The Impact of Social Determinants of Health in Managing Hypertension

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AMA/AHA BP Classifications

- Normal: <120 mm Hg Systolic BP (SBP) and <80 mm Hg Diastolic BP (DBP)
- Elevated: 120-129 mm Hg SBP and <80 mm Hg DBP
- Stage 1 Hypertension: 130-139 mm Hg SBP or 80-89 mm Hg DBP
- Stage 2 Hypertension: >140 mm Hg SBP or >90 mm Hg DBP
The Impact of SDoH in Managing Hypertension

BACKGROUND

• A relationship has been established between Social Determinants of Health (SDoH) and hypertension. The aim of this presentation is to highlight the prevalence of hypertension and to explore the links between hypertension and socio-economic factors.

• SDoH are the social conditions in which individuals live and work; conditions that are shaped by the distribution of power, income and resources, as much on a global and national level as on a local level. Social determinants in cardiovascular diseases are found largely outside the healthcare and preventative healthcare systems. However, it is important to think in terms of chains of cause and effect, which enable us to see these determinants at work within the system of curative and preventative care, including the management of traditional risk factors.

• Unaddressed SDoH are associated with higher blood pressure; this association is particularly evident in the level of education.
The Impact of SDoH in Managing Hypertension

Social Determinants of Health (SDoH) are responsible for health inequities.

Consider the following:

• Born, grow, live, work and age
• Distribution of money, power and resources at global, national and local levels
HTN Risk Factors and Complications

Risk Factors for High Blood Pressure

- Age
- Race
- Family history
- Obesity
- Inactivity
- Tobacco use
- Sodium intake
- Alcohol intake

Uncontrolled high blood pressure can lead to complications including:

- Stroke
- Vision loss
- Heart failure
- Heart attack
- Kidney disease/failure
- Sexual dysfunction
# SDoH and Impact on Hypertension

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**Health Outcomes**

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations
SDoH and Impact on Hypertension

Food
- Equipment (i.e., stove / microwave, refrigerator, utensils, etc.) / Utilities (i.e., water, gas, electric, etc.)
- Nutrition information (different types of diets, i.e., low salt diet; quantity (portion control vs. quality of food; fresh vs. frozen vs. canned))
- Adequate food preparation prior to cooking (peeled, rinsed, chopped, etc.)
- Education (understanding HTN itself and the effects of diet and exercise on HTN)

Transportation
- Walking / bike riding (city) / Private automobile
- Public transportation (i.e., bus, subway, cab service, Uber/Lyft, etc. vs. rural area)
- Assistance from a neighbor / friend / family member / church member
- Wheelchairs or other assistive devices for additional comorbid conditions

Financial Considerations
- Regarding office visits and prescription coverage
- Government assistance (i.e., monthly check) / retired (fixed income)
- If employed: are they paid weekly, biweekly, monthly, etc.
- Co-payments (required) / Insurance gaps (donut holes)
SDoH and Impact on Hypertension

Employment Considerations regarding Office Visits

• Multiple jobs / availability of sick leave
• Fee for service (Some may have jobs where they only get paid if they work)

Education

• Consider if the patient can read and / or write
• Consider comorbid medical conditions which may be barriers to comprehension
• Consider visually impaired or hearing impaired patients (this includes actually using reading glasses and hearing aids that may have been previously issued)

Social determinants

• Cigarette smoking / substance abuse
• Legal and illegal drug abuse / alcohol abuse
• Untreated or inadequately treated mental illness
• Inability to self-manage / inability to adhere

Exercise

• Lack of safe spaces for outside activities
• Lack of recreation centers / sports centers / gyms
Based on SDoH, How Do You Integrate Them Into the Patient Care Plan?

