Division of Medicaid
Office of the Governor
State of Mississippi
DUR Board Meeting

June 24, 2004

Room 139 Woolfolk Building
2 PM

DIVISION OF MEDICAID
OFFICE OF THE GOVERNOR
DRUG UTILIZATION REVIEW BOARD
AGENDA

June 24, 2004

Welcome	**Tim Alford, MD**
Reading & Approval of Minutes Of March 25, 2004 DUR Board Meeting	**Lew Anne Snow, RN**
Update on Over-Utilization Of Carisoprodol	**Sam Warman, R.Ph.**
Update on Over-Utilization of Narcotic Agents	**Sam Warman, R.Ph.**
Pharmacy Program Update	**Judith Clark, R.Ph.**
Black Box Warnings or Boxed Warning Update	**Sam Warman R.Ph.**
Beta Agonist Over Utilization Letter Types	**Sam Warman R.Ph.**
Suggested Interventions	**Sam Warman R.Ph.**
Next Meeting Information	**Tim Alford, MD**

Minutes of the March 25, 2004
Drug Utilization Review (DUR) Board Meeting

Members Attending: Tim Alford, M.D., Bob Broadus, RPh, Clarence Dubose, RPh, John Mitchell, M.D., Joe McGuffee, RPh,., Andrea Phillips, M.D.,Cynthia Undesser, M.D. Rudy Runnels, M.D.

Members Absent: Montez Carter, PharmD, Diana McGowan, RPh.,Leigh Ann Ramsey, PharmD., Sara Weisenberger, M.D.

Also Present: Sam Warman, RPh., Lew Anne Snow, R.N., Kathleen Burns, R.N. – HID Warren Jones, M.D. Executive Director of Medicaid, Judith Clark, RPh, Director of Pharmacy Bureau, Terri Kirby, RPh., Phyllis Williams –DOM

Dr. Tim Alford called the meeting to order at 2:04pm
Dr. Alford welcomed Dr. Rudy Runnels as the new member of the DUR Board.

Approval of minutes of last meeting(November 20, 2003): Bob Broadus made a motion to accept the minutes as written. Dr. Mitchell seconded the motion. All voted in favor of the approval.

Reports:
Update on Over-Utilization of Inhaled Beta-Agonists:
Sam Warman (HID) presented a report requested by the DUR Board on the over-utilization of inhaled beta-agonists. During the time frame July 2003 through January 2004, a total of 247 recipients were identified as over-utilizing inhaled beta agonist. One criterion that is currently approved regarding the overuse of beta agonists has the days supply limit set at 60 days. Sam Warman suggested that by reducing the days supply from 60 days to 30 days, more beneficiaries could be identified as over-utilizing beta-agonists.

The following recommendations were made:

1. Continue to identify criteria exceptions and mail intervention letters when appropriate
2. Continue to record and evaluate prescriber responses
3. Communicate the findings to prescribers and pharmacy providers
4. Conduct additional retrospective evaluations targeting the over and under utilization of all agents used to treat asthma and respiratory diseases
5. To add criteria that also includes other respiratory disease states in addition to asthma
6. Send an intervention letter to the pharmacy provider of those beneficiaries identified in an effort to educate the beneficiaries in the correct method of using an inhaled beta agonist.

Judy Clark then asked if other states offered packets to be mailed to patients that are on these inhalers. HID will research this for the Board and report on this next meeting

Recommendation:
Bob Broadus made a motion that the Board accepts these recommendations. Dr. Undesser seconded the motion. All voted in favor of the motion

Dr. Alford paused the meeting at this point to introduce Dr. Warren Jones as the Executive Director of Medicaid. Dr. Jones stated that Governor Barbour has challenged the Division of Medicaid by to encourage savings in the pharmacy area. Dr. Jones stated with the help of everyone in the Pharmacy Bureau, we will be able to move closer to accommodating this request from the Governor. Dr. Jones then excused himself to attend other obligations.

Update on the use of Generic Provider Id:
Sam Warman presented an update on the use of the Generic provider ID from 10/01/2003 through 1/31/2004. 122 pharmacies were identified as using the generic IDs greater than 40% of their total Medicaid prescriptions. 74 pharmacies out of the 122 pharmacies had also been identified in the last data report dated 09/01/2003 thru11/30/2003. No recommendations were made.

Pharmacy Program Updates:
Judith Clark reported that we do have a new executive director, Dr Warren Jones. The pharmacy Department understands that there will be possible changes in legislation as they are addressing many pharmacy issues this year. Mrs. Clark then presented a report regarding pharmacy expenditures for February 2004. Currently with the new Envision system new edits are available which are specific for age, gender and pregnancy. For example, if a medication is indicated for a specific gender, a claim will not go through for the opposite gender. Pay and report has been added to the pharmacy message instead of deny. Mrs. Clark stated that focused reviews will continue to be done in the pharmacy division.

