



Third National Multi-sectoral Steering Committee Meeting Combating AMR Myanmar

Prof : Htay Htay Tin , DDG (Laboratory), National Focal Point for AMR & Secretary of NMSC

National Health Laboratory , Department of Medical Service , Ministry of Health and Sports , Myanmar

20th November, 2020



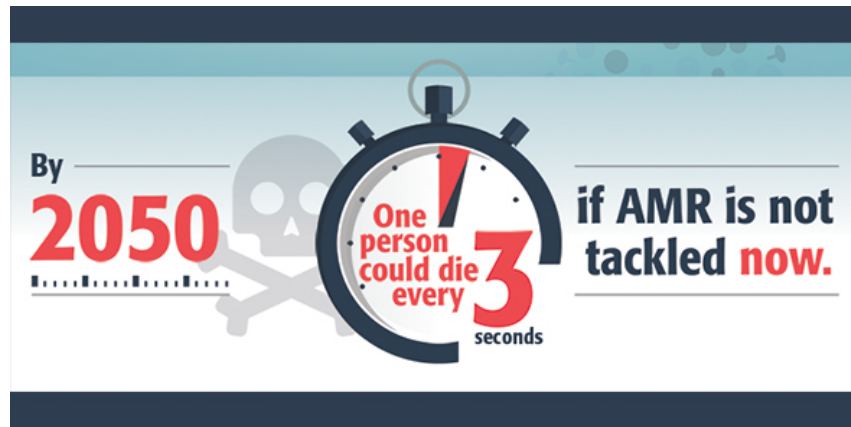
NHL, Yangon (20.11.2020)

Outline of presentation

- 01 Background of NAP AMR
- 02 Global Action Plan on AMR (GAP AMR)
- 03 Development of National Action Plan on AMR
- 04 Timeline of Events for NAP AMR (2017-2020)
- 05 Key achievements
- 06 Gaps
- 07 Way Forwards

Background of AMR

❖ Antimicrobial resistance (AMR) - is a real and immediate global threat.



Deaths attributable to AMR per year by 2050, if no action is taken

More than **10 million**

Estimated economic impact **\$100 trillion**



MRSA is the leading cause of **healthcare-associated** infections.



Treatment failures of last resort drugs for gonorrhea have been reported from 10 countries.

Antimicrobial resistance is a



global problem.

AMR infections cause **8 million** hospital days and **\$30 billion** cost to U.S. health care system per year.



The major reason for resistance development is **inappropriate use** of antimicrobial drugs.



No new major antibiotics have been discovered for **25 years**.

1.2 million infections and **\$96 million** cost are caused by resistant *Streptococcus pneumoniae* in the U.S. per year.

Multi-drug resistant tuberculosis strains caused **450 000** infections worldwide in 2012.



The WHO predicts a **post-antibiotic era**.

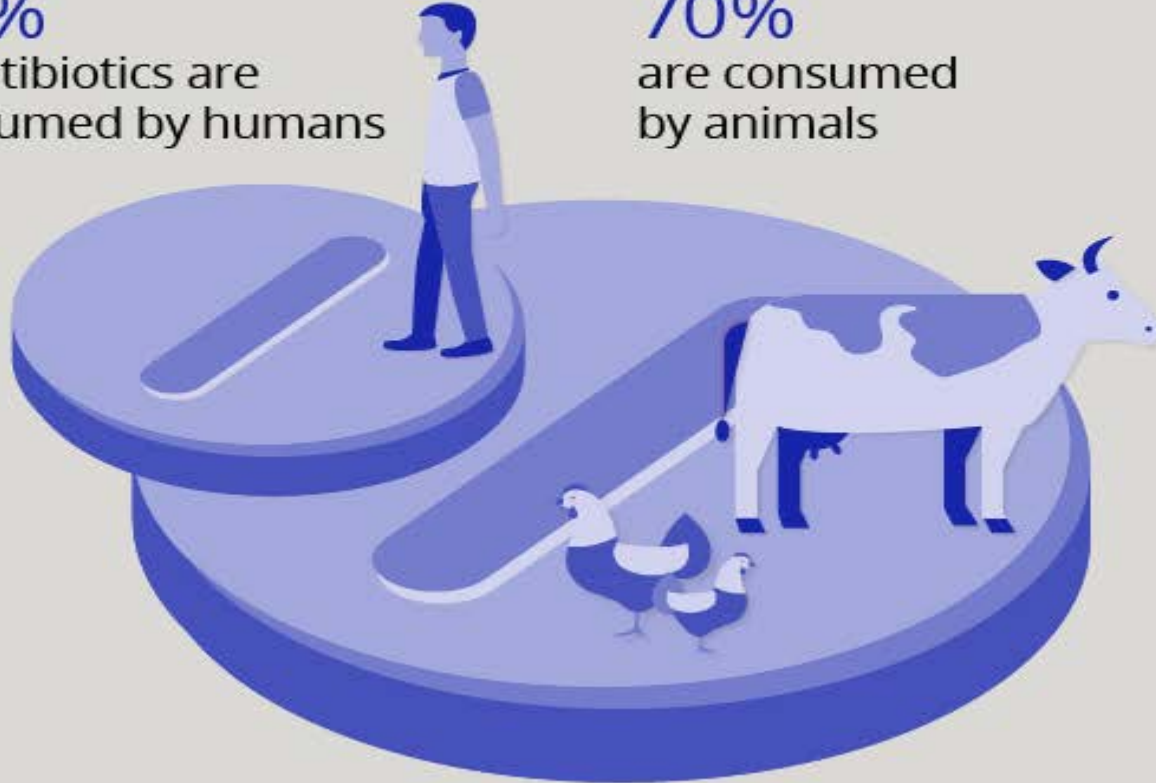
Antibiotics in human and animals

Antibiotics in humans and animals

2012

30%
of antibiotics are
consumed by humans

70%
are consumed
by animals

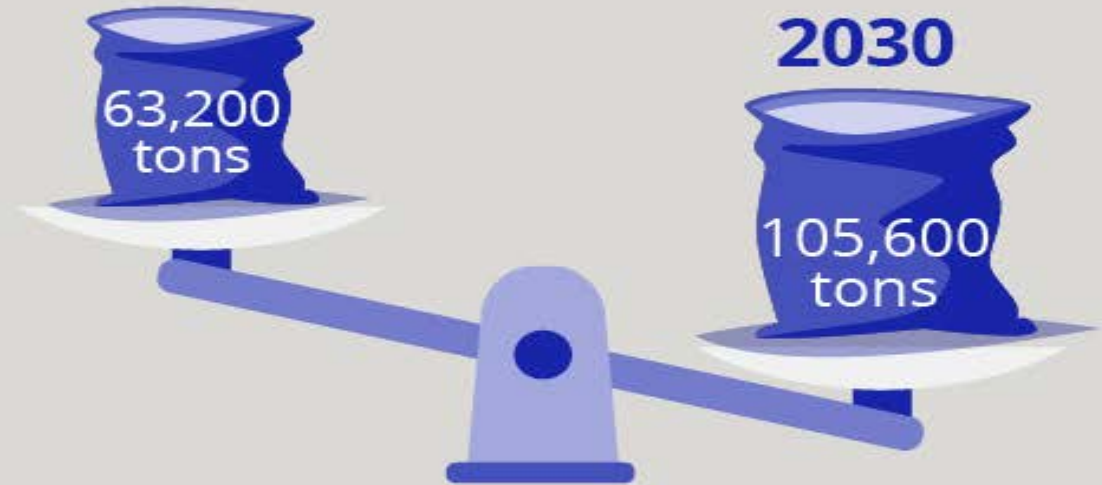


2010

63,200
tons

2030

105,600
tons



By 2030

Global consumption of antibiotics in
livestock production to increase by
two-thirds

Background of AMR

- ❖ At the 68th World Health Assembly in May 2015, a global action plan on AMR (GAP AMR) - adopted in response to the acknowledgement of this emerging crisis



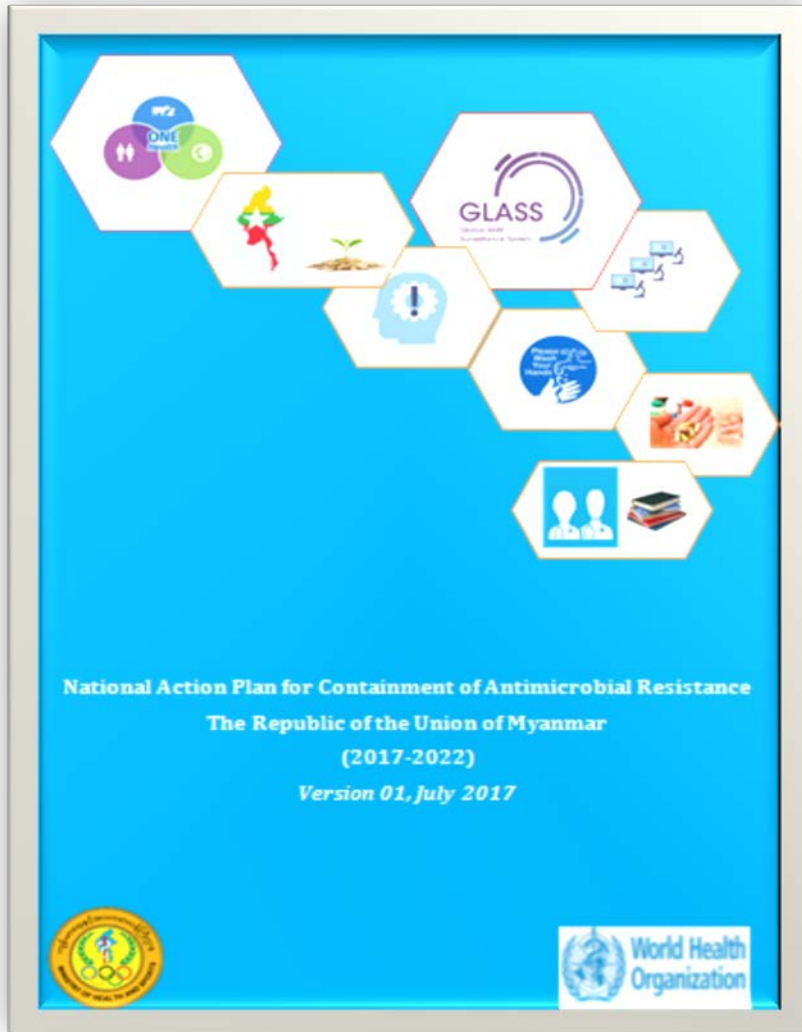
Stakeholder meeting on NAP AMR (27.2.2017)



