Module 8: ART Resistance and Second Line Regimens

Time: 1 hour, 20 minutes

Session Objectives
By the end of this session, participants will be able to:

- Understand when to switch to a second-line regimen
- Know preferred second-line regimens for adults (including pregnant and breastfeeding women), adolescents, and children
- Describe common drug resistance mutations and how they influence choosing a second-line regimen
- Be familiar with characteristics of the drugs commonly used in second-line regimens

Session Overview

- Management of Treatment Failure
- Second-Line Regimens
- ARV Characteristics
- Common Resistance Mutations
- Third-Line Regimens

Materials Needed

- Slides

55 minute Lecture

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<th>Trainer will:</th>
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<td>Review management of treatment failure, when to switch to second line treatments.</td>
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<td>Describe the preferred and alternative second-line regimens for adults and adolescents, pregnant or breastfeeding women, and children.</td>
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<td>Discuss characteristics of different ARVs in order to understand how the recommendations for second line regimens were devised.</td>
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<td>Review commonly used ARVs for first and second line regimens.</td>
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<td>Discuss common resistance mutations and their effect on regimen selection, including:</td>
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<td>- M184V</td>
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- Y181C and K103N
- K65R
- TAMs

- Discuss different protease and integrase inhibitors.
- Review the formulations available in your country.

Break for questions.

5 minute lecture
- Trainer will summarize key points:
  - Avoid premature as well as delayed switching of ART
  - When switching for treatment failure, avoid single agent switches
  - Selection of 2\textsuperscript{nd} and 3\textsuperscript{rd} line regimens must take into account common resistance mutations that arise from 1\textsuperscript{st} line agents.

20 minute Activity
- Facilitator will conduct case two discussions. (See slides and speakers notes for instructions).

Methodologies
- Lecture
- Case Discussion

Advance Preparation for Trainers
- Trainer must update \textit{slides 8, 10, 27, and 28} with second and third line regimens available in their country.