2003 RDUR Statistics Review:
Lew Anne Snow presented a report on the regarding the distribution of cases for all 2003 RDUR statistics. This included the number of cases identified, the letters sent, physician replies and the physician reply rate by percent.

Black Box Warning:
Sam Warman presented black box warnings issued by the FDA concerning the following:

- Viramune (nevirapine) was the targeted drug noted at this meeting.

Suggested Interventions:
Sam Warman suggested that a specific category be targeted each quarter for RDUR interventions. He stated that by decreasing the volume of letters sent to the physician the physician reply rate would increase. Mr. Warman suggested hypertension and diabetes as two possible target areas. The response from the provider community remains very positive regarding the over- utilization profiles currently being sent to providers; therefore it was suggested that this continue to be a targeted intervention each quarter.

Recommendation:
A motion was made by Bob Broadus to accept hypertension, diabetes and over-utilization as the targeted areas for the next quarter. Dr. Mitchell seconded the motion.
All voted in favor of the motion

Next Meeting Information:
Dr. Alford reminded the Board of the next meeting scheduled for June 24, 2004 at 2:00 p.m.
There being no other business, Dr. Alford asked for a motion to adjourn the meeting.
Dr. Undesser made a motion to adjourn the meeting.
Dr. Mitchell seconded the motion.
All voted in favor of the motion.
The meeting was adjourned at 3:25p.m.

Respectfully submitted:
Health Information Designs, Inc.

Update on Over Utilization
Of
Carisoprodol

Introduction

The Mississippi Drug Utilization Review (DUR) Board approved a criterion recommendation and prescriber letter for an intervention regarding the over utilization of carisoprodol.

Methodology

Paid claims data are forwarded from ACS to Health Information Designs (HID) for review and evaluation. The DUR Board, Division of Medicaid (DOM), and HID developed the criterion for this evaluation. In order for a claim exception to occur, a beneficiary must receive a 60 days supply in 90 days. It seeks to identify long term use of carisoprodol. For this update, the time span used was July 2003 through November 2003. Claims data was evaluated against the criterion and cases were identified for review by a HID clinical pharmacist.

Approved educational intervention letters with attached response forms were mailed to prescribers for identified recipients. A sample copy of the intervention letter can be found at the end of this update. The response form asks the prescriber to indicate any action taken in response to the intervention letter. Response forms were returned to HID for review and evaluation.

Results

- A total of 308 recipients were identified who appeared to be available for intervention.
- 109 letters were not sent due to Generic DEA, No prescriber information.
- 29 letters were returned due to Hospital DEA's—cannot provide prescriber information.
- 2 letters were not sent due to insignificant alert

After profiles were reviewed, 197 intervention letters were mailed

As of 4/15/04, 73 responses have been received equaling a 37% response rate. Table 1 summarizes the prescriber responses.

Table 1

Response	Number of responses
Benefits of the drug outweigh the risks	3
Physician unaware of what other physicians were prescribing	9
Patient has diagnosis that supports therapy	8
Patient is no longer under physicians care	8
Physician feels problem is insignificant, no change in therapy	18
Physician will reassess and modify drug therapy	8
Patient has discontinued or will discontinue drug	1
Physician tried to modify therapy, patient non-cooperative	2
Is my patient but have not seen in most recent 6 months	2
Patient never under this physician's care	4
Patient has appointment to discuss drug therapy problem	3
MD saw patient only once in ER or as On-Call MD	1
Tried to modify therapy, symptoms recurred	6

Discussion

The alert message for this criterion informs the prescriber that carisoprodol is indicated for short term use only. 37 of the 73 responses indicate however that drug therapy will continue without a change. Yet 76% of the 37 responses feel the information is very useful or useful. In fact 44% of all responses felt the information is very useful, 37% useful, 16% neutral, 2% somewhat useful, and 2 % felt the information not useful. Interesting still is the number of responses that indicate that prescribers are unaware of what other physicians are prescribing. 7 of those responses indicated that this intervention is very useful.

Conclusion

Evaluations of the information provided in this intervention indicate that this is a very useful intervention in the monitoring of carisoprodol use. Carisoprodol has the potential to be abused and this intervention provides an additional method to the physicians to monitor their patients.

Recommendations

1. Continue to identify beneficiary criteria exceptions and mail intervention letters where appropriate regarding the over utilization of carisoprodol.
2. Continue to record and evaluate prescriber responses
3. Communicate the findings of this evaluation to prescribers and pharmacy providers.
4. Report those responses that suggest lock-in or possible drug-seeking behavior to DOM due to the fact that 47 beneficiaries had intervention letters mailed to multiple prescribers.