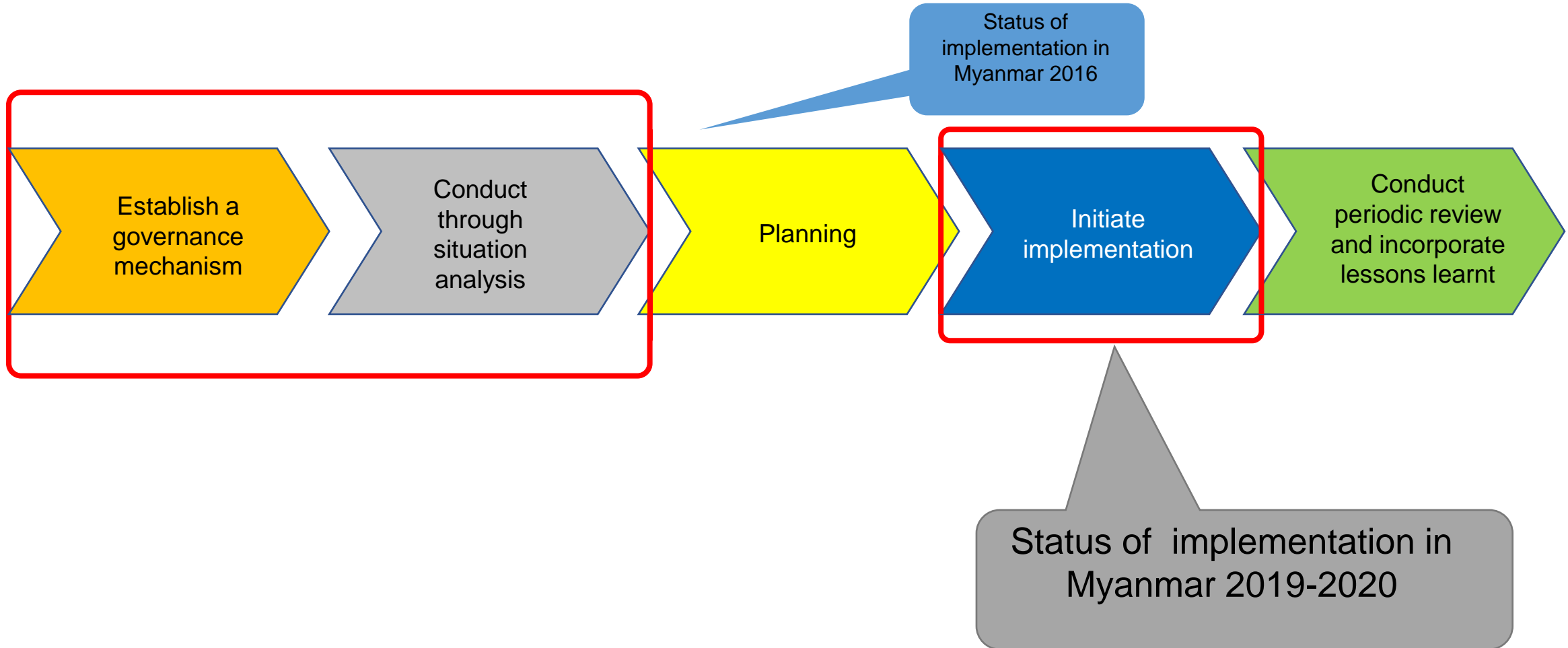
- ❖ Review the existing proposals on governance mechanisms and propose a single comprehensive yet implementable multi-sectoral governance mechanism in line with WHO NAP guidelines
- ❖ Review strategic interventions, objectives in light of the situation analysis and any subsequent in country developments related to AMR Control
- ❖ Recommend next steps for finalization of NAP AMR for Myanmar

National Action Plan for containment of Antimicrobial Resistance (NAP-AMR): Myanmar

(NAP-AMR): Myanmar (2017-2022), Version 01 - had been launched in line with Global Action Plan on AMR (GAP-AMR) in July, 2017



Steps in development and implementation of NAP-AMR status in Myanmar

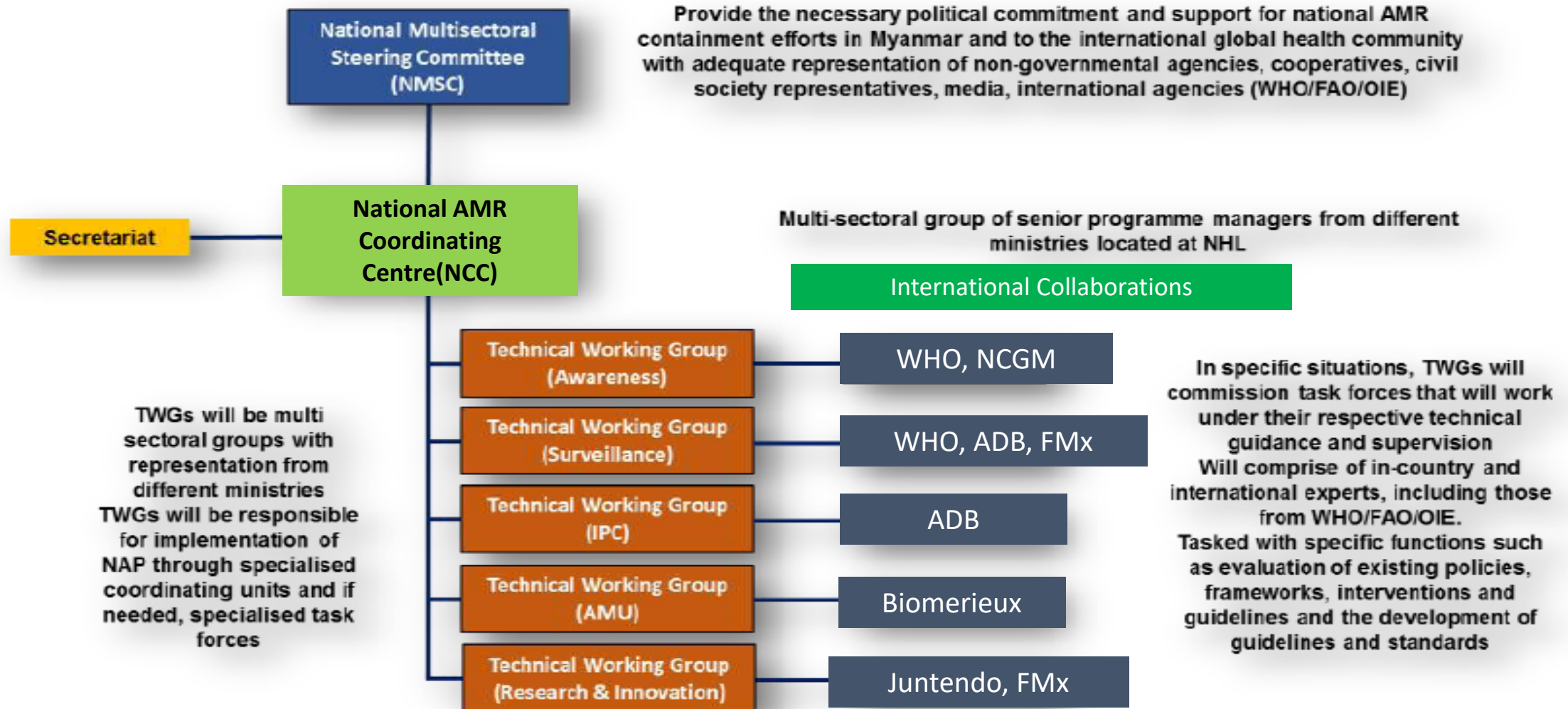


Five strategic objectives in NAP-AMR

- **Objective 1**: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training
- **Objective 2**: Strengthen the knowledge and evidence base through surveillance and research
- **Objective 3**: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures
- **Objective 4**: Optimize the use of antimicrobial medicines in human and animal health
- **Objective 5**: Develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines and other interventions



NMSC, NCC and International Implementation Partners



NAP AMR Myanmar

National Multisectoral Steering Committee



National Coordinating Centre



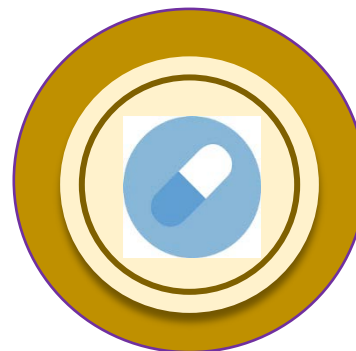
Awareness
TWG



Surveillance
TWG



IPC
TWG



AMU
TWG



R & I
TWG

National Multi-sectoral Steering Committee Combating AMR, Myanmar

Endorsed .. 22nd January 2018

❑Chairman.. Union Minister of Health and Sports

❑Secretary .. DyDG (Labs)

❑19 members in multi-sectoral and one health approach



National Multi-sectoral Steering Committee Combating AMR, Myanmar

Reorganized in 2020 (wait approval from president office)

❑ Chairman.. Union Minister of Health and Sports

❑ Secretary .. DG (Medical Services)

❑ Associate Secretary .. DyDG (Labs.)

❑ 19 members in multi-sectoral and one health approach



National Coordinating Centre (NCC)

- **WHO listed National Coordinating Centre (NCC)** was established in June, 2018
- Chaired by **National Focal Point** (Deputy Director General (Labs))
- Located at NHL, Yangon

Members of NCC

- Ministry of Health and Sports (DoPH, DoMS, DHRH, FDA, DMR)
- Ministry of Defence (DSMA)
- Ministry of Agriculture, Livestock and Irrigation (LVBD Lab, Agri. Lab, DoF)
- Ministry of Home Affairs
- Ministry of Industry
- MMA, MAMS, MPHA, MPA, MLF, MHAA & MNA
- WHO & FAO



1st Meeting of 5 TWG

Five TWG meetings for Strategic Intervention of NAP AMR were held in August 2018

- Awareness & Surveillance group meetings - 9.8.2018
- Antimicrobial Use & IPC groups meeting - 10.8.2018
- Research and Innovation group meeting - 17.8.2018

2nd Meeting of NCC and 5 TWG

- Second meeting of 2 TWG (Awareness and Antimicrobial usage) were held on 5.6.2019 (NHL)
- Second meeting of NCC and 3 TWG (Surveillance, Infection prevention and Control, Research and Innovation) were held on 30.9.2019 (Summit Parkview Hotel)



3rd Meeting of NCC (Virtual Meeting)

