Regional COR-NTD Meeting for the Pacific Islands

25-26 September 2024
Sofitel Brisbane Central, Australia

Preventing morbidity and managing disability

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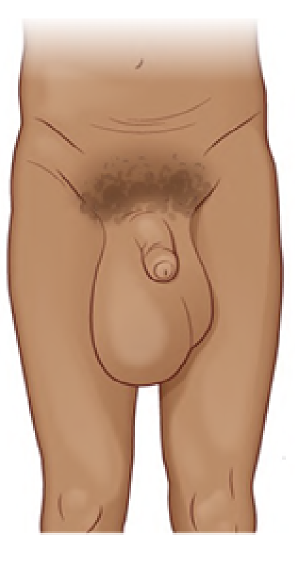
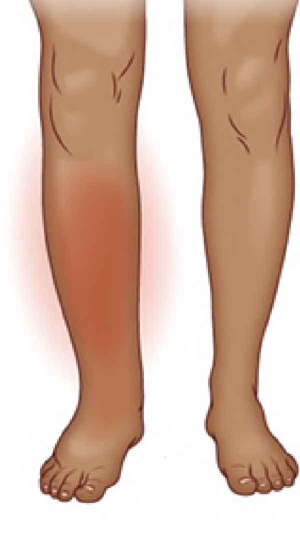
Clinical manifestations of lymphatic filariasis

Lymphoedema



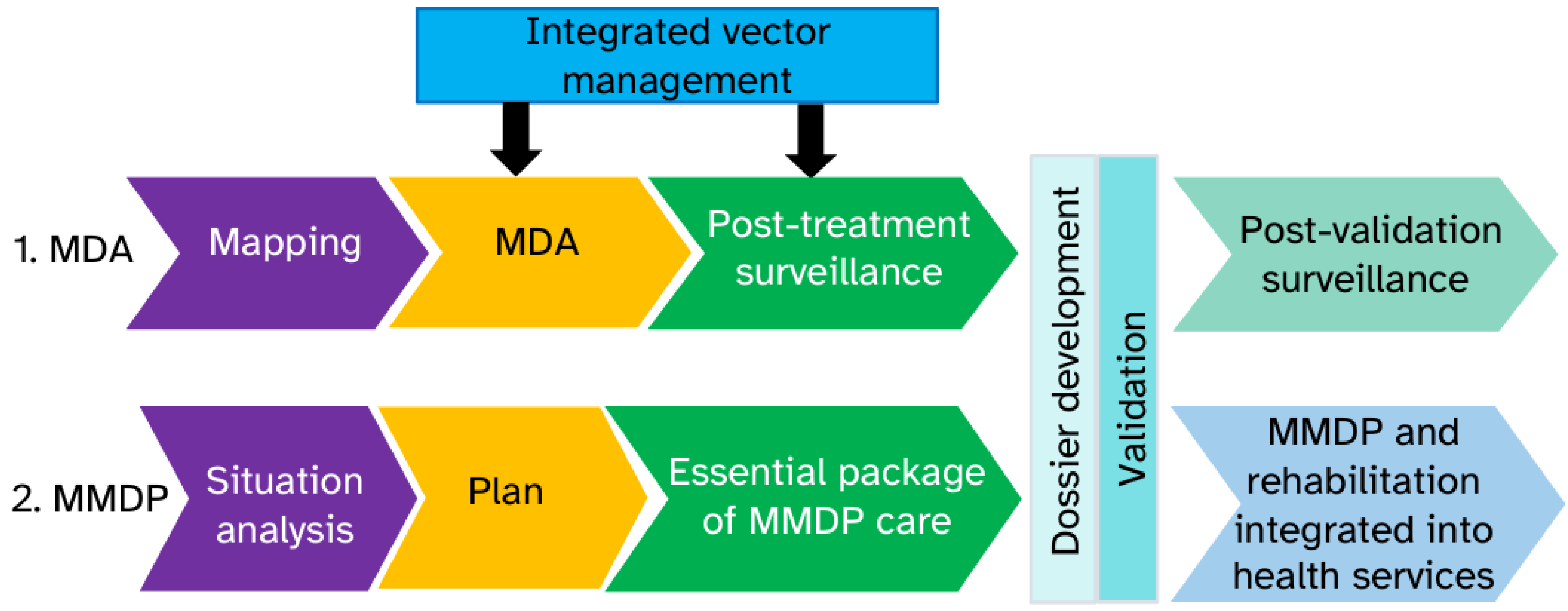
Hydrocele



Acute attacks

Source: The illustrations in slides 5, 15 & 18 are courtesy of the USAID-funded MMDP Project led by Helen Keller International

The GPELF strategic framework



Source: Adapted from WHO's Aide Memoire
https://iris.who.int/bitstream/handle/10665/339931/9789240017061-eng.pdf?sequence=1

What causes Morbidity?

