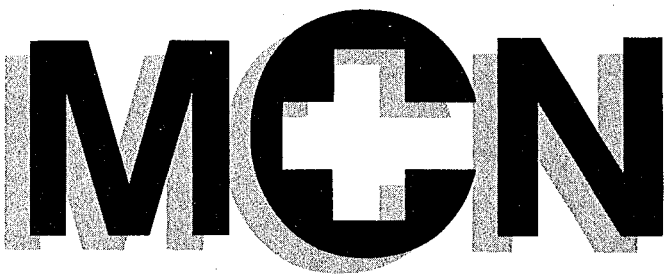
Chronic Care Guideline

Management of HYPERTENSION in Migrant Health Programs



MIGRANT CLINICIANS NETWORK

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HYPERTENSION

DEFINITION:

Persistent elevation of arterial blood pressure on three or more occasions at rest above the following parameters:

1) Non-pregnant adults 18 to 60: >140/90
2) Over age 60: >160/90
3) Children under 18: >95 percentile for age, or 14-18 yrs <135/90 10-14 <125/85
   6-10 <120/80 <6 <110/75
4) Pregnancy-induced hypertension:
   — New development of BP>140/90
   — New rise of 30mm systolic or 15mm diastolic in third trimester on at least 2 occasions 6 hours apart
   — Pregnancy-aggravated hypertension: Increase over chronic hypertension baseline of 30mm systolic or 15mm diastolic on at least 2 occasions 6 hours apart, a new development of proteinuria or generalized edema.

DETECTION:

1) Outreach screening for BP checks of patients with prior diagnosis of HBP, not currently in treatment.
2) Obtain personal and family history on all patients presenting for Health Maintenance.
3) Annual BP check on all patients 3 years and older.
4) BP check at every visit at 18 years and older.

QUALITY ASSURANCE SUGGESTIONS:

1) Maintain a log of all identified hypertensive patients in your clinic's population.
2) Review charts periodically to assess:
   a) Continuity of care for hypertensive patients
   b) How you are setting and meeting goals for control
   c) Establishment of data base for hypertensive patients
   d) Whether hypertensive patients are receiving appropriate disease specific monitoring and health education

GUIDELINE FORMAT:

The guideline follows a "SOAP" format (Subjective, Objective, Assessment, and Plan). Within each component of the SOAP format, "trigger statements" that target specific problem areas for providers who work with migrant patients are noted. These statements are designed to "trigger" a response from a provider to question the appropriate method of care needed for a migrant patient. These migrant specific statements follow four primary areas where consideration in serving migrant farmworkers or in designing a plan of care, should be given.

The acronym "CLEF" was developed to identify these four areas:

C - Culture of migrant patients
L - Language factors for consideration
E - Environmental/Educational factors
F - Follow-up care for a mobile population

MIGRANT SPECIFIC FACTORS

SUBJECTIVE CLEF

C=

- Ask whether the patient carries a portable health record or other copies of records, and ascertain where and when last care received
- Ask to see all drug bottles; a migrant may have received duplicate medications at multiple sites of care
- Ask specifically whether folk remedies are being used, or whether they use ethnic healers for their illness
- Seek the patient's perception of their condition; have they been told that they have HBP? What has happened to them?
- Seek the patient's perception of how symptoms relate to their condition; how their lifestyle/habits impact on it, and how their treatment affects their lifestyle

L=

- Take history and report of symptoms, in the patient's own language/dialect
- The person who takes the history or translates must be familiar with the language/dialect of the patient enough to be cognizant of idiomatic phrases, slang, etc.

E1=

- Be aware that any or all of the following may effect the patient's self-care or compliance with feature instructions, and seek, as needed, information on:
  - — What type of farmwork they do
  - — What hours and routines they keep, access to sanitation, drinking water
  - — Their living situation; who does the shopping, the cooking
  - — Their stress level
  - — What their current typical dietary intake is like
  - — Whether their current economic status places limitations upon their ability to comply with the dietary and medication regimen

E2=

- Ascertain the patient's educational level
- Ask whether they are able to read, if they enjoy reading, or if they would prefer to learn about their health in other ways, such as audiovisual or pictoral means
- Attempt to ascertain whether they have previously received HBP education

F=

- Ascertain the frequency of follow-up received so far; determine how long this family will be in your clinic's area; ask about obstacles to their future follow-up and how they might be able to deal better with those obstacles

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C=Cultural, L=Language, E1=Environmental, E2=Educational, F=Follow-up

PROTOCOL

SUBJECTIVE

A. Initial

1. Age of onset
2. Previous treatment
3. Smoking history
4. History of renal disease, diabetes mellitus, hypercholesterolemia, ASHD or endocrine disease
5. Elevated BP with pregnancy
6. Paroxysmal symptoms — headache, diaphoresis, palpitations
7. Current medication — including birth control pills, OTC medications
8. Family history of hypertension

B. Follow-up

1. Compliance with treatment
2. Side effects of medications

MIGRANT SPECIFIC FACTORS

OBJECTIVE CLEF

C= • Be aware that some cultural groups have strong negative feelings about blood tests, i.e.; fear that they may "lose their strength" when blood is removed from them
• Modesty about the physical examination, particularly for women, is more pronounced in some cultures and must be respected