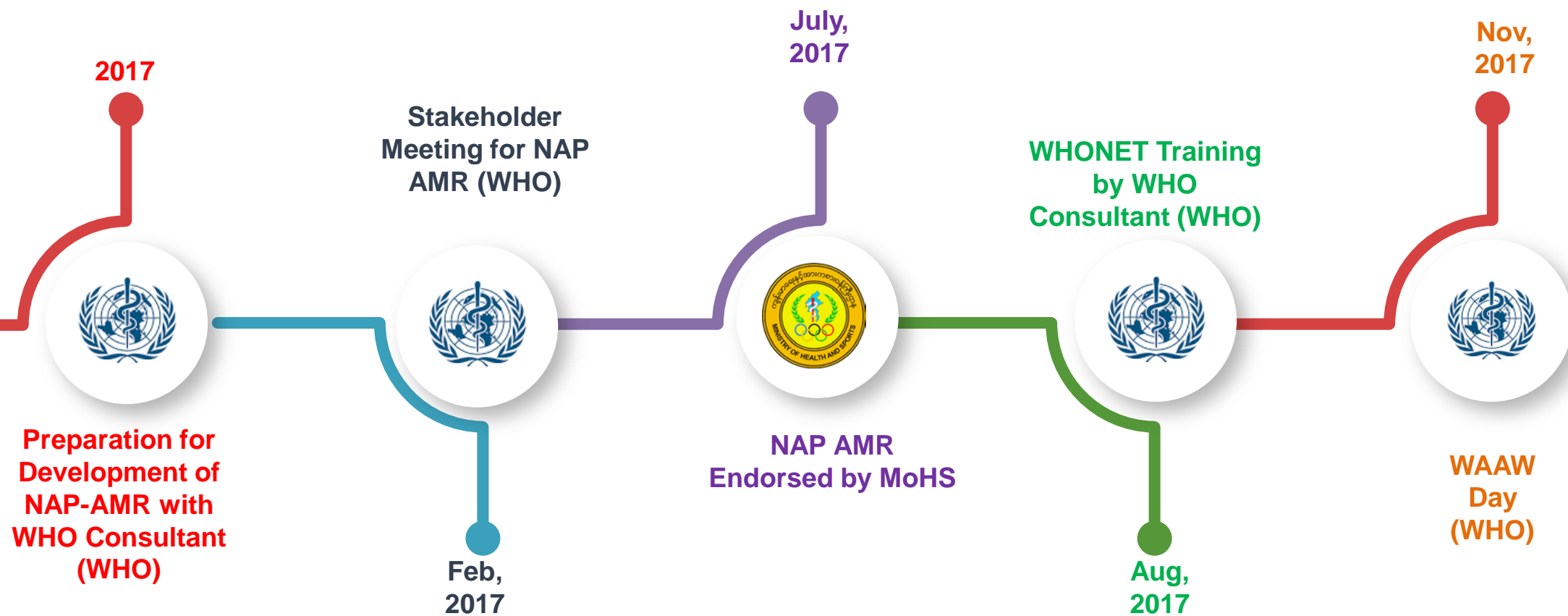
Date: 18.11.2020

Recommendations from meeting

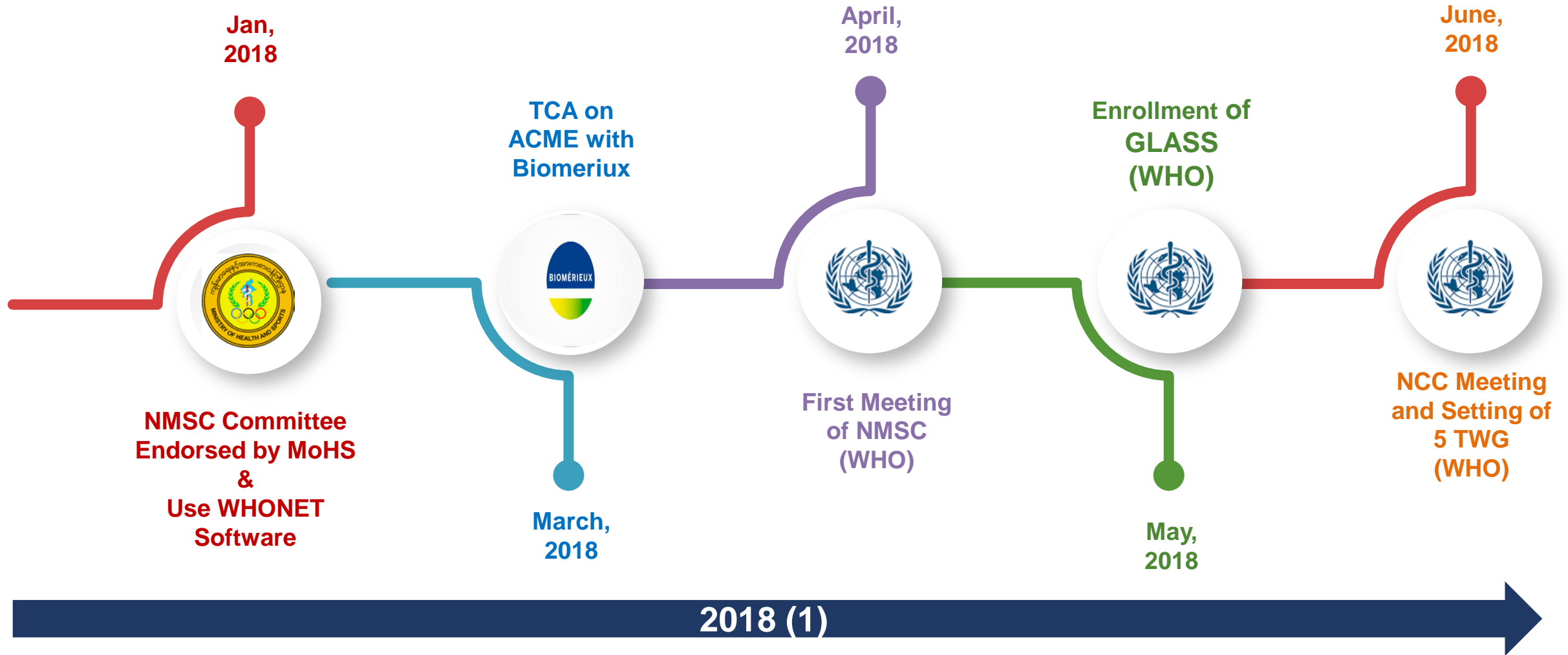
- To reinforce monitoring system in patient care
- Budget and refresher training of IPC for hospital staffs
- To reinforce Antibiotic Law and policy for usage of Antibiotic usage
- To improve research activities
- To promote the role of clinical pharmacologists in Hospital settings



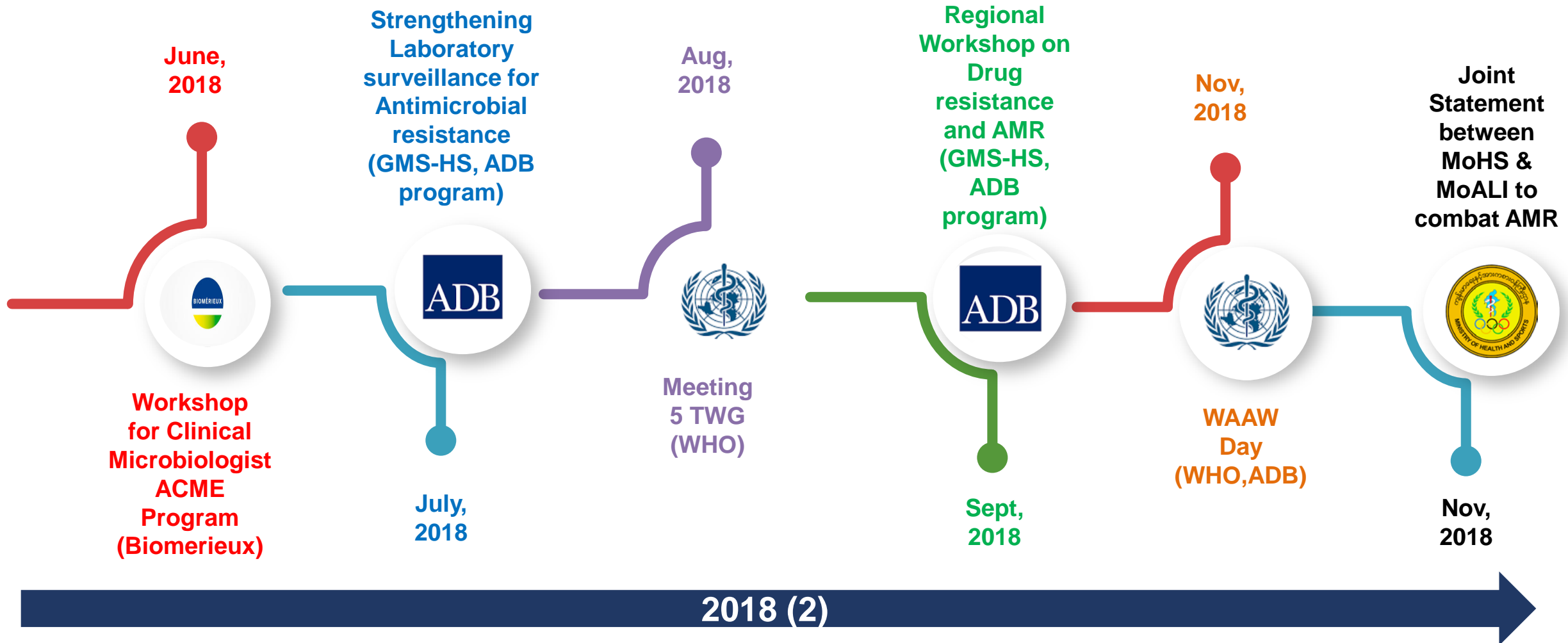
Timeline of Events for NAP AMR (2017)



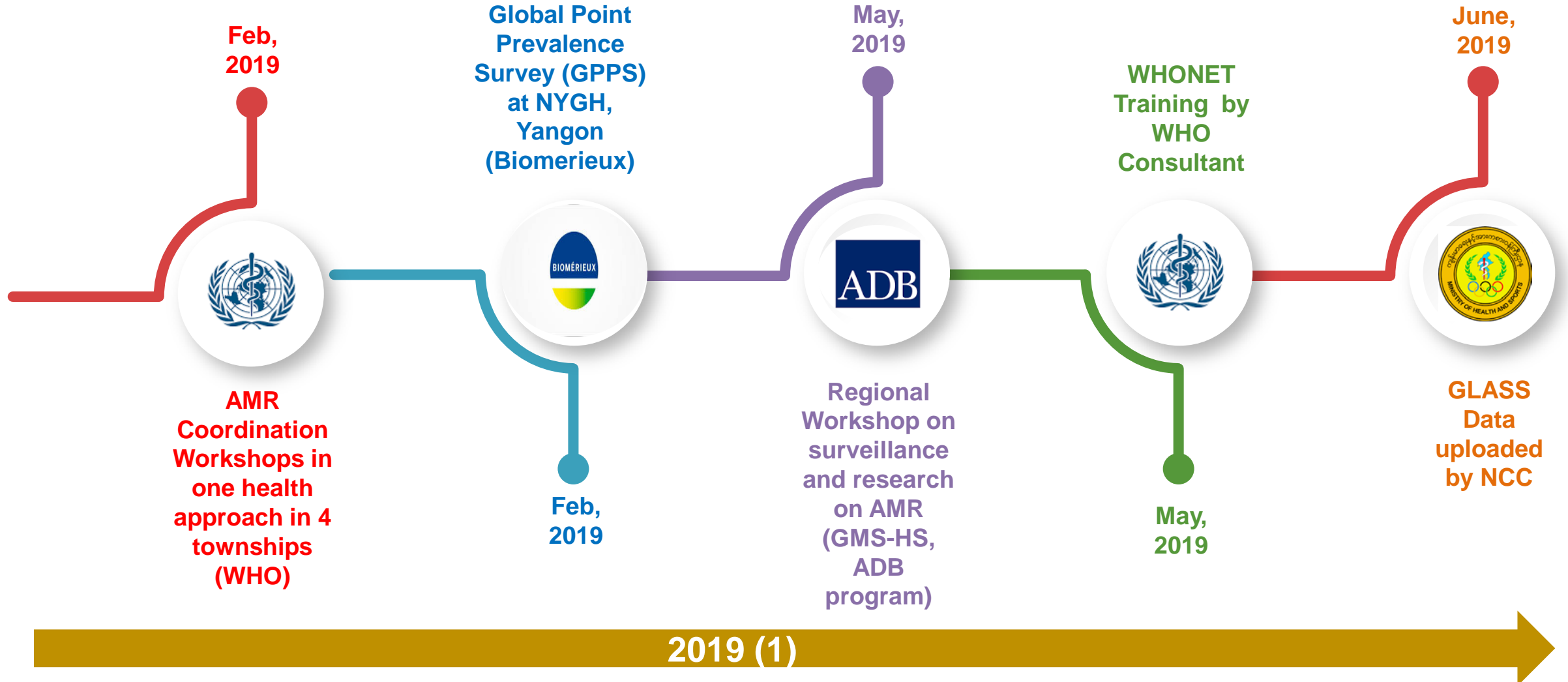
Timeline of Events for NAP AMR (2018) (cont)



