Session 4
Service Delivery and Patient Monitoring

Content should be adapted with country-specific information prior to use. Red text denotes places where modification may be required. Guidance on how to adapt the training is provided in the Course Overview.
Competency and objectives

Competency:

*Ability to identify current service delivery strengths and gaps and to accurately fill out recording tools at the primary health care level*

In this session, you will discover how to:

- Modify service delivery and patient flow
- Complete individual patient treatment cards
- Store cards
### Expected activities at primary health care facility

<table>
<thead>
<tr>
<th>Task/subtask</th>
<th>Frequency/timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunistic screening</strong></td>
<td></td>
</tr>
<tr>
<td>Measure blood pressure (BP) of all</td>
<td>Daily during outpatient department (OPD) hours</td>
</tr>
<tr>
<td>adults waiting in the outpatient</td>
<td></td>
</tr>
<tr>
<td>department queue following the</td>
<td></td>
</tr>
<tr>
<td>protocol.</td>
<td></td>
</tr>
<tr>
<td>Refer patients with BP &gt;160/100 to</td>
<td>When a patient with BP &gt;160/100 is identified</td>
</tr>
<tr>
<td>the doctor.</td>
<td></td>
</tr>
<tr>
<td>Ask patients with systolic between</td>
<td>When a patient initially presents with SBP 140–160</td>
</tr>
<tr>
<td>140–160 to come back for a second</td>
<td></td>
</tr>
<tr>
<td>reading at least one week later in</td>
<td></td>
</tr>
<tr>
<td>order to establish diagnosis.</td>
<td></td>
</tr>
<tr>
<td><strong>Initiate treatment</strong></td>
<td></td>
</tr>
<tr>
<td>Measure biometrics.</td>
<td>Every time a new patient who needs treatment is diagnosed</td>
</tr>
<tr>
<td>Follow hypertension treatment</td>
<td></td>
</tr>
<tr>
<td>protocol.</td>
<td></td>
</tr>
<tr>
<td><strong>Lifestyle counselling</strong></td>
<td></td>
</tr>
<tr>
<td>Counsel patients receiving treatment.</td>
<td>At each clinic visit</td>
</tr>
<tr>
<td><strong>Dispensing</strong></td>
<td></td>
</tr>
<tr>
<td>Dispense medications and provide</td>
<td>At each clinic visit</td>
</tr>
<tr>
<td>adherence advice.</td>
<td></td>
</tr>
<tr>
<td>Refill medications for stable patients.</td>
<td>Refill medications monthly for patients who had controlled BP three visits in a row</td>
</tr>
<tr>
<td><strong>Maintaining records and reports</strong></td>
<td></td>
</tr>
<tr>
<td>Patient Treatment Card:</td>
<td>For every new hypertensive patient</td>
</tr>
<tr>
<td>Fill in sections of the first page</td>
<td>At every follow-up visit</td>
</tr>
<tr>
<td>of the treatment card. Fill in data in</td>
<td></td>
</tr>
<tr>
<td>the follow-up sheets.</td>
<td></td>
</tr>
<tr>
<td>Facility Register for Hypertension:</td>
<td>End of every week</td>
</tr>
<tr>
<td>Enter newly registered patients.</td>
<td>End of every month</td>
</tr>
<tr>
<td>Update quarterly treatment outcomes.</td>
<td>End of first quarter of the year</td>
</tr>
<tr>
<td>Update annual treatment outcomes.</td>
<td>Every quarter</td>
</tr>
<tr>
<td>Prepare quarterly facility reports.</td>
<td>15 April of each year</td>
</tr>
<tr>
<td>Prepare annual facility report.</td>
<td></td>
</tr>
<tr>
<td><strong>Follow-up of defaulting patients</strong></td>
<td></td>
</tr>
<tr>
<td>Telephone patients who missed their</td>
<td>Start of new month: follow-up on all patients who missed</td>
</tr>
<tr>
<td>appointment the previous month.</td>
<td>their appointment the previous month</td>
</tr>
<tr>
<td>Make a home visit to track a patient</td>
<td>Start of new month: follow-up on all patients who missed</td>
</tr>
<tr>
<td>who cannot be contacted by phone.</td>
<td>their appointment the previous month who cannot be</td>
</tr>
<tr>
<td></td>
<td>contacted by phone</td>
</tr>
<tr>
<td><strong>Referral of patients to higher</strong></td>
<td></td>
</tr>
<tr>
<td>levels</td>
<td></td>
</tr>
<tr>
<td>Refer patients whose BP is not</td>
<td>Every time BP is not controlled after following the</td>
</tr>
<tr>
<td>controlled after following the</td>
<td>protocol.</td>
</tr>
<tr>
<td>protocol.</td>
<td></td>
</tr>
<tr>
<td>Call referred patients who have not</td>
<td>One month after every referral is made</td>
</tr>
<tr>
<td>followed up after one month of</td>
<td></td>
</tr>
<tr>
<td>referral.</td>
<td></td>
</tr>
</tbody>
</table>
A Service Delivery Model is essential to identify the right approach to provide effective patient management.