- Pathology and worm damage to lymphatics; secondary infections
  - Inflammation
  - Adipose tissue
  - Fibrosis

- What proportion of infected people go on to develop morbidity?
- How many people missed by MDA, or when MDA stops, are still infected?

New infection

Asymptomatic Infection; Early clinical signs

IMPAIRMENT

lymphoedema, hydrocoele, acute attacks

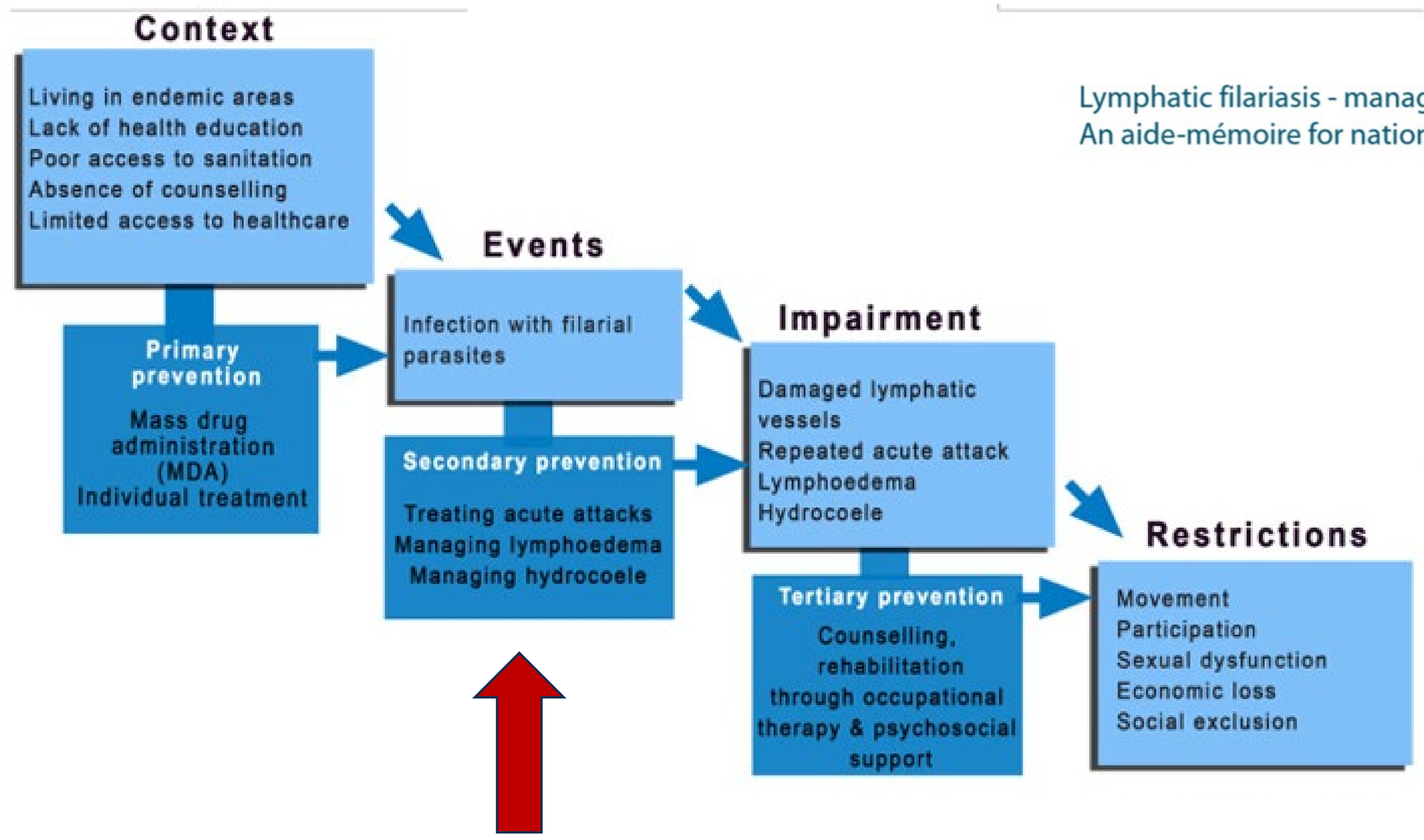
DISABILITY

shutterstock.com · 1884565942

MORBIDITY PREVENTION

DISABILITY MANAGEMENT

Figure 3. Programme prevention strategies to reduce the impact of LF disease, impairment, and restrictions