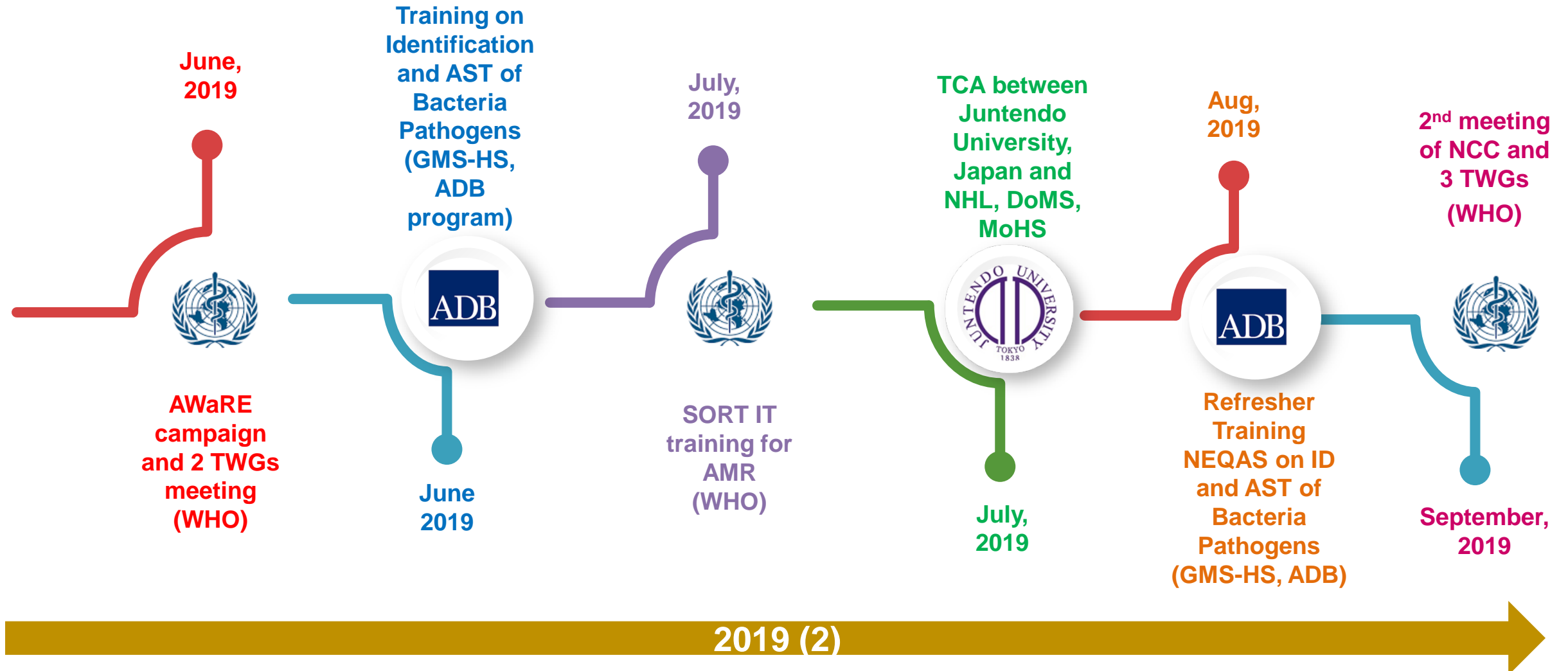
Timeline of Events for NAP AMR (2018) cont



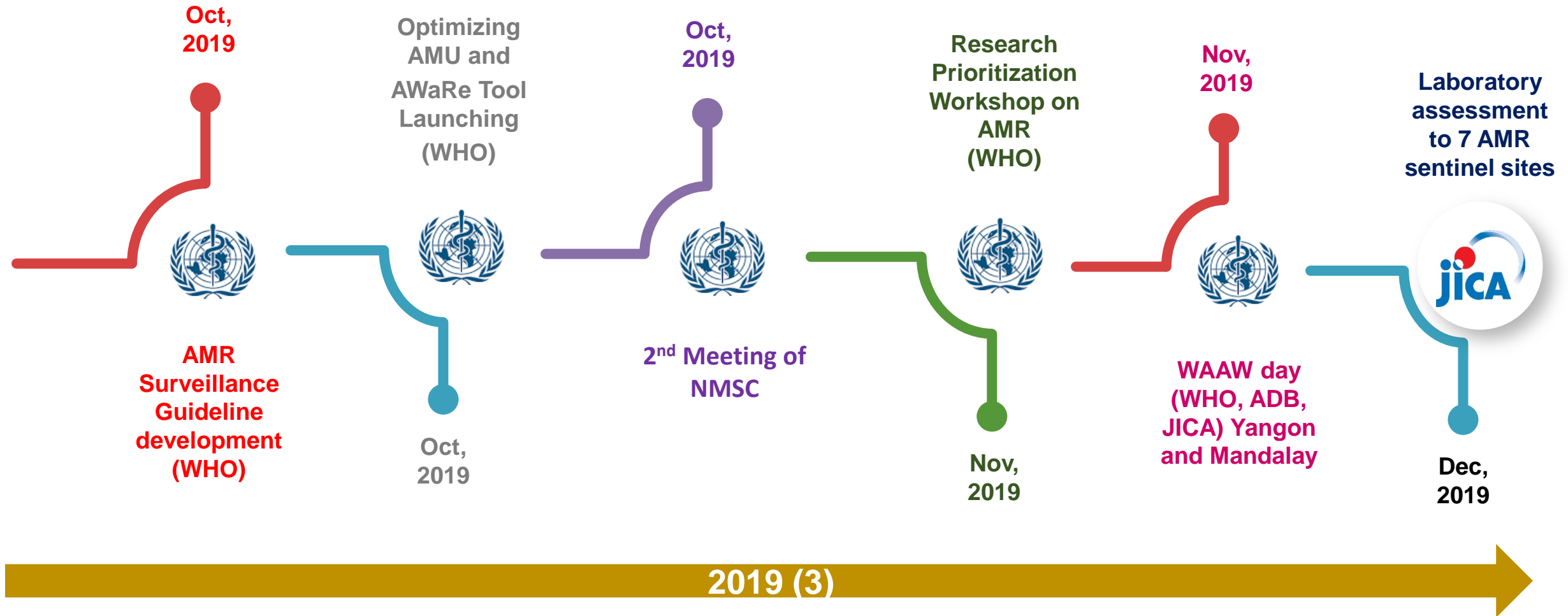
Timeline of Events for NAP AMR (2019) cont



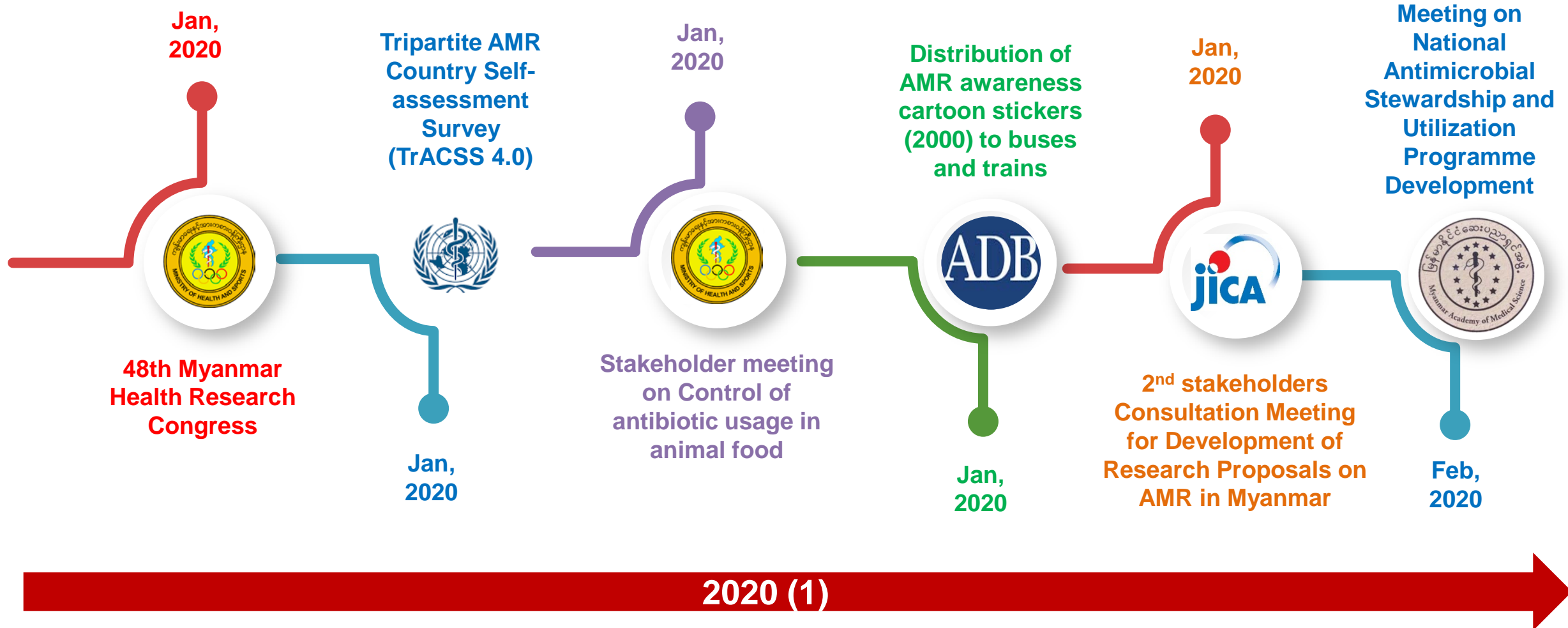
Timeline of Events for NAP AMR (2019) cont



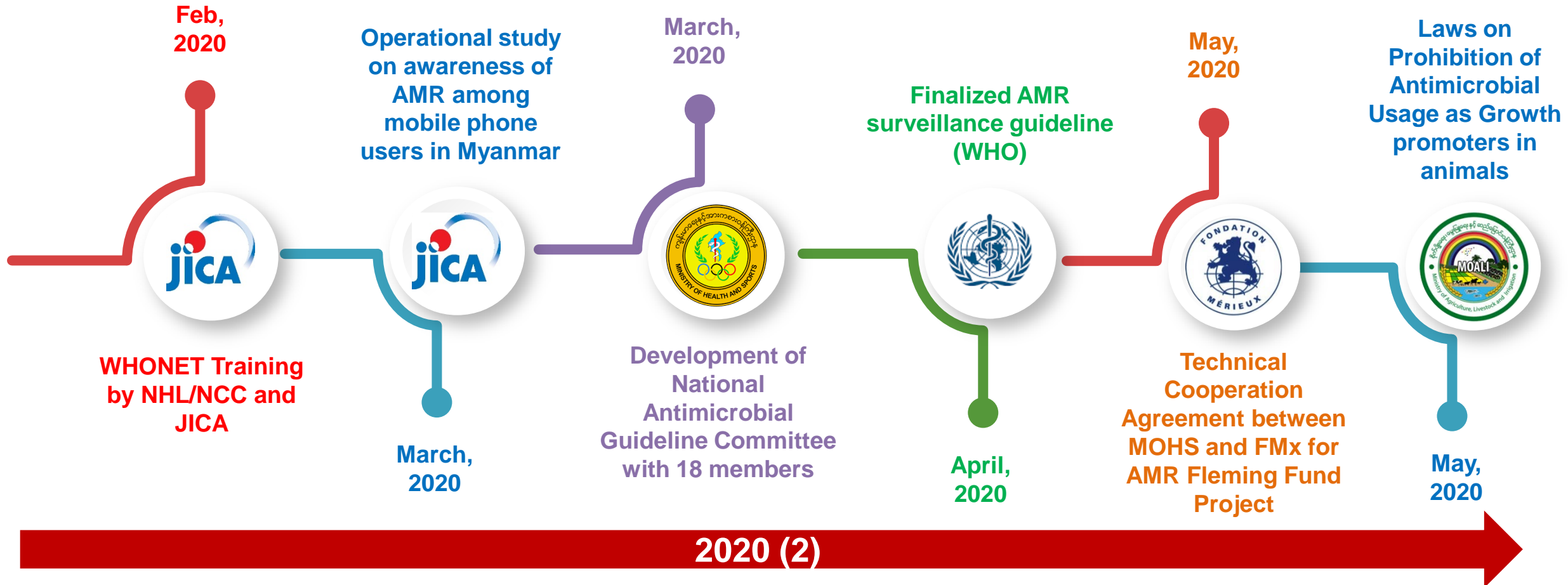
Timeline of Events for NAP AMR (2019) cont