L= • All testing must be explained in the patient's own language

E1= • Before assembling a new data base on a patient, determine whether baseline data may have been performed at another site
• Complete baseline data collection may not be realistic at upstream sites when the patient can be seen only briefly and perhaps may never return to that area again
• Be flexible in setting diagnostic criteria; it may not be realistic for the patient to return for multiple BP readings

E2= • Educate the patient regarding rationale for diagnostic work-up and baseline exam

F= • Before embarking on a data base assembly for a patient, be sure you have a realistic way to convey the results to him/her and arrange for continuing care

ASSESSMENT CLEF

C= • Diagnosis must be conveyed to the patient in sensitive terms that are culturally acceptable and comprehensible
• Care must be taken to find out what the disease/diagnosis means to the patient and his/her support system
• Some patients may be reluctant to accept and acknowledge illnesses which are asymptomatic.

L= • Discussion must occur in the patient's own language and syntax

E1= • Assessment of the status of the disease must take into consideration the living situation, i.e.; lack of appropriate cooking appliances and utensils, communal cooking or mess-hall approach, inability to acquire necessary foodstuffs due to transportation and economic barriers

E2= • Educate the patient about the terms you use to describe the severity of the disease process as well as the level of control aimed for

F= • Be sure the patient understands in concrete terms the type of follow-up required for their diagnosis and how to attain and maintain desired control

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OBJECTIVE

A. Initial

1. Cardiovascular exam
2. Chest exam
3. Abdominal exam
4. Extremity exam
5. Funduscopic exam
6. Urinalysis

B. Follow-up — at least annually

1. Cardiovascular exam
2. Urinalysis

PROTOCOL

ASSESSMENT

Hypertension — primary vs. secondary

MIGRANT-SPECIFIC FACTORS

PLAN CLEF

C=
- Involve family members in plan to help assure compliance and follow-up
- Dietary recommendations must incorporate familiar ethnic foods and take availability and acceptability of foods into account; talk to the family member who does the cooking
- Cultural concepts of acceptable weight and cooking practices must be considered
- Culturally relevant ways to present recommendations for lifestyle changes such as exercise and stress reduction must be found
- Cultural beliefs must be explored when prescribing medications

L=
- Medications must be labeled in the patient's first language
- Non-literate patients should receive medication instructions orally in their language and reinforcement with pictoral instruction

E1=
- Medication choices and schedules must take into account the patient's lifestyle, i.e.; migrants without access to potable water and may be unable to take medication in the field, poor or no hand-washing facilities thereby risking ingestion of toxic substances, diuretics causing need for frequent voiding and poor or no bathroom facilities, higher risk of dehydration with field workers, need to reconsider beta-blockers for migrants working in hot fields, consideration for drugs causing postural hypotension when the migrant is involved in stoop labor, etc.

E2=
- Although complex disease teaching may be unrealistic, every migrant patient should demonstrate knowledge of at least:
  a. the fact that hypertension may be controlled but not cured, therefore requiring treatment for life
  b. the fact that there are no symptoms which are reliable indicators of high blood pressure
  c. the risks of untreated hypertension
  d. the role of diet, exercise, stress management, and avoidance of tobacco, alcohol and "drugs" in the control of HBP
  e. potential side-effects of their therapeutic medication
  f. the plan for their own follow-up care (short and long-term, including treatment goals, and frequency of monitoring needed)
- Ask for patient feedback to assure comprehension
- Encourage patient to return should he/she experience adverse effects to medications, so that alternative drugs can be tried; rather than abandon treatment

F=
- Convey clear expectations for follow-up plans, and find out whether:
  a. the patient feels thay are practical from the standpoint of amount of work missed and transportation considerations
  b. they know when they will leave your area and where they will be going next
- MAKE SURE EVERY HYPERTENSIVE MIGRANT CARRIES AT LEAST A PORTABLE HEALTH RECORD, WITH INFORMATION RE: YOUR CLINIC, PHONE, ADDRESS SO MORE COMPLETE INFORMATION MAY BE REQUESTED

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PROTOCOL

PLAN

A. Diagnostic

1. Serum creatinine and/or BUN, cholesterol, triglycerides, electrolytes — within 6 months of initial visit.
2. CBC, blood sugar, calcium, phosphorus, total protein and albumin, uric acid, liver function tests — if indicated.
3. Urine culture — if suspect chronic pyelonephritis
4. 24 hour urine for quant. protein, K+, creatinine clearance — if suspect, renal insufficiency, nephrosis or hyperaldosteronism
5. EKG — within 6 months of initial visit
6. Chest x-ray
7. Specialized diagnostic tests used to evaluate select patients if a specific cause of hypertension is suspected, or if target organ involvement is suspected:

   a) Hormonal studies
      1) Catecholamine levels — for pheochromocytoma
      2) Aldosterone levels — for 1o aldosteronism
      3) Cortisol levels — for Cushing's syndrome or disease
      4) T3, T4 — for hyper or hypothyroidism
      5) Parathyroid levels — for hyperparathyroidism

   b) IVP
      1) History of UTI, renal stones or obstruction
      2) Suspected renal parenchymal disease
      3) Persistence of hypertension after toxemia

