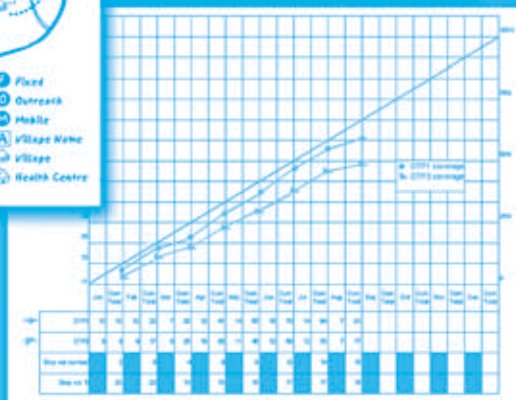
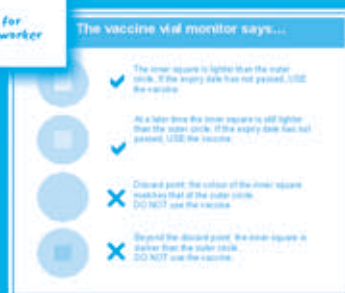
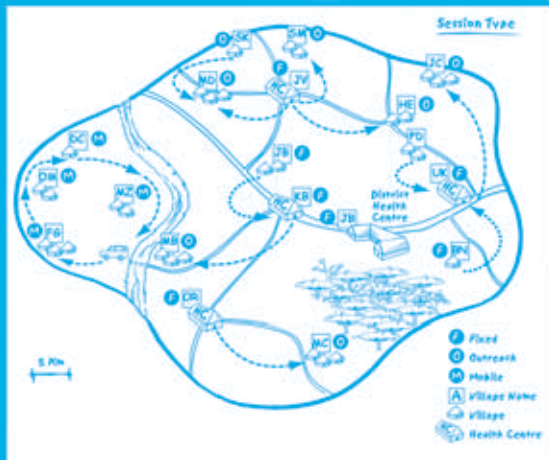


Training for mid-level managers (MLM)

I. Cold chain, vaccines and safe-injection equipment management



Estimating needs

Storage

Distribution and transport

Monitoring and supervision



Training for mid-level managers (MLM)

Module 1 : Cold chain, vaccines and safe-injection equipment management

Training for mid-level managers (MLM). Module 1: cold chain, vaccines and safe-injection equipment management

ISBN 978-92-4-001563-0 (electronic version)

ISBN 978-92-4-001564-7 (print version)

This publication was originally published under WHO reference number WHO/IVB/08.01.

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Suggested citation. Training for mid-level managers (MLM). Module 1: cold chain, vaccines and safe-injection equipment management. Geneva: World Health Organization; 2008, republished 2020 under the licence: [CC BY-NC-SA 3.0 IGO](#).

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

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Introduction to the series

This new series of modules on immunization training for mid-level managers replaces the version published in 1991. As there have been many changes in immunization since that time, these modules have been designed to provide immunization managers with up-to-date technical information and explain how to recognize management and technical problems and to take corrective action and how to make the best use of resources.

More and more new, life-saving vaccines are becoming available, yet the introduction of a new vaccine does not necessarily require a separate plan and separate training. This new series for mid-level managers integrates training for new vaccine introduction into each subject addressed by the modules. In this way, introduction of new vaccines is put into its day-to-day context as part of the comprehensive range of activities required to improve immunization systems.

In the context of these modules, mid-level managers are assumed to work in secondary administrative levels, such as a province; however, the modules can also be used at national level. For district managers (third administrative level), a publication on 'immunization in practice'¹ is widely available. As it contains a large amount of technical detail, it is also recommended for mid-level managers courses.

In writing these modules, the authors tried to include essential topics for mid-level managers, while keeping the modules brief and easy to use. They are intended to complement other published materials and guidelines, some of which are referred to in the text. Many more documents are available on the CD-ROM which accompanies this series. Each module is organized in a series of steps, in which technical information is followed by learning activities. Some knowledge and experience are needed to complete the learning activities, but even new readers should be imaginative and constructive in making responses. Facilitators should also be aware that the responses depend on the national context. Thus, there are no absolutely right or wrong answers, and the series does not set down new 'policies' or 'rules'. The authors hope that the readers of these modules will find them informative, easy to read and an enjoyable learning experience.

Modules in the mid-level managers series

Module 1 : Cold chain, vaccines and safe-injection equipment management

Module 2 : Partnering with communities

Module 3 : Immunization safety

Module 4 : Supportive supervision

Module 5 : Monitoring the immunization system

Module 6 : Making a comprehensive annual national immunization plan and budget

Module 7 : The EPI coverage survey

Module 8 : Making disease surveillance work

¹ *Immunization in practice: A practical guide for health staff*. Geneva, World Health Organization, 2004

Acknowledgements

This new series of modules on immunization training for mid-level managers is the result of team work between a large number of partners including the Centers for Disease Control and Prevention (CDC), IMMUNIZATIONbasics, Program for Appropriate Technology in Health (PATH), United Nations Children's Fund (UNICEF), United States Agency for International Development (USAID) and the World Health Organization (WHO). The authors are especially grateful to the consultants from the University of South Australia who have made a major contribution to the development of the modules.

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Abbreviations and Acronyms

The following abbreviations have been used in this document.

AD	auto-disable (syringe)
BCG	bacille Calmette-Guérin (vaccine)
DT	diphtheria-tetanus (vaccine)
dT	children's dose of diphtheria and tetanus toxoids
DTP	diphtheria-tetanus-pertussis vaccine
EEFO	earliest expiry first out
EPI	Expanded Programme on Immunization (WHO)
HepB	hepatitis B vaccine
Hib	<i>Haemophilus influenzae</i> type b (vaccine)
ILR	ice-lined refrigerator
JE	Japanese encephalitis
MMR	measles-mumps-rubella vaccine
MR	measles-rubella vaccine
OPV	oral polio vaccine
Td	tetanus and diphtheria toxoids with reduced diphtheria content for adults
T-series	tetanus-containing vaccines
TT	tetanus toxoid
VVM	vaccine vial monitor
WMF	wastage multiplication factor
YF	yellow fever

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