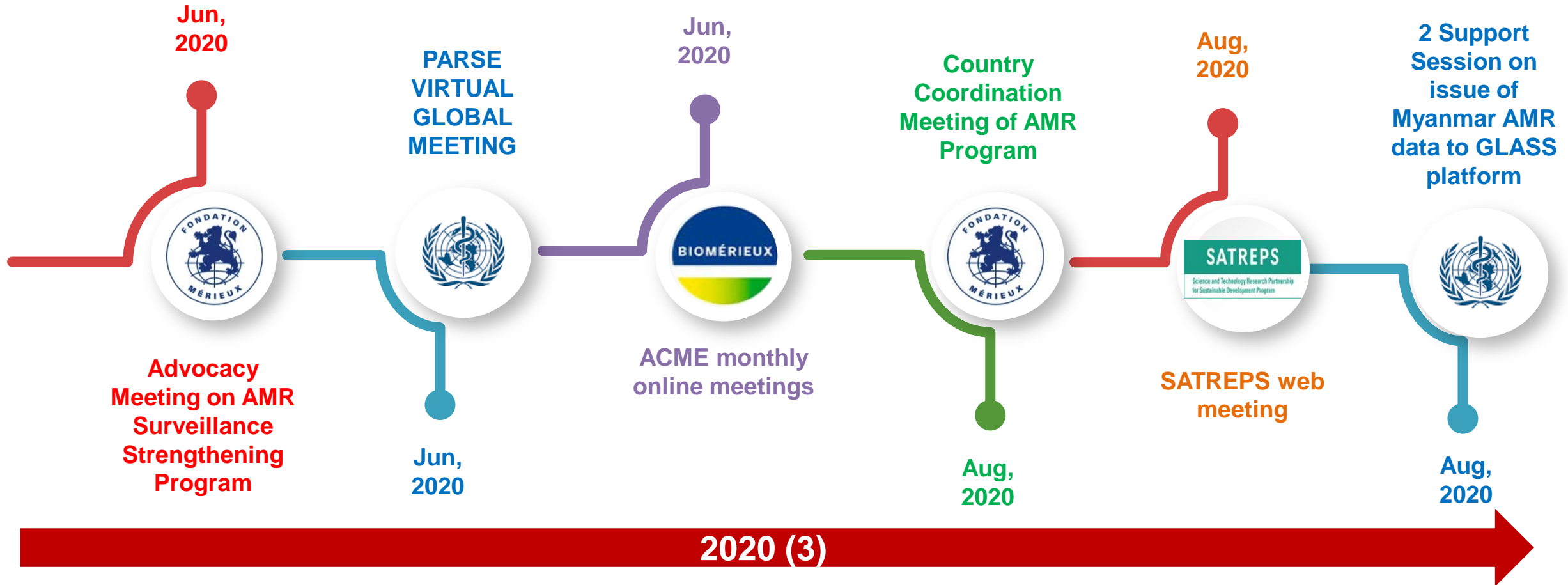
Timeline of Events for NAP AMR (2020) cont



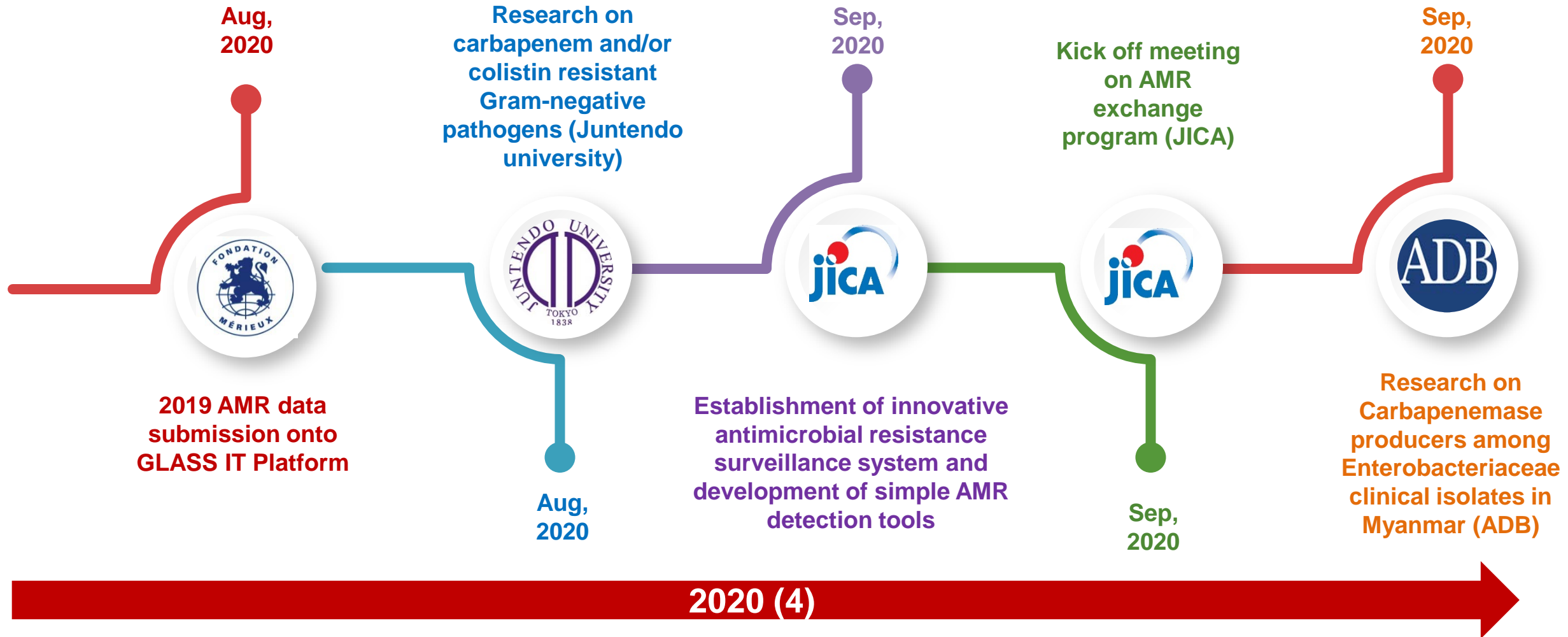
Timeline of Events for NAP AMR (2020) cont



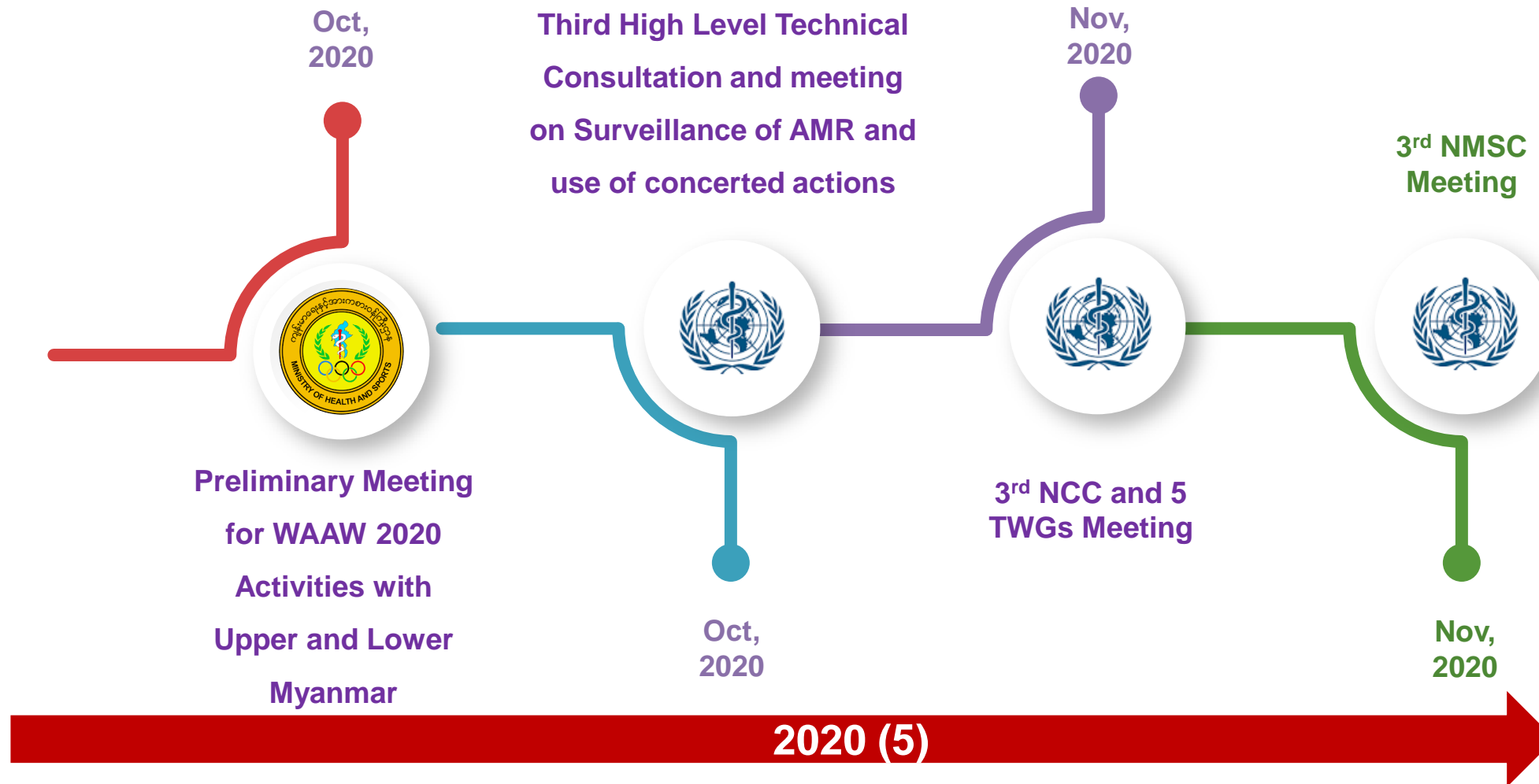
Timeline of Events for NAP AMR (2020) cont



Timeline of Events for NAP AMR (2020) (cont)



Timeline of Events for NAP AMR (2020) (cont)



