

Creating Evidence-Based Clinical Guidelines to Impact Patient Outcomes and Student Education

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Project Health Link: HRSA Nursing Education, Practice and Retention (NEPR) initiative:

Under Establishing or expanding nursing practice arrangements in non-institutional settings to demonstrate methods to improve access to primary health care in medically underserved communities.

Objectives of HRSA Grant

- (1) Establish a formal partnership between Partnership Health Center and VSU College of Nursing;
- (2) Expand primary health care services to employed, uninsured adults from two to five days a week through a faculty practice plan;
- (3) **Expand opportunities for the acquisition of clinical skills in the delivery of primary health care services to adults among graduate and undergraduate nursing students;**
- (4) ***Implement an evidence-based practice model of care in a primary care center;***
- (5) Evaluate the impact of the expanded nursing infrastructure through Health Link and present these findings in local, regional and national forums.

Objective Four

- **Implementation of an evidence-based practice model of care in a primary care center.**

Review of Literature

- Results (in a nutshell): The use of evidence-based clinical guidelines and protocols are shown to improve patient satisfaction as well as increase treatment/management of disease consistency among health care providers.
- Barriers to the use of clinical guidelines exist including:
 - reluctance on the provider's part,
 - access to evidence at the point of care,
 - a lack of involvement in the project
 - lack of communication of projects that were completed

Methods for Incorporating EBP

- **Gawlinski & Rutledge (2008).**
 - Develop a group to champion the EBP process.
 - Group should review models by using specific criteria,
 - Summarize the strengths and weaknesses of the models

Frameworks and Models

- Several exist, most require a need for some type of clinical change
- Reviewed several Models (Stetler's Model of Research Utilization; Clinical Practice Guideline Implementation Model; The Johns Hopkins Nursing Evidence-Based Practice Model and Guidelines), Iowa Model.

Iowa Model of Research-Based Practice to Promote Quality Care (1994; 2001)

- Decision making algorithm to guide nurses in using research findings to improve the quality of care.
- Concept of "triggers" for EBP



Iowa Model of Research-Based Practice to Promote Quality Care

1. Knowledge Focused Triggers:
 - a. Literature
 - b. National clinical guidelines exist
2. Topic is a priority for the organization
3. Form a team
4. Assemble relevant literature
5. Critique & synthesize research for use in practice
6. Is there a sufficient research base? (Yes)
7. Plot the change in practice
8. If appropriate, adopt in practice

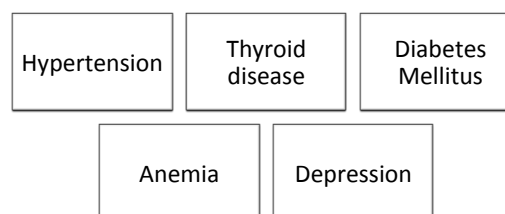
Form a Team

- Nurse Practitioners
 - Dr. Brenda Dyal
 - Dr. Maria Whyte
- Medical Director/Collaborating Physician
 - Dr. Lynn Feldman
- Grant PI
 - Dr. Jean Temple
- Team met and determined first step would be to identify appropriate EBP guidelines for implementation

Process

- Issues/problems which were identified and were reviewed for how best to address each issue include:
 1. Various background and experience levels of individual volunteer providers.
 2. High turnover rate of volunteer providers.
 3. Individual volunteer providers' willingness to "buy in" to the use of protocols
 4. Development of provider orientation for current and new volunteers and the method of delivery of orientation so as to be as convenient as possible to meet the various needs of individual volunteer providers.

Top Five Diagnosis based on Chart Review



Evidence-Based Guidelines: Hypertension

- The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) Hypertension diagnosis and treatment. 1995 Jun (revised 2010 Nov). NGC:008194 Institute for Clinical Systems Improvement - Nonprofit Organization.
- Hypertension evidence-based nutrition practice guideline. 1998 (revised 2008 Apr). NGC:006619 Academy of Nutrition and Dietetics - Professional Association.
- Medical management of adults with hypertension. 2003 Aug (revised 2011 Aug). NGC:008742 Michigan Quality Improvement Consortium - Professional Association

Guidelines.....

