Team-Based Management of Hypertension in the Primary Care Clinic & Hypertension Medication Management

Barriers to adherence

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About the patient Clinical Coordinator
Disclosure

- Brown Speaker Bureau: Association of Asthma Educators
- Dr. Pipestone has no relationships to disclose.
Objectives

1. Evaluate common barriers to continuity and consistency of care for patients with hypertension.
2. Devise strategies among health providers to foster continuity and consistency of care for patients with hypertension.
3. Evaluate common barriers to hypertensive medication use.
4. Devise strategies that foster adherence to hypertensive medications.
Barriers in care

Changes in medication

Barriers in medication

Changes in care
Historical Approach

- Physical barriers
- Limited communication
  - Refill Requests
  - Prescription Verification
Collaborative Model

Health Information Exchange

Patient

Hospital

Health Insurance
Barriers to care

- Missed opportunity
- Non-formulary
- Early fill
- Prior auth
- Poor communication
- Out of network
- Attentive
- Available
- Aware
HealthPartners study

• Dr. Karen Margolins, et al
  • Several clinics, 450 adult patients
  • 12 + 6 month study
  • Home telemonitoring and phone visits with pharmacist

BP control improved!

• 20% more likely to be controlled
• Self-efficacy indicators improved
• More meds were used

Change in care

Kaiser Permanente study

- Dr. Marc Jaffe, et al
  - Multi-site study, 350,000 - 650,000 adult patients per year
  - 8 year study
  - Comprehensive hypertension registry
  - Focused follow-up with MA

BP control improved!

- 10-15% more likely to be controlled
- Dramatically increased use of combo monotherapy

Change in care

Smiley’s Clinic

• Vascular care registry
• On-site clinical pharmacist
• Internal protocols under development according to Minnesota Community Measures
• Monthly Inter-disciplinary Team Meetings

BP control improving...

• Improvements fluctuate
• Since January, control improved 1-2%
Barriers in care

Changes in medication

Barriers in medication

Changes in care
Statistics

- **Adherence** to pharmacotherapy for HTN is ~50-70%

  - Within the first year of treatment ~16-50% will **discontinue** therapy

  - In patient who indicate use of medication for HTN **missed doses** are common

\[
\frac{\text{# of pills taken over a set time period}}{\text{# of pill prescribed over a set time period}} \times 100 \quad \text{Goal: } 80\%
\]

Common Barriers

• Most important are the asymptomatic and lifelong nature of HTN

  • Demographics: Age/Education
  • Patient Perceptions of Risk
  • Relationships between patient and healthcare team
  • Complexity of HTN Regimens

# Health Belief

<table>
<thead>
<tr>
<th>Concept</th>
<th>Definition</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Susceptibility</td>
<td>One's opinion of chances of getting a condition</td>
<td>Strong Heart Study*: Incidence of coronary heart disease is 2x higher in American Indians</td>
</tr>
<tr>
<td>Perceived Severity</td>
<td>One's opinion of how serious a condition and its consequences</td>
<td>Patient's Personal Experience. Belief about illness</td>
</tr>
<tr>
<td>Perceived Benefits</td>
<td>One's belief in the efficacy of the advised action to reduce risk or seriousness of impact</td>
<td>Beliefs about treatment</td>
</tr>
<tr>
<td>Perceived Barriers</td>
<td>One's opinion of the tangible and psychological costs of the advised action</td>
<td>Fear of the health care system, Distrust in prescribed therapies, Regimen Complexity, Side Effects</td>
</tr>
<tr>
<td>Cues to Action</td>
<td>Strategies to activate &quot;readiness&quot;</td>
<td>Patient activity seeking counsel (Ex. Internet, Family, Friends, Healers, Community Health Workers)</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>Confidence in one's ability to take action</td>
<td>Willingness to take the medication. Adherence</td>
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*J Primary Prevent. 2012;33:153-159
• **HPI:** A 45 y/o M present for evaluation of headaches. Used some Ibuprofen with minimal relief. Laying down makes the headaches worse.

• **SH/FH:** Drink two 20oz pops daily. Seasonal construction work. Father MI at age 50.

