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**Standardizing Preventive Care for
Hypertension**

Olga Felton RN, MSN, NCM
John Kern MD, CMO
Regional Mental Health Center
Northwest Indiana

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About the Speaker

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John Kern, MD is Chief Medical Officer at Regional Mental Health Center where he has worked since 1989. He is responsible for all medical services, all intensive psychiatric, addictions and emergency programs, and directs all integrated and primary care programs. He supervises a Behavioral Health Consultant program providing service to partner FQHC, Northshore Health Systems.

He received his bachelor's degree in psychology from University of Michigan in 1980, MD from Wayne State University School of Medicine in 1985, and completed residency at the Department of Psychiatry and Behavioral Sciences at Northwestern University Medical School in 1989. He has been board-certified by the American Board of Psychiatry and Neurology since 1991.

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Olga Felton, BSN, RN, HN-BC is Supervising Nurse Care Manager, coordinating and overseeing all clinical and reporting operations of the PBHCI grant. Felton has more than 30 years nursing experience in clinical, managerial and executive leadership positions, including critical care, home health and hospice, hospital-based wellness, and multi-site operations. She is an adjunct instructor in Purdue University's Nursing Department teaching online "Holistic Health Stress Management," and has published an online course in *Nursing Outlook* on complementary therapies.

Felton received an associate's degree in nursing from Purdue University in 1981, a bachelor's degree in nursing from Excelsior College (Albany, NY) in 2005, and is completing a master's degree in nursing from St. Joseph's College of Maine.

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Objectives

- State primary, secondary, tertiary preventive care for hypertension
- Identify standardized guide for screening and treating hypertension
- Identify nursing diagnosis applicable to treatment planning for care of hypertensive client

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Who we are

John Kern MD, CMO, Project Director

Olga Felton RN, MSN, Supervising NCM

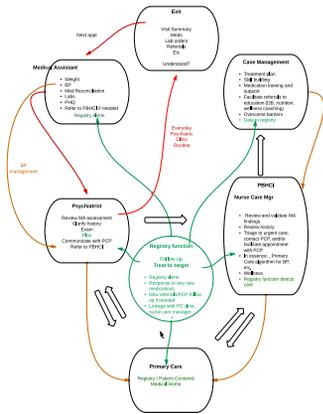
PBHCI Cohort 2 Grantee

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Goal: Preventive Care for Hypertension

Primary: Prevent disease, health education

Secondary: Screen for unknown cases, prevent disease from worsening, identify comorbidities, begin early treatment

Tertiary: Prevent worsening, treat comorbidities, medical management

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Why is this topic important to us?

Regional PBHCI Clients

N = > 615, Target 720

Elevated baseline BP: 50.4%

Elevated baseline BMI: 85.3%

Elevated baseline Glucose: 43.8%

Elevated baseline Triglycerides: 43.7%

* TRAC PBHCI Services Outcomes Measures 09-12-13

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Barriers

- Blood pressure variances and fluctuations
- Difficulty in obtaining accurate blood pressure
- Lack of formalized procedures
- Knowledge deficit of staff and clients
- Need for staff education

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What is Blood Pressure?

- Blood pressure = force of blood pushed against artery, measured in mm Hg (mercury)
- Systolic = pressure exerted during heart beat
- Diastolic = pressure while heart relaxes
- BP written as Systolic/Diastolic, i.e. 120/80

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Treat to Target Goal < 130/90

| BP Classification | Systolic | Diastolic | Lifestyle Modifications | Thiazide diuretic, ACEI, ARB, BB, CCB or combination |
|----------------------|----------|-----------|-------------------------|---|
| Normal | <120 | and <80 | Encourage | |
| Pre-hypertension | 120-139 | or 80-89 | Yes | No, but treat compelling indications (chronic kidney disease, diabetes) |
| Stage 1 Hypertension | 140-159 | or 90-99 | Yes | Yes, and treat compelling indications |
| Stage 2 Hypertension | ≥160 | or ≥100 | Yes | Yes, and treat compelling indications |

* Adapted from JNC7 Express NHI Publication No. 03-5233 December 2003

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What is the blood pressure...Really?