Key Achievements

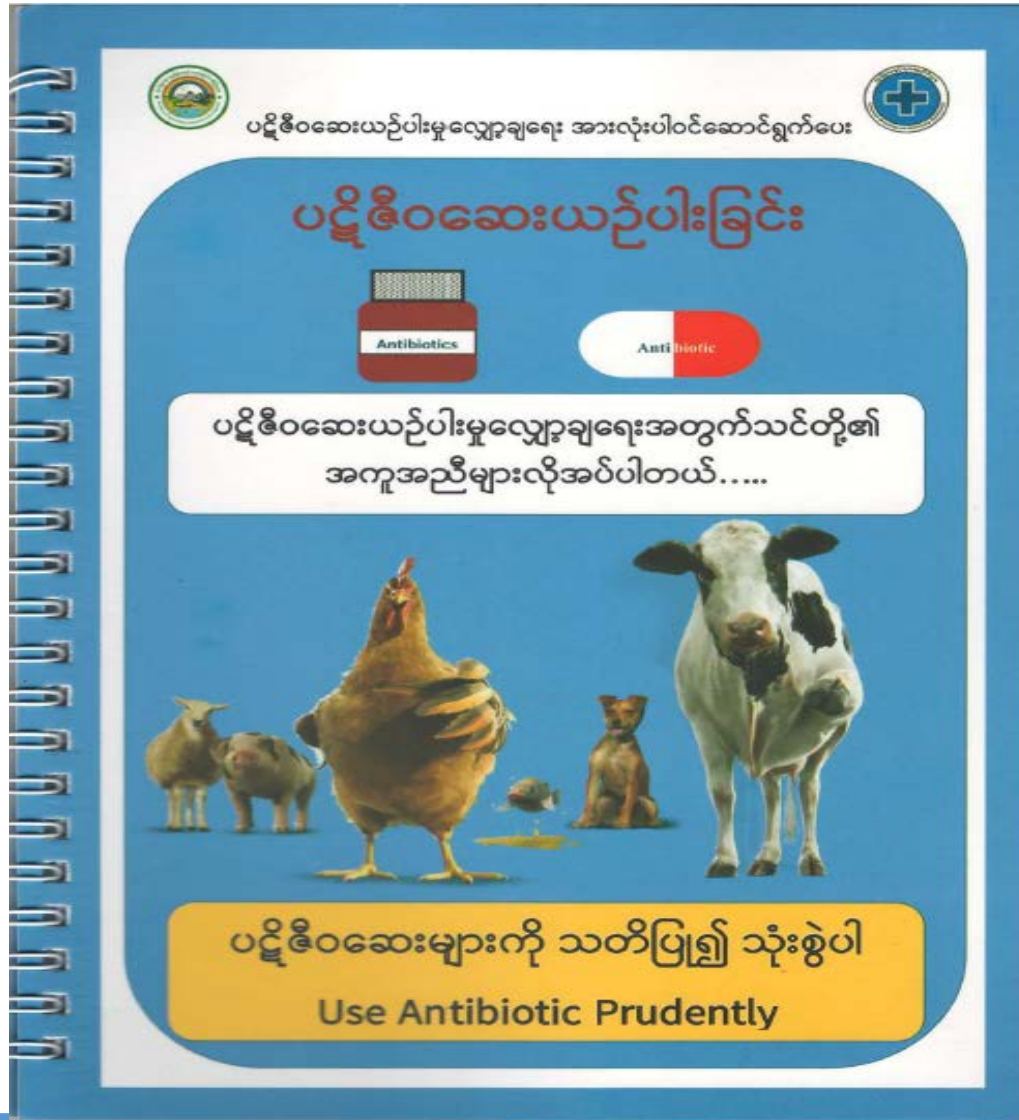


Activities for Raising AMR Awareness

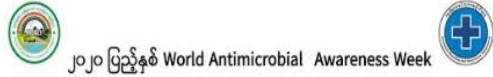
- Yearly celebration of World Antimicrobial Awareness Week since 2017
- Display of Photos and Posters at WAAW event
- Competition of Cartoon and Posters
- Distribution of Pamphlets, Cartoons and other IEC materials
- Broadcasting of AMR related Health Talks, song and music video in radio, MRTV and other medias - for widely distribution AMR related knowledge in community



2020 World Antibiotic Awareness Week Key Messages



2020 World Antibiotic Awareness Week Key Messages



ပဋိဇီဝဆေးယဉ်ပါးခြင်း



ပဋိဇီဝဆေးယဉ်ပါးမှုလျှော့ချရေးအတွက်သင်တို့၏
အကူအညီများလိုအပ်ပါတယ်.....



ပဋိဇီဝဆေးများကို သတိပြု၍ သုံးစွဲပါ
Use Antimicrobials Prudently



ပဋိဇီဝဆေးယဉ်ပါးမှုလျှော့ချရေး အားလုံးပူးပေါင်းပါဝင်ပေး

တိရစ္ဆာန်မွေးမြူထုတ်လုပ်သူများ
လိုက်နာရန်အချက်များ

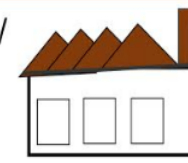


- မိမိမွေးမြူရေးခြံတွင် တိရစ္ဆာန်ဆေးကုဆရာဝန်မှ ညွှန်ကြားသည့် ပဋိဇီဝဆေးများကိုသာ အသုံးပြုရန်။
- တိရစ္ဆာန်ဆေးကုဆရာဝန်မှညွှန်ကြားသောဆေးအဆ၊ ဆေးပေး ကာလ၊ သုံးစွဲရမည့်နည်းလမ်း (ဥပမာ- ရေဖျော်ဆေး၊ အစာစပ် ဆေး)၊ ဆေးဖြတ်ကာလအတိုင်း တိတိကျကျလိုက်နာရန်။
- အသုံးပြုခဲ့သောပဋိဇီဝဆေးများကိုလည်း မှတ်တမ်းများထားရှိရန်။
- မိမိမွေးမြူထားသောတိရစ္ဆာန်များကို လိုအပ်သောကာကွယ်ဆေးများ ပုံမှန်ထိုးနှံရန်။
- တိရစ္ဆာန်ကူးစက်ရောဂါများကျရောက်မှုနည်းပါးစေရန် ကောင်းမွန် သောမွေးမြူမှုကျင့်စဉ်နှင့် ဇီဝလုံခြုံရေးဆိုင်ရာအစီအမံများကို လိုက် နာဆောင်ရွက်ရန်။



ပဋိဇီဝဆေးယဉ်ပါးမှုလျှော့ချရေး အားလုံးပူးပေါင်းပါဝင်ပေး

တိရစ္ဆာန်သုံးပဋိဇီဝဆေးများတင်သွင်း/
ထုပ်ပိုး/ဖြန့်ဖြူး/ရောင်းချသူများ
လိုက်နာရန် အချက်များ



- ပဋိဇီဝဆေးများ တင်သွင်း/ ထုပ်ပိုး/ ဖြန့်ဖြူး/ ရောင်းချခြင်းများအတွက် ခွင့်ပြုချက်ရယူရန်နှင့် သက်ဆိုင်ရာဦးစီးဌာနမှ ထုတ်ပြန်ထားသော စည်းကမ်းသတ်မှတ်ချက်များအတိုင်းလိုက်နာရန်။
- တရားဝင်ခွင့်ပြုထားသော တိရစ္ဆာန်သုံးပဋိဇီဝဆေးများကိုသာ တင်သွင်း/ထုပ်ပိုး/ဖြန့်ဖြူး/ရောင်းချရန်။
- ပဋိဇီဝဆေးများ ထုတ်လုပ်/ထုပ်ပိုး/သိုလှောင်/သိမ်းဆည်း/ဖြန့်ဖြူး/ ရောင်းချရာတွင် မူလအရည်အသွေးကို မထိခိုက်စေဘဲ ကောင်းမွန်သော ထုတ်လုပ်မှုကျင့်စဉ်များအတိုင်း လိုက်နာရန်။
- ပဋိဇီဝဆေးများပါဝင်သောဆေးဝါးထုတ်ကုန်များကို တရားဝင်ခွင့်ပြု ချက်ဖြင့်သာ ဖြန့်ဖြူး/ရောင်းချရန်။
- တင်သွင်း/ထုပ်ပိုး/ဖြန့်ဖြူး/ရောင်းချသည့်ဆေးပမာဏ၊ ဆေးအမျိုးအစား အလိုက် မှတ်တမ်းများထားရှိရန်။



ပဋိဇီဝဆေးယဉ်ပါးမှုလျှော့ချရေး အားလုံးပူးပေါင်းပါဝင်ပေး

တိရစ္ဆာန်အစာထုတ်လုပ်/တင်သွင်း/
ထုပ်ပိုး/ဖြန့်ဖြူး/ရောင်းချသူများ
လိုက်နာရန်အချက်များ



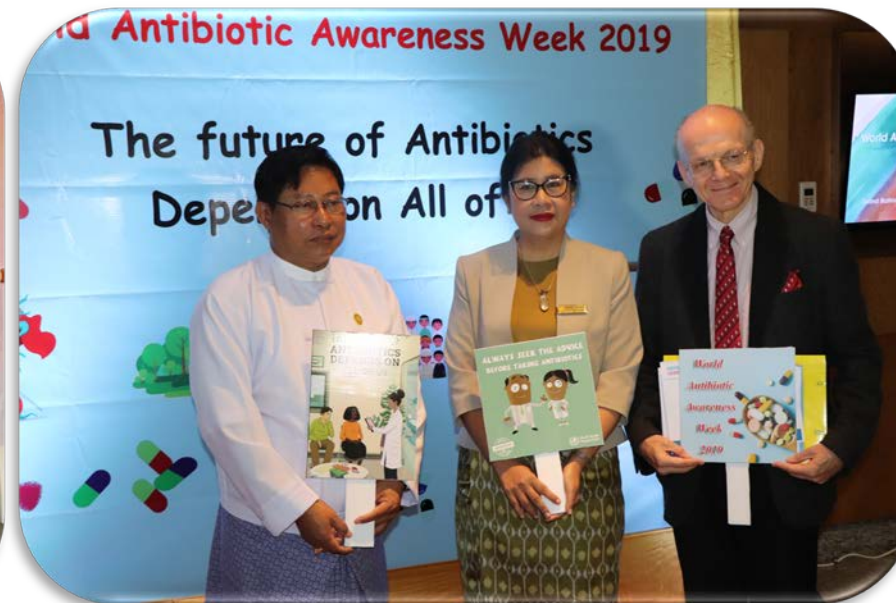
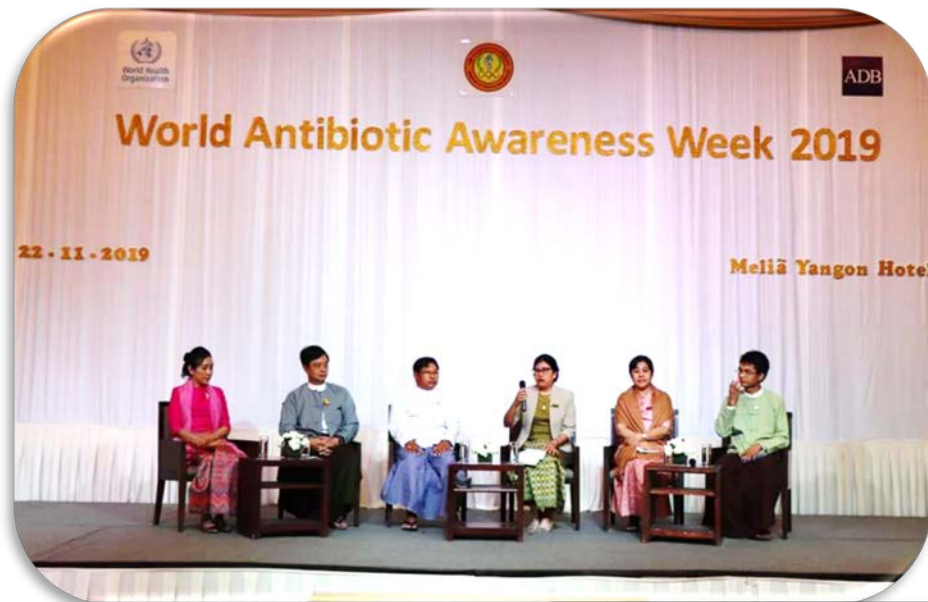
- ပဋိဇီဝဆေးများပါဝင်သောတိရစ္ဆာန်အစာများကို ထုတ်လုပ်/တင် သွင်း/ထုပ်ပိုး/ဖြန့်ဖြူး/ရောင်းချခြင်းအတွက် ခွင့်ပြုချက်ရယူရန်နှင့် သက်ဆိုင်ရာဦးစီးဌာနမှထုတ်ပြန်ထားသော စည်းကမ်းသတ်မှတ်ချက် များအတိုင်း လိုက်နာရန်။
- တိရစ္ဆာန်အစာများတွင် ထည့်သွင်းခြင်းမပြုရန် တားမြစ်ထားသည့် ပဋိဇီဝဆေးများကို လုံးဝထည့်သွင်းခြင်းမပြုရန်။
- တိရစ္ဆာန်အစာအိတ်ပေါ်တွင်ဖော်ပြရမည့်အညွှန်းစာနှင့်ပတ်သက်၍ သက်ဆိုင်ရာဦးစီးဌာနမှထုတ်ပြန်ထားသော စည်းကမ်းသတ်မှတ်ချက် များအတိုင်းလိုက်နာရန်။
- တိရစ္ဆာန်အစာများ ထုတ်လုပ်/ထုပ်ပိုး/သိုလှောင်/သိမ်းဆည်း/ပို့ဆောင် ခြင်းများအတွက် မူလအရည်အသွေးကို မထိခိုက်စေရန် ကောင်းမွန် သောကျင့်စဉ်များအတိုင်း လိုက်နာရန်။
- ပဋိဇီဝဆေးများပါဝင်သောအစာများကို တရားဝင်ခွင့်ပြုချက်ဖြင့်သာ ဖြန့်ဖြူး/ရောင်းချရန်နှင့် မှတ်တမ်းများထားရှိရန်။



Celebration of World Antibiotic Awareness Week 2018 (15th November 2018, Nay Pyi Taw)