• **Objective:** Ht: 72 Wt:230lbs BP: 176/98 (Prior reading 160/90) P:88 R:16

• Per patient “My blood pressure is only high in the clinic, I have white coat.” “My dad was not the same after his heart attack, he always seemed so tired. I think it was because of all the medications he was taking.”
• Million Heart (http://millionhearts.hhs.gov/Docs/MH_SMBP.pdf)

• Self-Measured Blood Pressure Monitoring
  • Decrease SBP by 1.6 to 8.5mmHg
  • Decrease DBP by 1.9 to 4.4mmHg

<table>
<thead>
<tr>
<th>Modification</th>
<th>Recommendation</th>
<th>Approximate SBP Reduction Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight reduction</td>
<td>Maintain normal body weight (body mass index, 18.4–24.9 kg/m²)</td>
<td>5-20 mmHg; 10-kg weight loss</td>
</tr>
<tr>
<td>Adopt DASH eating plan</td>
<td>Consume diet rich in fruits, vegetables, low-fat dairy products, with reduced content of saturated and total fats</td>
<td>8-14 mmHg</td>
</tr>
<tr>
<td>Dietary sodium reduction</td>
<td>Reduce dietary sodium intake to no more than 100 mmol/day (2.4g sodium or 6g sodium chloride)</td>
<td>2-8 mmHg</td>
</tr>
<tr>
<td>Physical activity</td>
<td>Engage in regular aerobic physical activity (e.g., brisk walking) at least 30 min/day, most days of the week</td>
<td>4-9 mmHg</td>
</tr>
<tr>
<td>Moderation of alcohol consumption</td>
<td>Most men: limit consumption to no more than two drinks/day Most women and those who weigh less than normal: no more than one drink/day</td>
<td>2-4 mmHg</td>
</tr>
</tbody>
</table>

Barriers in medication

**Thiazide / Loop Diuretics**

- Increased urination
- Hypokalemia
- Orthostatic symptoms
- Falls
Barriers in medication

**Beta-blockers**

- Fatigue
- Depression
- Bradyarrhythmia / heart block
- Exercise limitation / orthostatic symptoms
Barriers in medication

**ACEI / ARB**

- Hyperkalemia
- Angioedema
- Cough (ACEI only)
- Cr bump
- Teratogen
Barriers in medication

Aldosterone antagonists

- Anti-androgenic side effects
- Hyperkalemia
Barriers in medication

**CCB**
- Swelling
- Headache
- Angioedema
Barriers in medication

Central agents

- Dizziness / orthostatic symptoms
- Dry mouth
- Headache
- Nausea
- Sedation
Barriers in care

Changes in medication

Barriers in medication

Changes in care
Common Barriers

• How would you address these patient concerns:

  • “I take one pill every morning but because it is a diuretic when I go out I do not take it”

  • “When my blood pressure is good I am afraid to take my Lisinopril because it might cause my blood pressure to go to low”
Fostering Adherence

- **Patient perspective**
  - **Most trusted source information:** Physician
  - **Further information:**
    - 1) Better understand their doctors advice
    - 2) Check the validity of this advice

- **Alternative Sources:**
  - Pharmacist
  - Media/Internet
  - Others with HTN
Patient Perspective

- Fears
  - Long term use of medication - Especially focus on how it affects the liver
  - Adverse drug reactions - Actual or Potential
  - Disease complication of not taking the medication - morbidity/mortality

Patient Preference and Adherence. 2010;4:335-343
Fostering Adherence

• Patient’s Perspective
  • (+) Adherence
    • Patient acceptance of chronic disease

• Systematic disease management
  • Good patient provider relationship
  • Quality time spend giving information and explanation of disease and treatment
  • Encouragement/Rewards

• Incorporating medications into daily life
Fostering Adherence

• Patient Perspective
  • (-) Adherence
    • Weekends - delays in taking medication
    • Medication interfered with activities - skipped doses
    • Duration of remaining asymptomatic and or belief they had controlled their blood pressure - holding medication
Fostering Adherence

“Behavioral models suggest that the most effective therapy prescribed by the most careful clinician will control hypertension only if the patient is motivated to take the prescribed medication and to establish and maintain a health-promoting lifestyle. Motivation improves when patients have positive experiences with and trust in their clinicians.”

“Empathy both builds trust and is a potent motivator.”

Changes in medication

"Which pill would you like?"

Patient motivation

"Expect side effects."

"Come back in a week or two."
Changes in medication

- Diuretics may help empty bladder
- CCB may make your swelling worse
- BB may improve your migraine
- ARB won't worsen your cough
- ACEI will balance your K+
- Spiro may decrease hirsuitism

- Educate about salt intake, water intake.
- Limit caffeine and tobacco.
- Stockings may help edema.
“SMART” Goal Setting

- **Specific**: Clear, concise statement of change to be accomplished (Which, What, Who, When, Where, and Why)
- **Measurable**: Demonstrate or determine that the change has been accomplished
- **Achievable**: Change should stretch or challenge but not be impossible
- **Realistic**: Change must be something that the patient is willing and able to work towards
- **Time-bound**: By when (specific) would results be achieved for making the change
Application:

- Think of a patient who you have recently seen with HTN (controlled or not controlled).

- What are the patients’ Perceived Benefits to HTN Tx., Perceived Barriers, and Cues to Action?

- What SMART goal could you develop with the patient for accountability/Self Efficacy?
Questions?