Update on Over Utilization
Of
Narcotic Agents

Introduction

The Mississippi Drug Utilization Review (DUR) Board approved a criterion recommendation and prescriber letter for an intervention concerning the over-utilization of Narcotic Agents

Methodology

Paid claims data are forwarded from ACS to Health Information Designs (HID) for review and evaluation. The DUR Board, Division of Medicaid (DOM), and HID developed the criterion for this evaluation. In order for a claim exception to occur, a beneficiary has to have at least a 60 day supply in 90 days and exceed the dose limit of 1.5. The criterion adds all the narcotics the patient is taking. The criterion is not just looking for beneficiaries exceeding the maximum dose but also looking for those getting early refills and appropriate doses but from multiple physicians.

For this update, the time span used was June 2003 through January 2004. Claims data was evaluated against the criterion and cases were identified for review by a HID clinical pharmacist.

Approved educational intervention letters with attached response forms were mailed to prescribers for identified recipients. A sample copy of the intervention letter can be found at the end of this update. The response form asks the prescriber to indicate any action taken in response to the intervention letter. Response forms were returned to HID for review and evaluation.

Results

- A total of 99 recipients were identified who appeared to be over-utilizing narcotic agents.
- 30 letters were not sent due to Generic DEA, No prescriber information.
- 10 letters were returned due to Hospital DEA's—cannot provide prescriber information.

After profiles were reviewed, 69 unique recipients were available for intervention.

As of 4/15/04, 21 responses have been received equaling a 30% response rate. Table 1 summarizes the prescriber responses.

Table 1

Response	Number of responses
Benefits of the drug outweigh the risks	1
Physician unaware of what other physicians were prescribing	4
Patient is no longer under this physician's care	1
Physician feels problem is insignificant. No change in therapy	6
Physician will reassess and modify drug therapy	3
Physician response does not discuss drug therapy conflict	1
Patient is deceased	1
Patient never under this physician's care	3
Patient has appointment to discuss drug therapy problem	1

Discussion

The focus of this review is to alert for possible over utilization of narcotic agents. The response forms also include a section that rates the usefulness of the alert. 17 of the 21 responses included the evaluation. Of the 17, 53% of the responses found the information very useful; 35% found the information useful; 6% were neutral; and 6% rated the information not useful.
Further evaluation of the responses shows 8 of the 21 address modifying drug therapy in some fashion. 7 responses discuss continuing the current drug therapy.

Conclusion

This intervention is an effective instrument and the information provided is found to be very useful to the physicians. The criterion is useful in identifying those beneficiaries who might be exhibiting drug seeking behaviors while also those who are receiving appropriate medical attention.

Recommendations

1. Continue to identify beneficiary criteria exceptions and mail intervention letters where appropriate.
2. Continue to record and evaluate prescriber responses
3. Communicate the findings of this evaluation to prescribers and pharmacy providers.
4. Conduct additional retrospective evaluations targeting over utilization of narcotic agents by identifying beneficiaries that utilize multiple prescribers AND providers.

Boxed Warning Update

Code of Federal Regulations definition for Black Box:

Citation: Title 21 CFR 201.57 Section E

(e) Warnings. Under this section heading, the labeling shall describe serious adverse reactions and potential safety hazards, limitations in use imposed by them, and steps that should be taken if they occur. The labeling shall be revised to include a warning as soon as there is reasonable evidence of an association of a serious hazard with a drug; a causal relationship need not have been proved. A specific warning relating to a use not provided for under the "Indications and Usage" section of labeling may be required by the Food and Drug Administration if the drug is commonly prescribed for a disease or condition, and there is lack of substantial evidence of effectiveness for that disease or condition, and such usage is associated with serious risk or hazard. Special problem, particularly those that may lead to death or serious risk or hazard. Special problems, particularly those that may lead to death or serious injury, may be required by the Food and Drug Administration to be placed in a prominently displayed box. The boxed warning ordinarily shall be based on clinical data, but serious animal toxicity may also be the basis of a boxed warning in the absence of clinical data. If a boxed warning is required, its location will be specified by the Food and Drug Administration. The frequency of these adverse reactions and, if known, the approximate mortality and morbidity rates for patients sustaining the reaction, which are important to safe and effective use of the drug, shall be expressed as provided under the "Adverse Reactions" section of the labeling.