Celebration of World Antibiotic Awareness Week 2019 Yangon (22nd November, 2019)



Celebration of World Antibiotic Awareness Week 2019 Mandalay (18th November, 2019)

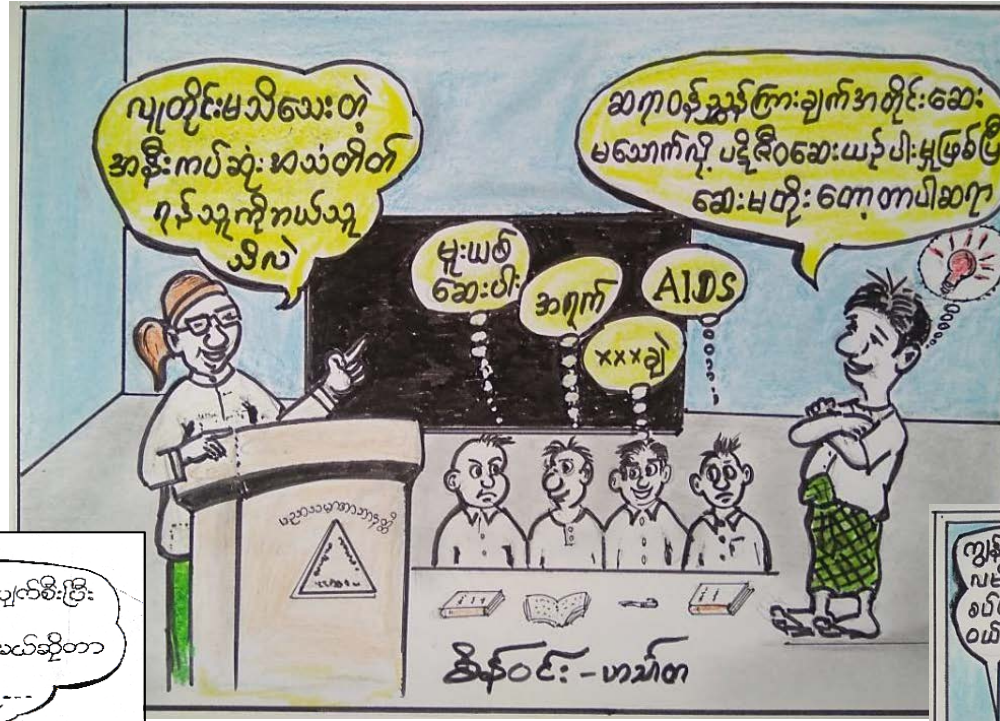


WAAW 2020 Cartoon Competition Winners

Second



Third



First



ပဋိဇီဝဆေးယဉ်ပါးခြင်းဆိုသည် ဆေးမတိုးခြင်းပြဿနာ

ပဋိဇီဝဆေးယဉ်ပါးခြင်းဆိုသည်မှာ ဆေးမတိုးခြင်းကို ဆိုလိုသည်။
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ပါမောက္ခ ဒေါက်တာဌေးဌေးတင်

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- ❖ ၂၀၁၅ ခုနှစ်တွင် ပဋိဇီဝဆေးယဉ်ပါးခြင်းအတွက် ကုန်ကျစရိတ်မှာ တစ်ကမ္ဘာလုံး အချုပ်အခြာ ၆၆ ထရီလီယံ (တောင်ပေါင်) ဖြစ်သည်။
- ❖ မြန်မာနိုင်ငံအနေဖြင့်လည်း ပဋိဇီဝဆေးယဉ်ပါးခြင်း ပြဿနာသည် နိုင်ငံ၏ကျန်းမာရေး၊ လူမှုရေးဆိုင်ရာ ကြီးမားသောခြိမ်းခြောက်မှုတစ်ခု ဖြစ်လာ။

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- ❖ တစ်ဦးချင်းလိုက်နာရန် ဖွဲ့ကွက်မှုက အခြေခံ ဖြစ်ပေါ်လာသော ပဋိဇီဝဆေး ယဉ်ပါးခြင်းကို စွဲသည့် တစ်နှစ်လျှင် ကမ္ဘာ အနှံ့ရှိ လူသားပေါင်း ၃၃ သိန်းကို သေဆုံးစေသည့် ဒုက္ခကပ်ရန်ဖြစ်လာခဲ့။
- ❖ ကျွန်ုပ်တို့သုံးစွဲသော ခန့်မှန်းချက်များအရ လာမည့် ၂၀၁၅ ခုနှစ်တွင် ကမ္ဘာ လူသား သိန်းတစ်ရာ (၁၀) သန်းအထိ သေဆုံးလိမ့်မည်ဟု ဟောကိန်းထုတ်ထား။

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WAAW 2020 အထိမ်းအမှတ်ဆောင်းပါး

WAAW 2020 theme song music video, cartoon animation and poster



AMR Awareness Raising Poster and bill-board for WAAW 2020

ပဋိဇီဝဆေးဝါးယဉ်ပါးမှုကြောင့် နှစ်စဉ်လူပေါင်းခုနစ်သိန်းကျော် သေဆုံးနေပြီး ၂၀၅၀ ခုနှစ်တွင် စုစုပေါင်း(၁၀)သန်းအထိ သေဆုံးနိုင်ပါသည်။

ပဋိဇီဝဆေးယဉ်ပါးခြင်းဆိုသည်မှာ ပဋိဇီဝဆေးဝါးများကို ဘက်တီးရီးယား၊ ဝှီးများက ခံနိုင်ရည် ရှိလာခြင်း ဖြစ်ပြီး ကူးစက်ရောဂါများကို ကုသနိုင်စွမ်း လျော့နည်းလာခြင်း ဖြစ်သည်။ ပဋိဇီဝဆေးများကို အစွမ်းထက် စေရန်အတွက် အထူးဂရုစိုက်သုံးစွဲရန် လိုအပ်ပါသည်။



UNITED TO PRESERVE ANTIMICROBIALS

WORLD ANTIMICROBIAL AWARENESS WEEK 2020

World Health Organization Myanmar

ပဋိဇီဝဆေးဝါးများကို မိမိသဘောအတိုင်း မသုံးစွဲရ။ ကျွမ်းကျင်သူ နှင့် အရင်တိုင်ပင်ပါ။



ပဋိဇီဝဆေးဝါး ယဉ်ပါးမှုကြောင့် ဆေးမတိုးခြင်းများ ဖြစ်ပေါ်နေပြီး နှစ်စဉ်လူပေါင်းများစွာ သေဆုံးနေရပါသည်။ ဆေးအာနိသင် ကြာရှည်စွာ အစွမ်းထက် စေရန် အားလုံးထိန်းသိမ်း သုံးစွဲရန် လိုအပ်ပါသည်။

UNITED TO PRESERVE ANTIMICROBIALS

WORLD ANTIMICROBIAL AWARENESS WEEK 2020

World Health Organization Myanmar

“ပဋိဇီဝဆေးအာနိသင် ကြာရှည်စွမ်းထက်ဖို့ အားလုံးထိန်းသိမ်းသုံးစွဲဖို့”



ပဋိဇီဝဆေးများကို မလိုအပ်ဘဲ မသောက်သုံးပါနဲ့



ကျန်းမာရေး ပညာရှင်များ၏ ညွှန်ကြားချက် အတိုင်းသာ သောက်သုံးပါ။

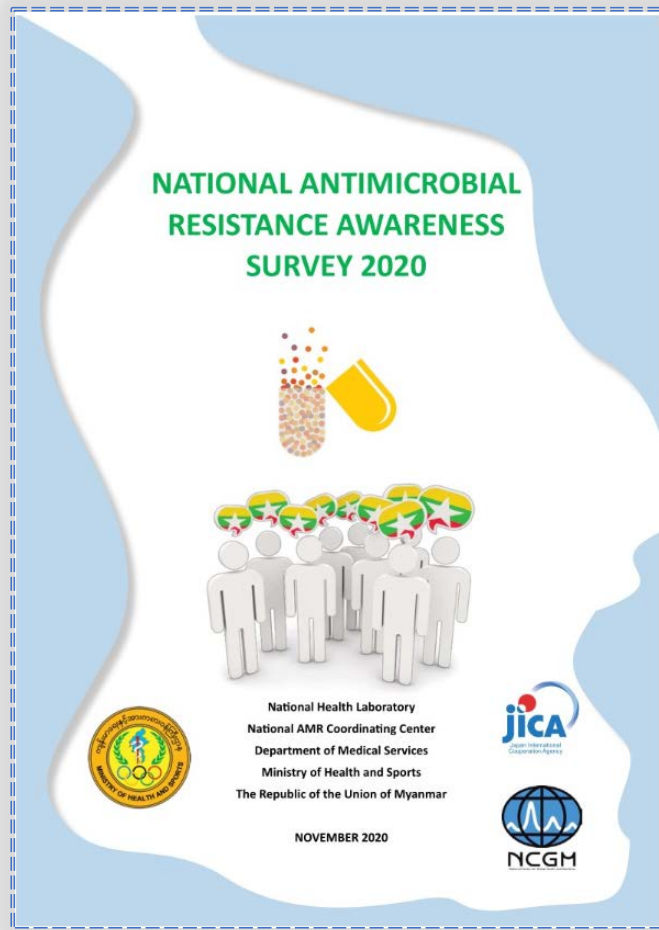
ကမ္ဘာ့ပဋိဇီဝဆေးယဉ်ပါးမှု အသိပညာပေး ရက်သတ္တပတ် (၁၈-၁၁-၂၀၂၀) မှ (၂၄-၁၁-၂၀၂၀)

UNITED TO PRESERVE ANTIMICROBIALS

WORLD ANTIMICROBIAL AWARENESS WEEK NOVEMBER 2020

World Health Organization Myanmar

AMR Awareness Survey in Myanmar (2020)



Survey Areas

- Awareness and Usage of Antibiotics
- Knowledge of Antibiotics
- Knowledge of Antimicrobial Resistance
- Awareness on Antibiotics use in farm animals

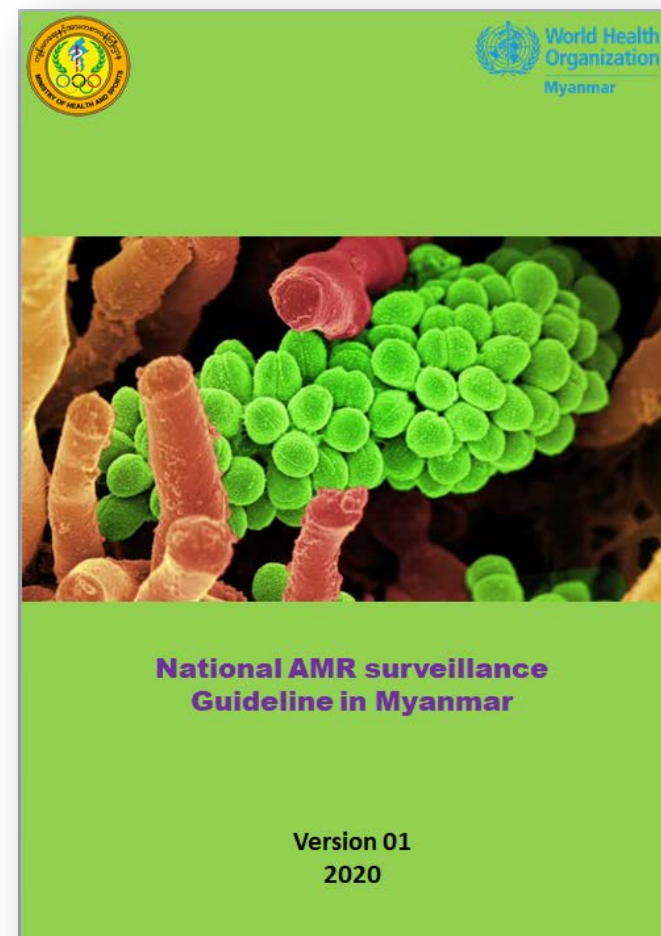
Surveillance for AMR

- 7 AMR Surveillance sites in Myanmar
- Technical support, reagents, consumables and equipment support for strengthening AMR sentinel sites
- Workshop on Standardization of WHONET software for AMR surveillance (32 Hospital Laboratories)
- Regular uploading of National AMR data to GLASS since 2019
- Development of National AMR Surveillance Guideline (launch soon)
- Analysis report of National AMR data 2016,2017 and 2018