Key requirements for a successful model:

• Clear roles for care at the facility level
• Strong referral mechanisms to secondary and tertiary levels of care
• Established patient monitoring system
• Impact evaluation system for patient outcomes
Example 2

[Insert image of country’s existing service delivery model.]
Example 3: Sample patient-flow pathway

**Community**
- **Registration**
  - ID card issued. Demographic details entered in CVD Patient Treatment Card.

**Primary Health Centre**
- **Pre-assessment area**
  - Check height, weight, BP, blood sugar (if indicated). Complete the initial sections of the treatment card.

- **Counselling**
  - Counselling on healthy lifestyle, adherence, and tobacco cessation.
  - Follow-up date arranged. CVD Patient Treatment Card kept by facility.

- **Pharmacy**
  - Pharmacist dispenses medicines and completes treatment card.

- **Treatment room**
  - Medical officer or staff member with responsibility for treatment assesses again and prescribes as per protocols. Completes treatment card. If indicated, makes referral and informs registration.

- **Laboratory**
Example 4: Thailand Integrated Patient Pathway

District Hospital (one for 50-70,000 population)

Community

Sub-district Health Promoting Hospital (one for 5000 population)

Regional Hospital

Integrated Patient Pathway: Ongkarak District Level Community Hospital

1. Registration

2. Blood pressure measurements are taken

3. Data Collection

4. Medical History

5. Counselling

6. See Doctor

7. Visit Exit Nurse

8. Visit Pharmacist

Nurse calls patients who miss appointments

Screening at community level once a year. Hypertension patients referred to District hospital

Patients with controlled BP referred to HPH

Upward referral of patients needing specialist care
EXERCISE 1

Patient flow and service delivery

**Part 1:** Outline the patient flow pathway in your clinic.

**Part 2:** Identify the main assets and barriers to incorporating hypertension screening and management into your current service delivery model.
Facility-level recording tool

Follow-up visits to record BP and medicines prescribed at every visit

### CVD Patient Treatment Card

<table>
<thead>
<tr>
<th>Name of Health Facility:</th>
<th>Name of District/State/Province:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of registration:</td>
<td>Unique patient treatment number:</td>
</tr>
</tbody>
</table>

**A. Patient identification information**

- Patient ID number:
- Name:
- Father’s/husband’s name:
- Date of birth:
- Age:
- Address:
- Phone number:
- Alternative phone number:

**B. Diagnosis**

1. Hypertension:
   - Yes, treatment initiated
   - Yes, was already on treatment when registered
2. Prior heart attack:
   - Yes
   - No
3. If yes, his heart attack in the past 3 years?
   - Yes
   - No
4. Prior stroke:
   - Yes
   - No
5. Chronic kidney disease:
   - Yes
   - No
6. Diabetic:
   - Yes
   - No
7. No smoking:
   - Yes
   - No

**C. Hypertension treatment at registration**

1. Medication 1:
2. Medication 2:
3. Medication 3:
4. Medication 4:

**D. Diabetes treatment at registration**

1. Medication 1:
2. Medication 2:
3. Medication 3:
4. Medication 4:

**Additional notes**

- Life-style modification (LSM)
  - Lifestyle modification alone
  - Both lifestyle modification & medication

Any other advice:

### Follow-up visits

- Visit 1: Blood pressure – systolic
- Visit 2: Blood pressure – diastolic
- Visit 3: Blood sugar fasting
- Visit 4: Antidepressants
- Visit 5: Antihypertensive
- Visit 6: Statin
- Visit 7: Blood sugars
- Visit 8: Metformin

### Additional investigations if available

- Visit 1: Serum postprandial
- Visit 2: Serum creatinine
- Visit 3: Urine cretin
- Visit 4: Urea
- Visit 5: Fasting examination
- Visit 6: Acute examination

### New complications

- Visit 1: Stroke
- Visit 2: Hypertension
- Visit 3: CVD
- Visit 4: Renal failure
- Visit 5: Lower limb amputation
- Visit 6: Others