- Essential hypertension. 1997 (revised 2009 Feb). NGC:007260 University of Michigan Health System - Academic Institution.
- Adapting your practice: treatment and recommendations for homeless patients with hypertension, hyperlipidemia & heart failure. 2004 (revised 2009 Dec). NGC:007679 Health Care for the Homeless (HCH) Clinician's Network - Medical Specialty Society; National Health Care for the Homeless Council, Inc. - Nonprofit Organization.
- Dietary guidelines for Americans, 2010. 2005 (revised 2010 Dec). NGC: 008657 Department of Agriculture (U.S.) - Federal Government Agency [U.S.]; Department of Health and Human Services (U.S.) - Federal Government Agency [U.S.].
- Many, many more.....

Georgia Department of Public Health. Office of Nursing

- The Office of Nursing principally provides leadership in the following three areas:
 - Practice; Workforce Development, and Quality Assurance/Quality Improvement
 - Under Practice:
 - Standard Nurse Protocols for over 125 diseases and health conditions
 - Standard Protocols for Biological and Chemical Agents
 - Practice Guidelines for LPNs, RNs and Nurse Practitioners
 - Consistency with the Georgia Nurse Practice Act and the Board of Nursing Rules and Regulations
 - Evidence-based approach

Hypertension Protocol

- Used Georgia Public Health Nurse Protocol for Hypertension as starting point.
- Adapted the protocol to fit ARNP practice (diagnosis, and management of condition, including providing prescription medications).
- Evidence-Based Protocol was drafted and sent to Medical Advisory Committee for review.
- After revision, protocol was adopted for use at PHC.
- Criteria for patient referral to ER established.

Medical Advisory Committee (Original)

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|--|---|
| <ul style="list-style-type: none"> ▪ APRN <ul style="list-style-type: none"> ▪ Brenda Dyal, APRN, ▪ Maria Whyte, APRN, ▪ Barbara Pearce, APRN ▪ PA <ul style="list-style-type: none"> ▪ Landis Coffee, PA ▪ MD <ul style="list-style-type: none"> ▪ John Anderson, MD ▪ Gerald Light, MD ▪ Lynn Feldman, MD, medical director of PHC & Collaborating MD | <ul style="list-style-type: none"> ▪ RN <ul style="list-style-type: none"> ▪ Donna Nolan, RN, MPH, Interim Director of Nurses, ▪ Ex officio <ul style="list-style-type: none"> ▪ VSU: Jean Temple, RN, Project Director of HRSA Project Health Link grant ▪ Clinic Administrator: Johnna Hicks |
|--|---|

Current MAC

- | | |
|--|---|
| <ul style="list-style-type: none"> ▪ APRN <ul style="list-style-type: none"> Brenda Dyal, APRN Denise M. Atkinson, APRN Fran Youmans Joan Scoggins, APRN Maria D. Whyte, APRN ▪ Pharmacist <ul style="list-style-type: none"> Chandler Conner, PharmD ▪ MD <ul style="list-style-type: none"> William Grow, MD Leon Meeks, MD William Gee, MD | <ul style="list-style-type: none"> ▪ RN <ul style="list-style-type: none"> Carol Morgan, RN ▪ Administration <ul style="list-style-type: none"> John Sparks, PHC Administrator Barbara Nelson, Clinic Director |
|--|---|

Policy & Procedure

- Policy regarding the development and use of evidence-based guidelines consistent with best practices has been adopted at PHC.
- Manual was developed to house current evidence-based clinical guidelines kept in provider area.
 - Currently available in Documents on EHR
- Evidence-based clinical practice guideline development is an ongoing, collaborative process, and the HTN guidelines is reviewed annually to assure that it is standardized and consistent with current evidence-based practice