Lymphatic filariasis - managing morbidity and preventing disability: An aide-mémoire for national programme managers, Second edition

World Health Organization

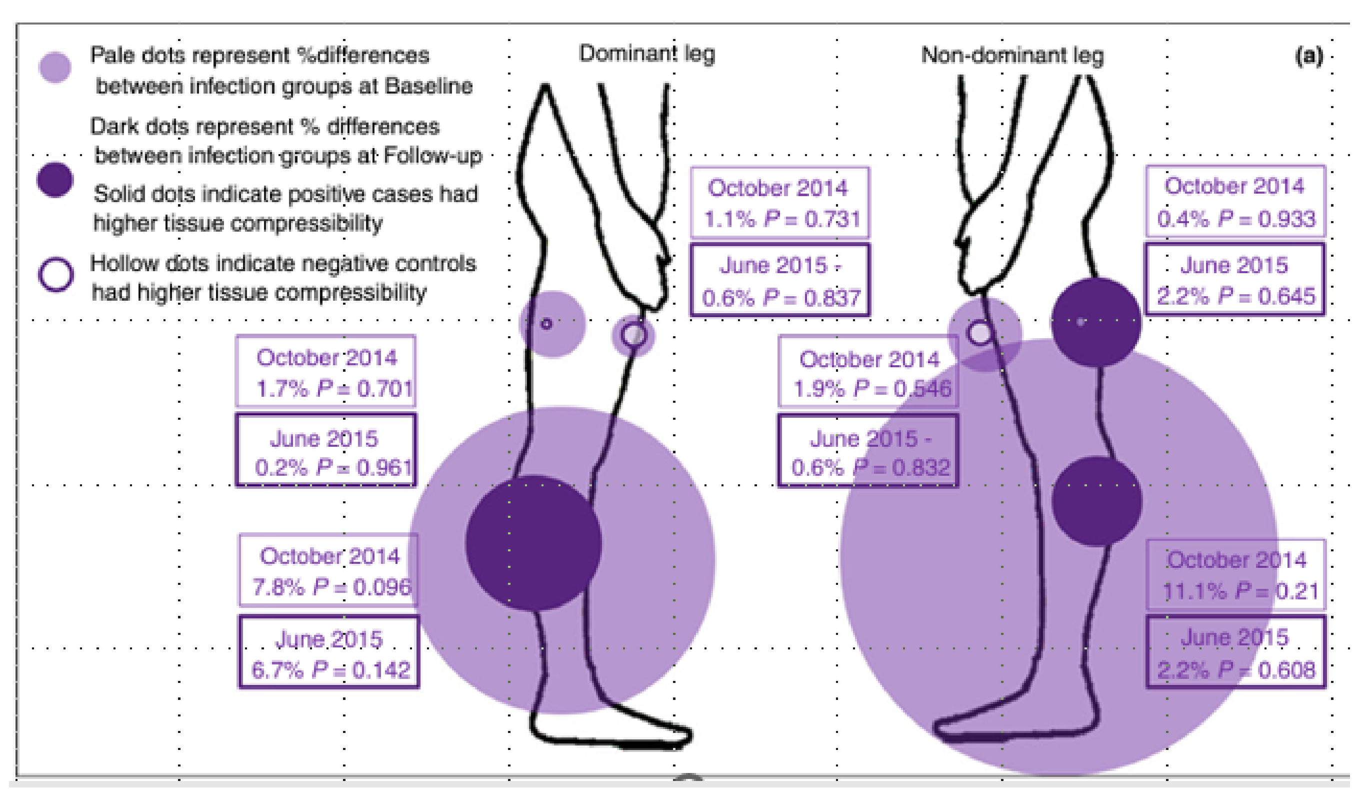
PREVENTING MORBIDITY:
MDA AND INDIVIDUAL TREATMENT.

FOCUS ON DIAGNOSIS AND TREATMENT IN SUBCLINICAL INFECTIONS, USUALLY IN YOUNG PEOPLE

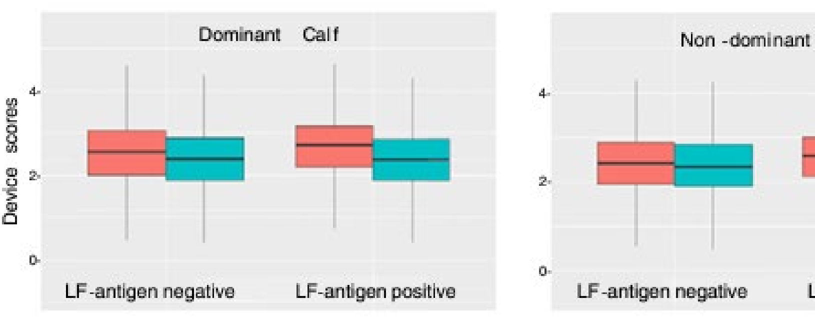
Disease progression

- Development of morbidity is a long process over years and decades.
- The treatments and interventions recommended vary according to the stage in the process.
- 4 phases
  - A: Infected but asymptomatic; subclinical lymphoedema or hydrocoele.
  - B: Mild lymphoedema or early hydrocoele
  - C: Moderate lymphoedema or hydrocoele IMPAIRMENT
  - D: Severe lymphoedema or hydrocoele DISABILITY