### Additional information

- Visit date
- Name
- Date of visit
- Signature of doctor

Treatment dose and codes (indicate dosage). Note when starting (Y for new), and stopping (D for discontinued).
Facility-level information flow

- **Patient Treatment Card**
  - BP ≥ 140/90
  - Stored sequentially by registration number
  - Completed by health provider daily

- **Completed by facility manager quarterly/annually**
  - Health Facility Report
    - Data from treatment register
    - Calculates control rate
    - Supports supervision

- **Facility Register for Hypertension**
  - Newly registered patients
  - Left side
  - Right side: Treatment outcomes 6 mths and annual

- **Quarterly and Annual Report**
# Patient Treatment Card

<table>
<thead>
<tr>
<th>CVD PATIENT TREATMENT CARD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Patient identification information</strong></td>
</tr>
<tr>
<td>Patient ID number:</td>
</tr>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Father/husband's name:</td>
</tr>
<tr>
<td>Sex:  Age:</td>
</tr>
<tr>
<td>Address:</td>
</tr>
<tr>
<td>Phone number:</td>
</tr>
<tr>
<td>Alternative phone number:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Diagnosis</th>
</tr>
</thead>
</table>
| 1. Hypertension:  
  - Yes, treatment initiated  
  - Yes, was already on treatment when registered |
| Other co-morbidity |
| 2. Prior heart attack:  
  - Yes  
  - No |
| 3. If yes, h/o heart attack in the past 3 years?  
  - Yes  
  - No |
| 4. Prior stroke:  
  - Yes  
  - No |
| 5. Chronic kidney disease:  
  - Yes  
  - No |
| 6. Diabetes:  
  - Yes  
  - No |
| 7. H/o smoking:  
  - Yes  
  - No |

<table>
<thead>
<tr>
<th>C. Hypertension treatment at registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medication  dose</td>
</tr>
<tr>
<td>2. Medication  dose</td>
</tr>
<tr>
<td>3. Medication  dose</td>
</tr>
<tr>
<td>4. Medication  dose</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D. Diabetes treatment at registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Medication  dose</td>
</tr>
<tr>
<td>2. Medication  dose</td>
</tr>
<tr>
<td>3. Medication  dose</td>
</tr>
<tr>
<td>4. Medication  dose</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional notes</th>
</tr>
</thead>
</table>
| Life-style modification (LSM)  
  - Life-style modification alone  
  - Both lifestyle modification & medication |
| Any other advice: |

- Yes  
- No
Treatment follow-up sheets

- Accounts for medication checks at follow-up visits, blood pressure monitoring, and future visit planning

- Follow-up visits are accounted for with each visit record: date, SBP, DBP, treatment dose and code, referred to specialist, and date of next visit
Additional investigations

Results of investigations should be recorded, if available.

- Use the space under additional notes to record any significant event related to hypertension treatment, such as side effects.

### I. Additional investigations if available

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Visit date</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Serum potassium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Serum creatinine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Total cholesterol</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Urine protein</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Fundus examination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Foot examination</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### K. Additional information
EXERCISE 2

Completing a Patient Treatment Card

*Review the patient details and complete the treatment card accordingly.*

*Please keep the completed treatment card for future exercises.*
EXERCISE 3

Spot the mistake

Review the patient details and the completed treatment card. Identify at least three errors on the card.
The story continues from Exercise 3.

The nurse asked the ANM to visit the patient’s house and counsel the patient. After the counselling, the patient decided to return and continue treatment.

Complete the patient treatment card with the information given.
Patient Treatment Card storage

**Shelf I:** Arrange cards by unique treatment number at the start of the month/quarter

**Shelf II:** Move the treatment card to next shelf after giving treatment and marking a tick on the card.

**Shelf III (Confirmed transferred)**

**Shelf IV (Lost to follow-up)**

**Shelf V (Dead)**

**End of quarter**

Count cards in each shelf/box

1. Leftover cards in shelf I at the end of each month means these patients have missed their follow-up visit and have not collected medicines. Call patients to remind them to visit health facility for follow-up.
2. If patient has been confirmed for transfer to another facility, move the card to Shelf III.
3. If patients have missed visits for one year, move the card to Shelf IV.
4. If the patient has died, mention date of death in the follow-up section of treatment card and move the card to Shelf V.
Models of record keeping

**Paper-based system**
- Data are transcribed from various formats into electronic databases
- Can be implemented in all contexts

**Hybrid paper + electronic system**
- Paper-based individual health records with an electronic longitudinal record
- Allows for a reduction in data transcription

**Electronic system**
- Inclusion of a CVD module within an operational system of electronic health records
- Allows for easier data collection when there is large patient volume