- Mercury vs. aneroid manual vs. electronic
- Technical errors: position, cuff size, deflation rate
- Clinic vs. self-monitor vs. continuous monitor
- Special populations and circumstances (elderly, infants and children, obesity, exercise)

Reference:
[Gwendolyn Ogedegbe, MD](#) and [Thomas Pickering, MD, DPH](#)
Principles and techniques of blood pressure measurement,
Cardiol. Clin. 2010 November; 28(4): 571-586.
 doi: 10.1016/j.ccl.2010.07.006

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Other factors affecting blood pressure

| Factor | Magnitude Systolic/diastolic |
|-----------------------------|------------------------------|
| Talking or active listening | 10/10 |
| Distended bladder | 15/10 |
| Cuff over clothing | 5-50/unknown |
| Smoking within 30 minutes | 6-20/unknown |
| Back unsupported | 6-10/unknown |
| Arm unsupported (sitting) | 1-7/5-11 |

Reference: Wisconsin Department of Health Services
 Division of Public Health
<http://dhs.wisconsin.gov/health/cardiovascular>

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Manual Blood Pressure

Skills involved

- Auditory/auscultatory
- Visual
- Palpation/tactile
- Fine Motor
- Cognitive
- Critical thinking



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Sphygmomanometer



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Case Example: White Coat Effect

- Elevated blood pressure in office
- Anxiety
- Hyperactive alerting response
- Conditioned response to medical environment

- Discussion

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Case Example: It's Just Anxiety!

Elevated blood pressure in office
+ anxiety
= late or no treatment

Discussion

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Case Example: Clinical Inertia

“Failure of healthcare providers to initiate or intensify therapy when indicated”.

- Lag time in translation and incorporation of clinical guidelines into practice

Reference:
Dario Giugliano, MD, PhD; Katherine Esposito, MD, PhD
Clinical Inertia as a Clinical Safeguard
JAMA. 2011;305(15):1591-1592. doi:10.1001/jama.2011.490

Discussion

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So...what do we do?

1. Medical Assistant: Ht/Wt/BMI, BP, medication reconciliation, labs, PHQ, Refer to PBHCI if needed
2. Psychiatrist: Review MA assessment and meds, communicate w/PCP, Refer to PBHCI if needed
3. Exit: MA or PBHCI, review orders
4. Case Manage: RX Plan, facilitate referrals
5. RN Care Manage: Validate findings, review history, triage to urgent care, PCP and/or lifestyle modifications

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BP Management Guidelines

| BP Classification | SBP | DBP | Care Management (Validate blood pressure, then triage) |
|---|---------|----------|--|
| Normal (Primary Prev.) | <120 | <80 | Health education |
| Pre-hypertension (Secondary Prevention) | 120-139 | or 80-89 | Assess for other risk factors PCP for compelling indications Diabetes ed./Lifestyle modifications Medication training/skill building |
| Stage 1 hypertension (Tertiary Prevention) | 140-159 | or 90-99 | Assess for other risk factors PCP for med management w/in 2 weeks Diabetes ed./Lifestyle modifications Medication training/skill building |
| Stage 2 hypertension | >160 | or >100 | Urgent care/PCP w/in 24 hours PBHCI follow up w/in 7-10 days |

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Successes

- Staff Training in Manual Technique
- Increased awareness of blood pressure goals

- Improved from Baseline:
 - BP: 20.5%
 - BMI: 49.7%
 - Glucose: 47.9%
 - Triglycerides: 55.2%

*TRAC PBHCI Services Outcomes Measures 09-12-13

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Lessons-learned

- Blood pressure is like a moving target!
- Need multiple measurements and validate findings
- Blood pressure measurement a complex skill set
- Ongoing training and experience needed

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Tips

Use available resources (Wisconsin DOH Toolkit)
Provide staff training, equipment, experience (teaching stethoscope)



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Nursing Diagnoses/Treatment Planning

Nursing DX:
Ineffective health maintenance r/t lack of information of disease evidenced by elevated BP.
Goal: Client will manage BP effectively.

Objectives: Target blood pressure 130/90 within 1 month.

Interventions

- Case management
- Skill build
- Medication training/support

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Discussion and Q&A

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