Zelnorm (tegaserod maleate)

Audience: Gastroenterologists and other healthcare professionals

The FDA and Novartis notified healthcare professionals of an important drug warning and prescribing information for Zelnorm, a serotonin 5-HT_4 receptor partial agonist indicated for the short-term treatment of women with irritable bowel syndrome (IBS) whose primary bowel symptom is constipation. This new information relates to a Warning for serious consequences of diarrhea and a Precaution for rare reports of ischemic colitis in post marketing use of Zelnorm

Office of the Governor
Division of Medicaid
[[ADDRESS]

Administered by Health Information Designs, Inc
PO Box
[ADDRESS]

[TODAY]

[adrs1]
[adrs2]
[adrs3]
[adrs4]

DEAR [Dr. XXXXXX]:

In compliance with the OBRA '90 federal legislation, state Medicaid agencies are mandated to institute Retrospective Drug Utilization Review Programs (RDUR). The program's goal is to ensure that Medicaid patients receive optimal drug therapy at the lowest reasonable cost. One way to achieve this goal is to identify potential drug therapy problems that may place patients at risk, particularly if multiple providers are identified. This RDUR program is informational in nature and allows you to incorporate the information provided into your continuing assessment of the patient's drug therapy requirements.

[alert_msg] During a recent review of the enclosed drug history profile, *it was noted that your patient,* **[John] [Smith]**, *has a diagnosis of asthma and has submitted claims for excessive amounts of* **[drug_a_name].** ***We have notified the pharmacy provider to ensure proper use of inhaler****. We routinely notify practitioners of suspected excessive use to ensure the patient is following the regimen as intended.*

We have enclosed the historical profile and an asthma management card summarizing NIH guidelines for your evaluation and consideration. Since we are interested in feedback about our program from providers, we would appreciate learning of your assessment of this information. Please complete the response form on the reverse side of this letter and return it in the enclosed envelope or fax it to the number below.

At the bottom of this letter are the specific prescriptions attributed to you by the dispensing pharmacy. In addition, if multiple physicians are involved, each will receive this information. Thank you for your professional consideration.

RX #(s): [rx_no_a]

Sincerely,

W. Murray Yarbrough M.D.

W. Murray Yarbrough, M.D.
Medical Director

Case#: [case_no]
Enclosures

Administered by Health Information Designs, Inc.
1550 Pumphrey Ave.
Auburn, AL 36832-9956
(800)225-6998 x 3033 Fax(334)502-6589

Office of the Governor
Division of Medicaid
[[ADDRESS]

Administered by Health Information Designs, Inc
PO Box
[ADDRESS]

PRESCRIBER RESPONSE

All information used to generate the enclosed letter, including Prescriber identification, was obtained from Pharmacy Claims Data. If there appears to be an error in the information provided, please note the discrepancy. Thank you for your cooperation.

1. This patient **is** under my care:

_____ I have reviewed the information and will continue without change.
_____ however, I did not prescribe the following medication(s)_____.
_____ and has an appointment to discuss drug therapy.
_____ however, has not seen me recently.
_____ however, I was not aware of other prescribers.
_____ I have reviewed the information and modified drug therapy.
_____ I have not modified drug therapy because benefits outweigh the risks.
_____ I have tried to modify therapy, however the patient refuses to change.
_____ I have tried to modify therapy, however symptoms reoccurred.

2. This patient **is not** under my care:

_____ however, I did prescribe medication while covering for other MD or in the ER.
_____ but has previously been a patient of mine.
_____ because the patient recently expired.
_____ and has never been under my care.

3. I have reviewed the enclosed information and found it:
_____ very useful_____ useful_____ neutral_____ somewhat useful_____ not useful.

4. Please check here if you wish to receive reference information on the identified problem___.(Please provide a fax number if available_____-_____-_____.)

Comments: _____
_____
_____
_____
[adrs1] Case# [case_no]
Letter Type [letter_type]
[alert_msg]
[criteria]

Administered by Health Information Designs, Inc.
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Stepwise Approach for Managing Asthma in Adults and Children Older Than 5 Years of Age: Treatment

Classify Severity: Clinical Features Before Treatment or Adequate Control			Medication Required To Maintain Long-Term Control
	Symptoms/Day Symptoms/Night	**PEF or FEV_1 PEF Variability**	Daily Medications
Step 4 Severe Persistent	Continual Frequent	≤ 60% >30%	• **Preferred treatment:** **- High-dose inhaled cortisosteroids AND** **- Long-acting inhaled $beta_2$-agonists** AND, if needed, - Corticosteroid tablets or syrup long-term (2mg/kg/day, generally do not exceed 60 mg per day). (Make repeat attempts to reduce systemic corticosteroids and maintain control with high-dose inhaled corticosteroids.)
Step 3 Moderate Persistent	Daily >1 night/week	>60% - < 80% >30%	• **Preferred treatment:** **- Low-to-medium dose inhaled corticosteroids and long-acting inhaled $beta_2$-agonists.** • Alternative treatment (listed alphabetically): - Increase inhaled corticosteroids within medium-dose range OR - Low-to-medium dose inhaled corticosteroids and either leukotriene modifier or theophylline. …….. If needed (particularly in patients with recurring severe exacerbations): • **Preferred treatment:** **- Increase inhaled corticosteroids within medium-dose range and add long-acting inhaled $beta_2$-agonists.** • Alternative treatment: - Increase inhaled corticosteroids within medium-dose range and add either leukotriene modifier or theophylline.
Step 2 Mild Persistent	>2/week but < 1x/day >2 nights/month	≥ 80% 20-30%	• **Preferred treatment:** **- Low-dose inhaled corticosteroids.** • Alternative treatment (listed alphabetically): cromolyn, leukotriene modifier, nedocromil, OR sustained-release theophylline to serum concentrations of 5-15 mcg/mL
Step 1 Mild Intermittent	≤2 days/week ≤2 nights/month	≥ 80% < 20%	• No daily medication needed. • Severe exacerbations may occur, separated by long periods of normal lung function and no symptoms. A course of systemic coticosteroids is recommended.

