acute Care is a Critical Part of Quality Improvement and Patient-Centered Care

- Patient Satisfaction
- Quality and Clinical Outcomes
- Care Coordination across Sites of Care
- Reduce Hospital Readmissions

Post-Acute Care
Can Help Reduce
Costs in a
Rapidly Changing
Payment
Environment

- Value-Based Purchasing
- Readmission Penalties
- Episodic / Bundled Payment
- "Accountable Care" and Risk Payments



Central Dallas Community Top Five MS DRGs and Their 30-Day Inpatient Readmission Rates

	DRG Code	DRG Description	Number of Discharges	30-day Readmits	Rate of 30-day Readmits
		Septicemia or severe sepsis	2.6		20.20/
	871	w/o mv >96 hours w mcc	362	73	20.2%
	292	Heart failure & shock w cc	163	45	27.6%
Your Community	291	Heart failure & shock w mcc	151	41	27.2%
	682	Renal failure w mcc	123	32	26.0%
		Misc. disorders of nutrition,			
		metabolism,			
	640	fluids/electrolytes w mcc	89	30	33.7%

Source: Medicare FFS Claims. Time Period: 05/01/2016 – 07/31/2016



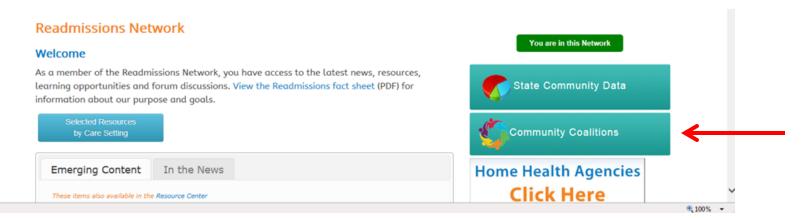
Introducing Coalition Pages

- Your coalition now has a designated web page for peer-to-peer sharing.
- Visit these pages for the following:
 - > Updates on meetings
 - Uploaded presentations from meetings
 - Shared resources discussed in meetings
 - Resource sharing from peers



Where to Find the Coalition Pages

- Log in to <u>www.tmfqin.org</u> and locate the Readmissions Network page (join this network if you haven't already).
- Select "Community Coalitions"





Care Coordination Community Coalition Meeting

Central Dallas Area

The patient is at the center.
 All improvers welcome.
 Everyone teaches and learns.

Help the community reduce avoidable readmissions and join the Regional Cross-Setting Care Transitions Meeting

When:

Wednesday, Nov. 15, 2017 1-3 p.m. CT

Where:

Texas Health Presbyterian Hospital—Dallas Fogelson Auditorium 8200 Walnut Hill Lane Dallas, Texas, 75231

Please see page 2 for the campus map.

Who:

Hospital Leadership, Case Management, Care Coordination, Quality, Emergency Department, Discharge, Pharmacy, Physicians, Skilled Nursing, Home Health, Hospice, Dialysis, Inpatient Rehabilitation Facilities, Long-Term Acute Care, Behavioral Facilities, EMS/Fire, Other Stakeholders

RSVP:

Click Here to Register

Registration is preferred but not required.

For more information, contact: Joshua Cartwright, CQIA, CPHQ Quality Improvement Consultant TMF Quality Innovation Network Joshua.Cartwright@area-b.hcqis.org 972-834-7662

Quality Improvement



www.TMFQIN.org • 1-866-493-6863

- Welcome: Host, Texas Health Resources
- Introductions: Central Dallas Coalition
- Speaker: Janelle Shepard, MBA, BSN, RN-BC Topic: Medicare Spending Per Beneficiary
- TMF QIN Community Roundtable, Looking Forward
- Guest Speaker: Dallas/Fort Worth Hospital Council Topic: Post-Acute Program Introduction

Next Meeting: Wednesday, Feb. 14, 2018 1-3 p.m. CT

Location: TBD

Speakers:

- Kathy Tillman Option Care, Infusion
- Kathy Shockley, MA, LNHA, Alzheimer's Association of Greater Dallas

The agenda is subject to change.

Community Collaboration

Quarterly Coalition Meetings:

- Central Dallas & South Dallas
- www.TMFQIN.org

Care Specific Affinity Calls:

- Home Health
- Home Care
- **Skilled Nursing Facilities**
- Long-term Acute Care Facilities/Inpatient Rehab Facilities

Email: Joshua.Cartwright@area-b.hcqis.org for more information



Create an Account



Network Membership

Create an Account

- Step 1: Log in with your existing account or create a free account now.
- Step 2: Join any or all of the networks below if you have not already.
- Step 3: Visit each individual Network page to view its resources.
- Optional Step 4: Change your preferred language to Puerto Rican Spanish. See "Access Puerto Rican Spanish" below./Cambie su idioma preferido a español de Puerto Rico. Vea "Acceso a español de Puerto Rico" abajo.

The networks below offer health care providers and stakeholders an opportunity to collaborate to accomplish better care, better health and more affordable care through quality improvement. Click on a network name to learn more about what it offers, or view a full list of our network resources.

The Networks section of the site is available to members only. If you do not have an account, you may create a new account. If you are a registered user, please log in with your existing account and then join the networks below.

Benefits of participation include connecting and collaborating with others in your field and sharing knowledge through forums, listservs and educational events. You will have access to tools and resources specific to each network, as well as easy event registration

Access to Puerto Rican Spanish/Acceso a español de Puerto Rico

1C	count Lo	gin
	OG IN o	or create a free account to gain access to
Us	ername:	
Pas	ssword:	
	Logir	
	Did you	forget your password?
	Reset Pas	ssword



Questions?



For More Information

DFW QIC - Joshua Cartwright, CQIA, CPHQ <u>Joshua.Cartwright@area-b.hcqis.org</u>

Phone: 972-834-7662



https://www.linkedin.com/in/joshua-cartwright-cqia-cphq-83207798/