B. Therapeutic

1. Nutritional intervention — refer to nutritionist initially and at least once every 12 months if uncontrolled.
2. Pharmacologic — treatment should be individualized taking into account the pathophysiologic mechanisms underlying each case and carefully considering co-morbid conditions.

   a) Diuretics — most effective in patients who are older, black or female, or whose hypertension is volume dependent. Minimize potassium loss with concomitant dietary sodium restriction, increased dietary potassium, use of potassium sparing diuretic or potassium supplement. May use any of the following:

	Oral Dose
1) Thiazide type	
(a) hydrocholorothiazide	25-50 mg/d
(b) metolazone	2.5-10 mg/d
2) Potassium sparing	
(a) spironolactone	50-100 mg/d
(b) amiloride	5-10 mg/d
3) Combination	
(a) triamterene 50 mg/HCTZ 25 mg	1-2 caps/d
(b) triamterene 75 mg/HCTZ 50 mg	1 tab/d
(c) amiloride 5 mg/HCTZ 50 mg	1-2 tabs/d

b) Beta-adrenergic blockers — most effective if patients are young, male, white and have symptoms of cardiac awareness (rapid heart rate, palpitations or extra-systoles). Use any of the following:

		initial dose	maintenance dose	maximum dose
1)	propranolol	40 mg bid	120-240 mg/d	640 mg/d
2)	metoprolol	100 mg qd	200 mg/d	450 mg/d
3)	atenolol	50 mg qd	10-100 mg/d	200 mg/d
4)	nadalol	40 mg qd	40-80 mg/d	240 mg/d
5)	timolol	10 mg bid	20-40 mg/d	80 mg/d
6)	pindolol	5 mg bid	10-20 mg/d	60 mg/d
7)	labetolol	100 mg bid	200-400 mg bid	1200 mg/d

c) Isotope renography and renal scans
   1) Follow-up of patient with known renal disease
   2) To confirm clinical suspicion of renal arterial lesion in patient allergic to contrast

d) Selective renal arteriography
   1) Abdominal, flank or back bruit
   2) Sudden dramatic hypertension
   3) Sudden exacerbation of previously controlled hypertension
   4) Disparity in renal lengths of > 1 cm

e) Renal vein renin activity
   1) In conjunction with selective arteriography to assess function of arteries
   2) Re-evaluate progression of known lesions

f) Plasma renin activity
   1) Assessment of low renin hypertension (e.g. 1o aldostreronism, volume dependent hypertension)
   2) Assessment of high renin hypertension (e.g. renal arterial disease)

g) Central-acting alpha-2 agonists — may be used as first line therapy or if intolerance to diuretics or beta blockers. Usually added as second line agents. Use any one of the following:

		initial dose	maintenance dose	maximum dose
1)	methyldopa	250 mg bid	500-2000 mg/d	3000 mg/d
2)	clonidine	0.1 mg bid	0.2-0.8 mg/d	2.4 mg/d
3)	guanabenz	4 mg bid	4-16 mg bid	32 mg bid

h) Peripheral vasodilators — useful in combined drug treatment. Use any of the following:

		initial dose	maintenance dose	maximum dose
1)	hydralazine	10 mg qid	10-25 mg qid	50 mg qid
2)	minoxidil	5 mg qd	10-40 mg/d	100 mg/d
3)	prazosin	1 mg bid	1-15 mg/d	20 mg/d

i) Angiotensin converting enzyme (ACE) inhibitors — very effective in patients with normal or elevated plasma renin activity. Use any of the following:

		initial dose	maintenance dose	maximum dose
1)	captopril	12.5-25 mg bid	25-50 mg bid	450 mg/d
2)	enalapril maleate	2.5-5 mg/d	10-40 mg/d	40 mg/d

j) Calcium-channel blocking agents — useful in patients with co-existing ASHD or in patients with intolerance to beta-blockers, uncontrolled diabetes or severe chronic obstructive lung disease. Use any of the following:

		initial dose	maintenance dose	maximum dose
1)	nifedipine	10mg tid	10-20mg tid/qid	30-40mg tid
2)	verapamil	40mg tid	40-120mg tid	120mg qid
3)	diltiazem	30mg tid	30-60mg tid	120mg tid

k) Sympatholytics — usually second line therapy. Use any one of the following:

		initial dose	maintenance dose	maximum dose
1)	guanethidine	10 mg qd	10-25 mg/d	50 mg/d
2)	guanadrel	5 mg bid	20-75 mg/d	200 mg/d

C. Patient education

1. Explain lack of accurate symptoms and chronicity
2. Discuss complications of uncontrolled hypertension
3. Discuss risk factors and risk-factor modification (e.g. diet, exercise, salt restriction, smoking and alcohol)
4. Discuss importance of compliance and regular check-ups

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