Quick Relief **All Patients**	• Short-acting bronchodilators: 2–4 puffs **short-acting inhaled $beta_2$-agonists** as needed for symptoms. • Intensity of treatment will depend on severity of exacerbation; up to 3 treatments at 20-minute intervals or a single nebulizer treatment as needed. Course of systemic corticosteroids may be needed. • Use of short-acting beta-agonists > 2 times a week in intermittent asthma (daily, or increasing use in persistent asthma) may indicate the need to initiate (increase) long-term control therapy.

Step down

⇩ Review treatment every 1 to 6 months; a gradual stepwise reduction in treatment may be possible.

Step Up

⇧ If control is not maintained, consider step up. First, review patient medication technique, adherence, and environmental control..

Goals of Therapy: Asthma Control

- Minimal or no chronic symptoms day or night
- Minimal or no exacerbations
- No limitations on activities; no school/work missed
- Maintain (near) normal pulmonary function
- Minimal use of short-acting inhaled $beta_2$-agonist (< 1x per day, < 1 canister/month
- Minimal or no adverse effects from medications.

Note

- The stepwise approach is meant to assist, not replace, the clinical decision-making required to meet individual patient needs.
- Classify severity: assign patient to most severe step in which any feature occurs (PEF is % of personal best; FEV_1 is % predicted).
- Gain control as quickly as possible (consider a short course of systemic corticosteroids); then step down to the least medication necessary to maintain control.
- Provide education on self-management and controlling environmental factors that make asthma worse (e.g. allergens and irritants).
- Refer to an asthma specialist if there are difficulties controlling asthma or if step 4 care is required. Referral may be considered if step 3 care is required.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service•National Institutes of Health•National Heart, Lung and Blood Institute NIH Publication No. 97-4051 June 2002

Office of the Governor
Division of Medicaid
[ADDRESS]

Administered by Health Information Designs, Inc
PO Box
[ADDRESS]

[TODAY]

[adrs1]
[adrs2]
[adrs3]
[adrs4]

DEAR [tadrs1]:

In compliance with the OBRA '90 federal legislation, state Medicaid agencies are mandated to institute Retrospective Drug Utilization Review Programs (RDUR). The program's goal is to ensure that Medicaid patients receive optimal drug therapy at the lowest reasonable cost. One way to achieve this goal is to identify potential drug therapy problems that may place patients at risk, particularly if multiple providers are identified. This RDUR program is informational in nature and allows you to incorporate the information provided into your continuing assessment of the patient's drug therapy requirements.

During a recent review of the enclosed drug history profile, *it was noted that your patient,* **[t1d0-recip-fst-nm] [t1d0-recip-lst-nm]**, *may be receiving excessive amounts of* **[drug_a_name].** We routinely notify practitioners of suspected excessive use to ensure the patient is using the regimen correctly. The enclosed historical profile is provided for your evaluation and consideration. In presenting this information to you, we recognize that the management of each patient's drug therapy depends upon an assessment of the patient's entire clinical situation about which we are not fully aware.

The success of the DUR program is enhanced by the two-way exchange of information. Therefore, at your convenience, we would appreciate learning of your assessment of this information and of any action taken in response to this notice. Although your participation in this program is voluntary, we find your feedback helpful in adjusting our program to address clinically important problems. Please complete the response form on the reverse side of this letter and return it in the enclosed envelope or fax it to the number below.

If multiple providers are involved, each will receive this information. Thank you for your professional consideration.

RX #(s): [rx_no_a]

Sincerely,

W. Murray Yarbrough M.D.

W. Murray Yarbrough, M.D.
Medical Director

Case#: [case_no]
Enclosures

Office of the Governor
Division of Medicaid
[ADDRESS]

Administered by Health Information Designs, Inc
PO Box
[ADDRESS]

PHARMACIST RESPONSE

All information used to generate the enclosed letter, including Provider Identification, was obtained from Pharmacy Claims Data. If there appears to be an error in the information provided, please note the discrepancy. Thank you for your cooperation.