In general, use community resources when available and appropriate:

**Food**
- Meals on wheels
- Churches that provide food for seniors / homeless / financial need
- Homeless shelters

**Nutrition consult**
- Integrating patients cultural foods with appropriate substitutions
- Option: PCP should have dietary handouts available or incorporate a basic dietary template / few sentences on EMR that can be added to patient discharge summary

**Financial Services**
- Drug reps are our friends
- Sample medications, coupons for free and / or discounted meds

**Note:** Limited funds may lead to choices between purchasing medication vs. purchasing food. Consider drug samples when available and patient funds are limited
Integrating SDoH Into Patient Care Plan

Homeless Population Case Study:

- BP > 200 / 100
- Clonidine, EKG, Labs, sample meds, cardiac referrals
- Visited all area homeless shelters to assess food / beverage / potential exercise options
- Successful Walk in Weekly Blood Pressure Clinic
BP QI Interventions

• Accurate BP Readings
  ▪ Accurate blood pressure readings are essential in this measure
  ▪ Ensure all staff obtaining BPs are appropriately trained and retrained often
  ▪ Teaching stethoscopes are available in order to train and monitor the competencies of clinic staff
  ▪ Re-checking blood pressures may be necessary if the reading is not baseline for the patient to ensure accurate readings (may allow patient a few minutes to rest in between readings)
  ▪ Develop a BP competency assessment tool (Million Hearts Blood Pressure Project)

• Entire Clinic Responsibility
  ▪ Encourage staff to help educate the patients on BP
  ▪ If nurse or another medical staff member has a good rapport with patient, this conversation may be easier and better received
  ▪ Patients respond more positively to encouragement

• EMR Modification
  ▪ Providers have found it helpful that the BP be bolded or colored differently if the BP is not baseline or in suggested BP parameters
  ▪ Being able to view all the patient’s past BPs on a single spreadsheet may be helpful to identify trends in the patient’s BPs
# BP QI Interventions During Patient Appointment

## Educate Patient Immediately after an Elevated BP Measurement
- Education by clinic staff
- Websites
- Provide educational hand-outs; Ensure materials are available in multiple languages and appropriate reading levels
- Educational video

## Inform Provider
- Document in EMR
- Have staff send the provider a note or tell them in-person
- If a nurse or another medical staff member have a good rapport with patient, this conversation may be easier and better received
- Patients respond more positively to encouragement

## Provider Assessment and Follow-up
- Provider confirm BP elevation by measuring patient BP in the exam
- Being able to view all the patient’s past BPs on a single spreadsheet may be helpful to identify trends in the patient’s BPs
- Allow patient to be involved in the development of the treatment plan
- Encourage the patient to keep a BP log at home
- Encourage patient to schedule their BP follow-up with the clinic staff before they leave the clinic
- Ensure patient knows the importance of lifestyle and diet changes as well as the importance of medication adherence
Recommended Lifestyle and Diet Modifications

Exercise:

• Walk in shopping malls / shopping centers (safe, avoid inclement weather)
• Walk in large groceries stores, or even Walmart / Target / large retail stores (safe, avoid inclement weather)
• Consider PT referrals for exercises that can be done at home using the patient’s body weight and common items found in their homes
• Make it fun and a social event by encouraging participation of friends, family and/or coworkers
• Consider participating in sporting events or basketball / swimming / bicycling, etc.
• Use IT devices to view videos of your favorite exercises
• Monitor your steps using an IT device or attach a physical device to your clothing to keep track of your steps
• Take the steps at work instead of the using elevators
• Park your car in the parking lot further away from the store and then walk to and from your car and the store
• Encourage setting aside a specific date and time to exercise and keep an exercise log / journal
Recommended Lifestyle and Diet Modifications

Compliance:

• Encourage patients to participate in their health care plan and in managing their disease process
• Encourage adherence and compliance to medication regimen by building a strong
• Doctor / Patient relationship via effective communication and trust
• Review medication list from other prescribers and try to eliminate unnecessary / outdated medication
• Incorporate the timing of the medication and the side affects of the medication within the patients’ work / school / social schedule
• Encourage routine follow-up physician visits
• Schedule future follow-up physician visits at the current visit to maximize school / work schedules
Disseminate Best Practices in terms of the SDoH:

• Smoking cessation / intervention (medication, classes, etc.)
• Drug and alcohol rehabilitation services
• Appropriate mental health diagnosis and treatment
References

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