TREATMENT FOR LF CAN REVERSE EARLY SUBCLINICAL LYMPHOEDEMA



Compressibility score (Indurometer)



Douglass et al TROP MED INT HEALTH
volume 24 no 4 pp 463–476 april 2019
Preventive chemotherapy reverses covert, lymphatic-associated tissue change in young people with lymphatic filariasis in Myanmar
https://onlinelibrary.wiley.com/doi/full/10.1111/tmi.13212

Conclusions

- Significant covert tissue differences between LF Ag pos and neg young people at baseline.
- Difference disappeared 6 months after treatment (higher compressibility reverted to be same as Ag neg)
- Young people should be a focus of increased education and awareness in endemic areas to encourage early diagnosis and treatment

What to do at each PHASE of Infection/Morbidity

- PHASE A. SUBCLINICAL INFECTION and no obvious physical changes
  - **Treat the infection** – thoroughly. But for this, access to diagnosis is needed
  - Education
- PHASE B. infection and early physical changes – EARLY MORBIDITY
  - **Treat the infection** – thoroughly. But for this, access to diagnosis is needed
  - Treat acute attacks
  - Essential and enhanced self care
  - Education
- PHASE C. IMPAIRMENT - established lymphoedema or hydrocoele
  - Treat acute attacks
  - Essential and enhanced self care
  - Surgery for hydrocoele
- PHASE D. DISABILITY - advanced (irreversible) lymphoedema or advanced hydrocoele
  - Surgery for hydrocoele
  - Enhanced self care and community support

Take home messages…

- Initial LF infections are asymptomatic for a long time.
  - Diagnosis and treatment of LF (outside or after MDA) is needed to prevent progression and reduce onward infection
- Very early lymphoedema can be reversed
  - Treatment of LF is needed
  - Hygiene is essential but not enough to reverse lymphoedema status
  - All components of self-care should be taught and used at this stage
- Enhanced self-care important at all stages
  - Deep breathing and exercise of large muscles to clear the proximal system
  - Skin mobilisation to reverse skin and tissue changes
  - Lymphatic massage to support failing lymph vessels

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THE MISSING PHASE A
FOR **MORBIDITY PREVENTION**:
YEARS OF SUBCLINICAL
INFECTION

Annex 2. Simplified staging of lymphoedema for community-level health workers

Simplified stage	Mild	Moderate	Severe
Description	Lymphoedema without folds. Can or cannot be reversible at night.	Lymphoedema with shallow folds.	Lymphoedema with skin changes (mossy lesions, knobs, and/or deep folds)
Equivalent in 7 stage classification	1 and 2	3	4-7

PHASE A
SUB-CLINICAL INFECTION

PHASE B
EARLY MORBIDITY

PHASE C
IMPAIRMENT

PHASE D
DISABILITY

CONCLUSION: MMDP or MPDM?

- MMDP pillar assumes that morbidity already exists.
  We should be trying to prevent it before it happens
- Early lymphoedema is reversible, but access to treatment for LF is needed
- Once morbidity is irreversible, then we have to manage the impairment/disability and prevent it getting worse

- Long timeline and different needs at different times
- Appropriate treatment and follow-up needs to be available at each stage, but most care is self- and family- provided care
- Support groups/information/knowledgeable champions for community members and health workers needed at each stage

How can we engage at risk populations?

Increasing awareness of the need for early intervention

- How are patients identified and assessed?
  - What assessment tools/criteria are used? Circumference measures?
  - What staging scale do you use?
  - How could you identify young people who may be at risk?
- What is needed to implement an early identification and intervention program?
  - How are people with lymphoedema identified in the community?
  - Are people with very mild lymphoedema included in the current program?
  - What resources would be needed for preventative activities?
- How can we educate young people to look for early signs and symptoms?
  - Do children have access to video equipment at school?
  - How do teenagers communicate? Where do they congregate?
  - Are there other community groups that could be utilized? Community meetings? Church?

Upload keywords that

Describe the problem | Identify a digital solution | Show a benefit or limitation in digital solutions