1. This patient:

_____ is a patient at this pharmacy and I will counsel the patient appropriately during their next visit.
_____ no longer receives medication from this pharmacy.
_____ has never been a patient at this pharmacy.
_____ has recently expired.

2. I **agree** with the information provided. After reviewing the case I have:

_____ conferred with the physician and patient and anticipate modification in the patient's drug regimen.
_____ conferred with the physician and patient and anticipate discontinuation of the drug.
_____ discussed with the patient the under utilization of the drug.
_____ discussed with the patient the over-utilization of the drug.
_____ **not** advised modification of the patients drug therapy because the benefits outweigh the risks, and the patient is closely monitored.
_____ **not** advised modification of the patient's drug therapy because the potential problem is not clinically significant for this patient.
_____ counseled the patient regarding the appropriate use of the medication however the patient continues to demonstrate noncompliance.

3. I **disagree** with the information provided and after reviewing the case, I have:

_____ taken no further action.
_____ counseled the patient regarding the information provided.
_____ conferred with the physician regarding the information provided.

COMMENTS:_____
_____
_____

[adrs1] Case# [case_no]
Letter Type [letter_type]
[alert_msg]
[criteria]

Reference Card From the

Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)

EVALUATION

Classification of Blood Pressure (BP)*

Category	SBP mmHg		DBP mmHg
Normal	<120	and	<80
Prehypertension	120–139	or	80–89
Hypertension, Stage 1	140–159	or	90–99
Hypertension, Stage 2	≥160	or	≥100

* See *Blood Pressure Measurement Techniques* (reverse side)

Key: SBP = systolic blood pressure DBP = diastolic blood pressure

Diagnostic Workup of Hypertension

- Assess risk factors and comorbidities.
- Reveal identifiable causes of hypertension.
- Assess presence of target organ damage.
- Conduct history and physical examination.
- Obtain laboratory tests: urinalysis, blood glucose, hematocrit and lipid panel, serum potassium, creatinine, and calcium. Optional: urinary albumin/creatinine ratio.
- Obtain electrocardiogram.

Assess for Major Cardiovascular Disease (CVD) Risk Factors

- Hypertension
- Obesity (body mass index ≥30 kg/m^2)
- Dyslipidemia
- Diabetes mellitus
- Cigarette smoking
- Physical inactivity
- Microalbuminuria, estimated glomerular filtration rate <60 mL/min
- Age (>55 for men, >65 for women)
- Family history of premature CVD (men age <55, women age <65)

Assess for Identifiable Causes of Hypertension

- Sleep apnea
- Drug induced/related
- Chronic kidney disease
- Primary aldosteronism
- Renovascular disease
- Cushing's syndrome or steroid therapy
- Pheochromocytoma
- Coarctation of aorta
- Thyroid/parathyroid disease

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Heart, Lung, and Blood Institute

TREATMENT

Principles of Hypertension Treatment

- Treat to BP <140/90 mmHg or BP <130/80 mmHg in patients with diabetes or chronic kidney disease.
- Majority of patients will require two medications to reach goal.

Algorithm for Treatment of Hypertension

Lifestyle Modifications

Not at Goal Blood Pressure (<140/90 mmHg)
(<130/80 mmHg for patients with diabetes or chronic kidney disease)
See *Strategies for Improving Adherence to Therapy*

Initial Drug Choices

Without Compelling Indications		With Compelling Indications
Stage 1 Hypertension (SBP 140–159 or DBP 90–99 mmHg) Thiazide-type diuretics for most. May consider ACEI, ARB, BB, CCB, or combination.	**Stage 2 Hypertension** (SBP ≥160 or DBP ≥100 mmHg) 2-drug combination for most (usually thiazide-type diuretic and ACEI, or ARB, or BB, or CCB).	**Drug(s) for the compelling indications** See *Compelling Indications for Individual Drug Classes* Other antihypertensive drugs (diuretics, ACEI, ARB, BB, CCB) as needed.

Not at Goal Blood Pressure

Optimize dosages or add additional drugs until goal blood pressure is achieved. Consider consultation with hypertension specialist.

See *Strategies for Improving Adherence to Therapy*

Blood Pressure Measurement Techniques

Method	Notes
In-office	Two readings, 5 minutes apart, sitting in chair. Confirm elevated reading in contralateral arm.
Ambulatory BP monitoring	Indicated for evaluation of "white coat hypertension." Absence of 10–20 percent BP decrease during sleep may indicate increased CVD risk.
Patient self-check	Provides information on response to therapy. May help improve adherence to therapy and is useful for evaluating "white coat hypertension."

