CHAPTER 14
ECONOMICS OF HYPERTENSION CONTROL

THE ECONOMIC BURDEN OF HYPERTENSION

Direct costs for detection, evaluation and management of hypertension.

Indirect costs of economic consequences of the illness, such as loss of productivity and earnings.

Intangible costs range from relatively small adverse effects on the quality of life resulting from hypertension treatment, to major impairment due to hypertension complications.

Hypertension related complications such as stroke, coronary heart disease and renal failure. All have devastating socioeconomic problems.

COST EFFECTIVENESS

• In hypertension, cost effectiveness is used in reference to the cost of drugs, and other direct medical expenses required to prevent one myocardial infarction, stroke or death.
• Cost effectiveness is calculated as:
  \[
  \text{average drug price for 5 years + consultations + diagnostic tests) X number needed to treat for 5 years.}
  \]
• Cost effectiveness improves with older age, male sex, severity of hypertension and compliance.

COST MINIMIZATION

• Patient selection: accurate diagnosis and classification of hypertension (chapter 6).
• Use of total risk concept: baseline risk assessment provides guidance on whether to treat milder forms of hypertension (chapter ).
• Integrate the workup: simultaneously identify target organ changes, concomitant risk factors and possible cause of secondary hypertension, and limiting laboratory tests to those that are medically necessary.
• Encourage life style modifications (chapter 7)
• Optimize drug use: initiate antihypertensive treatment with diuretics in patients with no indications for other agents.
• Utilize drug efficiently: use proper drug dosages and combinations. Consider fixed combinations that cost less than separate drugs.
• Enhance compliance (chapter 8).
• Utilize trained nonphysician professionals e.g., nurse practitioners, who can ensure proper blood pressure measurements and enhance compliance with therapeutics and lifestyle strategies.

**ECONOMIC MODELS TO CONTROL HYPERTENSION**
There are two complementary approaches to reduce the level of blood pressure in a target population:

*The population strategy*
- Aims to shift the blood pressure distribution and hence reduce cardiovascular disease across the entire population even in those with lowest relative risk.

*The high-risk approach*
- Aims to reduce blood pressure in individuals who are by their level of blood pressure are at greatest risk of complications.
- This approach has important benefits on the individual but may have little impact on the population.