Recommendations & Dissemination of Work

- Evaluation of use of protocol by providers.
 - Who is using the protocol?
 - Policy for parameters for ER referral is adhered to by PHC clinicians and staff
- Opportunity for interprofessional collaboration in development of guidelines.
- Incorporate EBP guidelines into new EHR system.
- Set homepage on computers in each exam room to the National Guidelines Clearinghouse at: <http://guideline.gov/browse/by-topic.aspx>
- Podium presentation at NONPF.

Impact

Impact: Clinic

- Electronic Health Records
- Policy
- Procedure
- Economic Impact

Impact: Clinic: Electronic Health Record

- For years 1 & 2 the EHR was not impacted by protocols.
- At the end of year 3 & year 4 several things impacted the integration into the EHR
 - New EHR
 - New E prescribing software
 - Providers knowledge
 - Meaningful Use
 - Interprofessional documentation

Impact: Clinic: Policy

Impact: Clinic: Economics

- Nurse Hours
- Clinic Staff
- Volunteers
- InKind
- Donations



Impact: Clients

- MedBank
- Economics has increased requests for lower cost medications
- Effective medications becoming generic.
- Experienced improved Health Status
 - Improves adherence to medication

Impact: Clients

- Health Literacy
 - Improved in areas
 - Not improved in others



Impact: Students

- Supportive environment
 - Complex clients
 - Able to apply known evidence in an environment not influenced by pharmaceutical representatives and SWAG.
 - Time to Coach
 - Preceptor/faculty support

Impact: Students

- AGNP students experience EBP translated into clinical practice




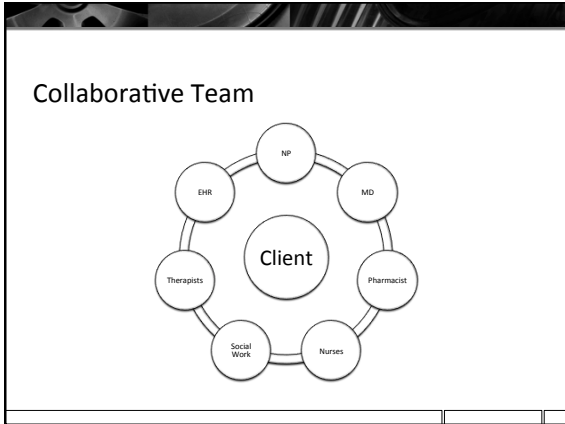
Impact: Student

- Actual interprofessional practice
 - Athletic training/Exercise physiology
 - Marriage and family therapy
 - Social Work
 - Physician Assistants
 - Business students
 - Future
 - Residents
 - Medical Students



Impact: Student

- Develop Professional role
 - Mentoring
 - Service

Impact: Students

- Evidence-based clinical guideline development provides opportunity for NP project topics.
 - Asthma Action Plan
 - Diabetes Education Needs
 - Assessment of the use of the MedBank program

Impact: Students

- Current projects
 - Evaluation of the Hope Clinic (designed to reduce DM ER visits)
 - Comparison of medications prescribed through MedBank vs. generics for treatment of HTN (comparing adherence and reduced BP readings at follow up)—student is expecting to find that patient's whose medications come passively are more adherent than those who must actively seek medication.
 - Update of HTN Protocol. NP students reviewed the literature for updates to management and treatment of HTN; include drugs in the ARB classification on the list of medications (as now have generic option). Updates to MedBank list to include in protocol. Suggested changes were reviewed by a pharmacist and nutritionist; currently the protocol is under review by MAC.
 - Evaluate documentation for Cervical Cancer Screening
 - Initiation of Dental Screening Protocol

Impact: Faculty

- Practice
- Mentor/Mentee
- Scholarship
 - Presentations
 - Research



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