Causes of Resistant Hypertension

- Improper BP measurement
- Excess sodium intake
- Inadequate diuretic therapy
- Medication
  - Inadequate doses
  - Drug actions and interactions (e.g., nonsteroidal anti-inflammatory drugs (NSAIDs), illicit drugs, sympathomimetics, oral contraceptives)
  - Over-the-counter (OTC) drugs and herbal supplements
- Excess alcohol intake
- Identifiable causes of hypertension (see reverse side)

Compelling Indications for Individual Drug Classes

Compelling Indication	Initial Therapy Options
• Heart failure	THIAZ, BB, ACEI, ARB, ALDO ANT
• Post myocardial infarction	BB, ACEI, ALDO ANT
• High CVD risk	THIAZ, BB, ACEI, CCB
• Diabetes	THIAZ, BB, ACEI, ARB, CCB
• Chronic kidney disease	ACEI, ARB
• Recurrent stroke prevention	THIAZ, ACEI

Key: THIAZ = thiazide diuretic, ACEI= angiotensin converting enzyme inhibitor, ARB = angiotensin receptor blocker, BB = beta blocker, CCB = calcium channel blocker, ALDO ANT = aldosterone antagonist

Strategies for Improving Adherence to Therapy

- Clinician empathy increases patient trust, motivation, and adherence to therapy.
- Physicians should consider their patients' cultural beliefs and individual attitudes in formulating therapy.

The National High Blood Pressure Education Program is coordinated by the National Heart, Lung, and Blood Institute (NHLBI) at the National Institutes of Health. Copies of the JNC 7 Report are available on the NHLBI Web site at **http://www.nhlbi.nih.gov** or from the NHLBI Health Information Center, P.O. Box 30105, Bethesda, MD 20824-0105; Phone: 301-592-8573 or 240-629-3255 (TTY); Fax: 301-592-8563.

Principles of Lifestyle Modification

- Encourage healthy lifestyles for all individuals.
- Prescribe lifestyle modifications for all patients with prehypertension and hypertension.
- Components of lifestyle modifications include weight reduction, DASH eating plan, dietary sodium reduction, aerobic physical activity, and moderation of alcohol consumption.

Lifestyle Modification Recommendations

Modification	Recommendation	Avg. SBP Reduction Range†
Weight reduction	Maintain normal body weight (body mass index 18.5–24.9 kg/m^2).	5–20 mmHg/10 kg
DASH eating plan	Adopt a diet rich in fruits, vegetables, and lowfat dairy products with reduced content of saturated and total fat.	8–14 mmHg
Dietary sodium reduction	Reduce dietary sodium intake to ≤100 mmol per day (2.4 g sodium or 6 g sodium chloride).	2–8 mmHg
Aerobic physical activity	Regular aerobic physical activity (e.g., brisk walking) at least 30 minutes per day, most days of the week.	4–9 mmHg
Moderation of alcohol consumption	Men: limit to ≤2 drinks* per day. Women and lighter weight persons: limit to ≤1 drink* per day.	2–4 mmHg

* 1 drink = 1/2 oz or 15 mL ethanol (e.g., 12 oz beer, 5 oz wine, 1.5 oz 80-proof whiskey).

† Effects are dose and time dependent.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health
National Heart, Lung, and Blood Institute
National High Blood Pressure Education Program

NIH Publication No. 03-5231
May 2003

Recommended Additions *Approved* *Rejected*

3. Certain Antihypertensive Agts/Stroke/Thiazide diuretics & ACEIs #1608 _____ _____

Alert Message: This patient has a history of stroke and is on an anti-hypertensive medication. The current JNC-7 report suggests that recurrent stroke rates are lowered by the combination of an ACE inhibitor and a thiazide-type diuretic, if no contraindications are present.

Conflict Code: TA – Therapeutic Appropriateness

Util A	Util B	Util C(Negating)
Calcium Channel Blockers	Stroke	ACEIs
Anti-adrenergic:		Diuretics
Centrally & Peripherally Acting Agents		
Alpha/Beta Adrenergic Blockers		
ARBs		
Beta Blockers		

References:

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, And Treatment of High Blood Pressure, NIH Publication No. 03-5233, May 2003.

***This criterion first looks for ICD-9's in Util B, then looks for use of any drug in Util A in past 90 days. If it meets Util A and B, then it looks for use of drugs in Util C. If no use of drugs in Util C then the criterion will hit and a profile generated.**

4. Certain Antihypertensive Agts/Chronic Kidney Disease/ACEIs & ARBs #1609 _____ _____

Alert Message: This patient has a diagnosis of chronic kidney disease and is on an anti-hypertensive medication. The current JNC-7 report recommends an ACE inhibitor or angiotensin II receptor antagonist as optimal antihypertensive therapy in these patients, if no contraindications are present.

Conflict Code: TA – Therapeutic Appropriateness

Util A	Util B	Util C(Negating)
Calcium Channel Blockers	Chronic Kidney Disease	ACEIs
Anti-adrenergic:	(ICD-9s)	ARBs
Centrally & Peripherally Acting Agents		
Alpha/Beta Adrenergic Blockers		
Diuretics		
Beta Blockers		

References:

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, And Treatment of High Blood Pressure, NIH Publication No. 03-5233, May 2003.

***This criterion first looks for ICD-9's in Util B, then looks for use of any drug in Util A in past 90 days. If it meets Util A and B, then it looks for use of drugs in Util C. If no use of drugs in Util C then the criterion will hit and a profile generated.**

MISSISSIPPI MEDICAID
RETROSPECTIVE DRUG UTILIZATION REVIEW
CRITERIA RECOMMENDATIONS
JANUARY 2004

Recommended Additions ***Approved*** ***Rejected***

1. Diabetes/Hypertension/Cardiovascular Drugs (Negating) #1536 _____ _____

Alert Message: This patient has a history of diabetes and hypertension and may benefit from the addition of an anti-hypertensive agent to reduce cardiovascular morbidity and mortality. The coexistence of these conditions imposes a need for a significantly lower goal blood pressure (130/80 mm Hg) than the goal recommended for a non-diabetic patient with hypertension (140/90 mm Hg). If lifestyle modifications alone are no longer effective consider JNC-7 pharmacologic treatment recommendations for the selection of the optimal anti-hypertensive therapy.

Conflict: TA – Therapeutic Appropriateness

Drugs:

Util A	Util B	Util C (Negating)
Insulin	Hypertension	ACEIs
Oral Hypoglycemic Agts.	(ICD-9's)	ARBs
		Beta Blockers
		Calcium Channel Blockers
		Anti-adrenergic - Centrally & Peripherally Acting Agents
		Alpha/Beta Adrenergic Blockers
		Diuretics

References:

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, And Treatment of High Blood Pressure, NIH Publication No. 03-5233, May 2003.

Arauz-Pacheco C, Parrott MA, Raskin P: The treatment of hypertension in adult patients with diabetes (Technical Review). *Diabetes Care* 25:134–147, 2002.

***This criterion first looks for ICD-9's in Util B, then looks for use of any drug in Util A in past 90 days. If it meets Util A and B, then it looks for use of drugs in Util C. If no use of drugs in Util C then the criterion will hit and a profile generated.**

2. Certain Antihypertensive Agts/Post MI/Beta-blockers, ACEIs & Ald. Ants.#1607 _____ _____

Alert Message: This patient has a diagnosis of myocardial infarction and is on an anti-hypertensive medication. The current JNC-7 report recommends a beta-blocker, ACE inhibitor or an aldosterone antagonist as optimal antihypertensive therapy for hypertensive post myocardial infarction patients, if no contraindications are present.

Conflict Code: TA – Therapeutic Appropriateness

Util A	Util B	Util C(Negating)
Calcium Channel Blockers	Post MI (ICD-9's)	ACEIs
Anti-adrenergic:		Aldosterone Antagonists
Centrally & Peripherally Acting Agents		Beta Blockers
Alpha/Beta Adrenergic Blockers		
Diuretics		

References:

The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, And Treatment of High Blood Pressure, NIH Publication No. 03-5233, May 2003.

***This criterion first looks for ICD-9's in Util B, then looks for use of any drug in Util A in past 90 days. If it meets Util A and B, then it looks for use of drugs in Util C. If no use of drugs in Util C then the criterion will hit and a profile generated.**

Suggested Interventions
June 24, 2004

- **Hypertension**

  Adverse Cardiovascular Effects—COX-2 Inhibitors & CHF/Edema/Fluid Retention
  Initial Criteria Exception Report Count—2,338 beneficiaries

  Drug-Drug Interaction—Clonidine & Beta Blockers
  Initial Criteria Exception Report Count—1,157 beneficiaries

  Drug-Drug Interaction—ACEI & K+ sparing diuretics
  Initial Criteria Exception Report Count—238 beneficiaries

  Under-Utilization of Beta Blockers
  Initial Criteria Exception Report Count—1,672 beneficiaries

  Therapeutic Appropriateness—Cardio Post MI Drug & Post Myocardial Infarction
  Initial Criteria Exception Report Count—40 beneficiaries

  Drug (Actual) Disease Precaution—NSAIDS & Hypertension
  Initial Criteria Exception Report Count—1,682 beneficiaries

  ***In addition to new criteria recommendations if approved**