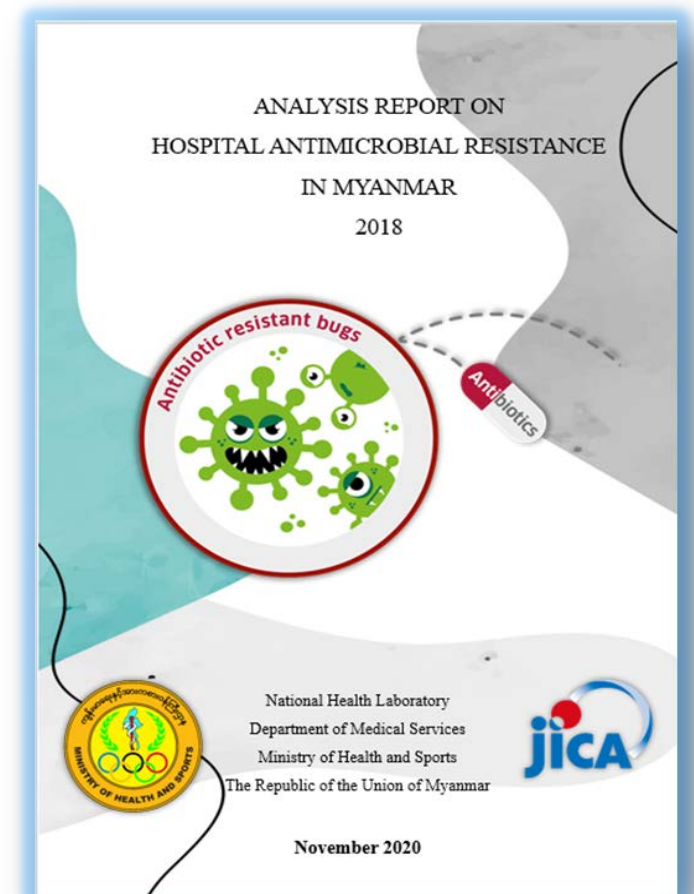
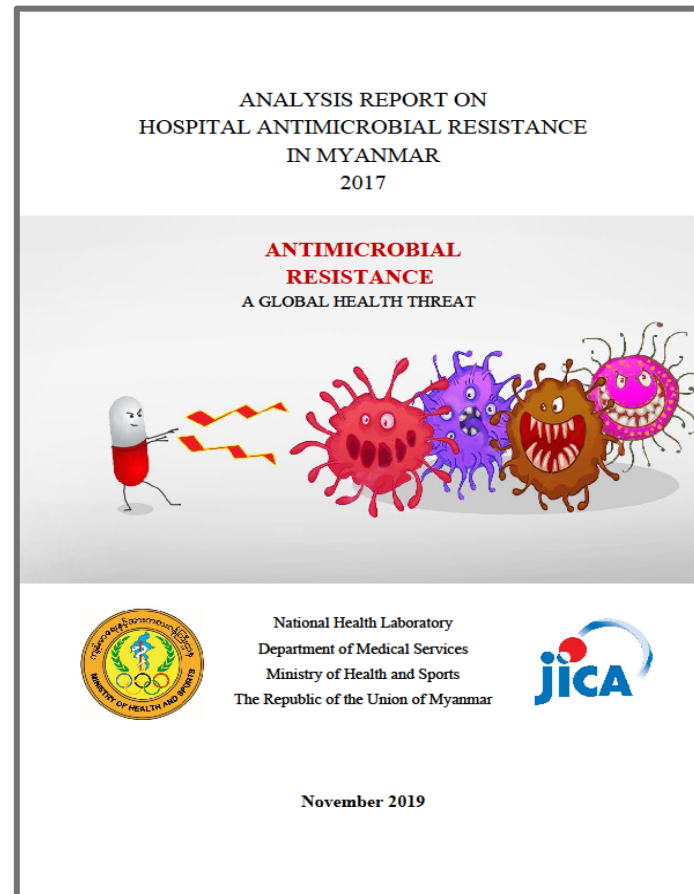
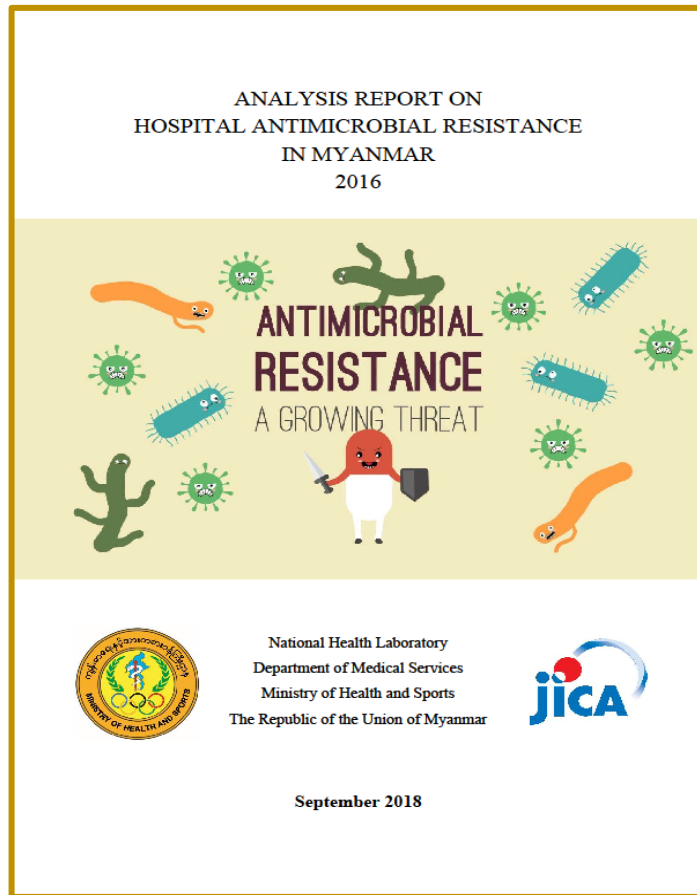


Myanmar National AMR Surveillance Guideline

Planning to launch soon
with the support of
WHO



Analysis Reports on Hospital AMR in Myanmar (2016, 2017 & 2018)



Infection Prevention and Control

- Established Hospital Infection Prevention and Control Committees
- Developed Hospital Infection Control Guidelines and Medical Laboratory Waste Management Instructions
- Launched Hospital Waste Management Guideline for township and station hospital
- World Hand Hygiene Day Activities
- Allocate budget for Hospital Infection Prevention and Control
- DC parade and Patient Safety



Hospital Infection Control Guidelines

ပြည်ထောင်စုသမ္မတမြန်မာနိုင်ငံတော်အစိုးရ
ကျန်းမာရေးနှင့်အားကစားဝန်ကြီးဌာန
ကုသရေးဦးစီးဌာန



Hospital Infection Control Guidelines

ဆေးရုံများတွင် ရောဂါကူးစက်မှုကာကွယ်ထိန်းချုပ်ခြင်း
လုပ်ငန်းလမ်းညွှန်

၂၀၁၆ ခုနှစ်



NEW YANGON GENERAL HOSPITAL

ရန်ကုန်အထွေထွေရောဂါကုဆေးရုံသစ်ကြီး

INFECTION CONTROL MANUAL & GUIDELINES

2020



Hand Hygiene Compliance Rate (NYGH Data)

Hand Hygiene Compliance Rate	Baseline (1.2.2019)	(31.7.2019)	(31.7.2020)
Doctors	47%	76%	85%
Nurses	77%	88%	90%
Workers	71%	79%	83%
HCWs (Whole Hospital)	70%	81%	86%



Antimicrobial Utilization and Stewardship

- Workshop on Optimizing Antimicrobial Use and **AWaRe Tool** Launching (October, 2019)
- **Global Point Prevalence Survey (GPPS)** for antimicrobial usage was done in some hospitals (YGH, NYGH) and TOT training was given to continue GPPS in other hospitals
- Meeting on National Antimicrobial Stewardship and Utilization Program Development (February, 2020)



Workshop on Optimizing Antimicrobial Use and AWaRe Tool Launching (17.10.2019 – 18.10.2019)



Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (GPPS) (2019)

- Conduct GPPS in NYGH From 18th February to 22nd February 2019
- With the support of Biomerieux Co. Ltd
- (3) trainers from Singapore General Hospital
- (9) Participants and (4) observers from NYGH
- Total number of ward surveyed - medical ward, surgical ward, Intensive care unit, Private ward
- Total number of patients surveyed – 134




GPPS Team

Research & Innovation

- Stakeholder Consultation Meeting for Development of Research Proposals on AMR
- Research Prioritization Workshop on AMR
- Developed Research Agenda for AMR
- Regional and National SORT IT program for AMR
- 48th Myanmar Health Research Congress [Antimicrobial Resistance: A Threat Of Global Concern]

48th Myanmar Health Research Congress

Antimicrobial Resistance: A Threat Of Global Concern



Global situation of Antimicrobial Resistance and our best possible approach in managing the crisis

Yangon, Myanmar 13th Jan 2020

Dr. Satheesh THANGARAJ,
Head-Medical Affairs

PIONEERING DIAGNOSTICS





**Anti-Microbial Resistance:
Clinician's Perspective**

Prof. Moe Moe San
Tropical & Infectious Diseases Dept.
UM-1 & YGH

Good Governance of Pharmaceuticals



Dr. Theingi Zin
Director
Department of Food and Drug Administration

13-1-2020







Where Myanmar NAP AMR is now

Dr. Thi Thi Htoon
M.B., B.S, M.Med.Sc (Micro), Ph.D, FACTM
Head/Senior Consultant Microbiologist
Bacteriology and Parasitology Section
(13.1.2020)



National Health Laboratory,
Yangon, Myanmar



**Emerging Livestock Systems: Zoonoses
Role of Veterinary Public Health
in fighting Antimicrobial Resistance (AMR)**

by
Dr Min Thein Maw , BVSc, MAG, PhD
Livestock Breeding and Veterinary Department
(13-1-2020)



**Highlights of Research and Recent
Activities on Antimicrobial Resistance
in Myanmar**

Dr. Wah Wah Aung
MBBS, MMedSc, Ph.D (Microbiology)
Director (Research), Department of Medical Research

13th Jan 2020_AMR Symposium_48th MHRC

Country-wide antibiotic consumption in public hospitals before and after decentralization of drug procurement in Myanmar

- Five years' drug procurement records (2014 - 2018) reported from public hospitals of all states and regions were reviewed
- Consumption was estimated using the WHO methodology for surveillance of antimicrobial consumption and based on the ATC/DDD classification system
- Consumption was also categorized according to AWaRe classification
- Findings of this study will inform strategies for antibiotic stewardship which would reduce unnecessary antibiotic consumption and health expenditure which could then be redirected to areas of health need



Ongoing research activities of AMR

Sr. No	Name of project	Funded by	Remarks
1.	New detection system for carbapenem, aminoglycoside and/or colistin-resistance Gram negative pathogens in clinical laboratories at hospitals in Myanmar (2019-2021)	Juntendo	Already got approval from IRB and start implementation
2.	Prevalence of carbapenemase producers among Carbapenem Resistant Enterobacteriaceae clinical isolates in Myanmar	ADB	Already got approval from IRB and start implementation
3.	Point Prevalence Survey for Antimicrobial Consumption, Health Care Associated infections (HAI) and Antimicrobial Resistance (AMR) in tertiary hospitals of Myanmar	ADB	Preparatory stage

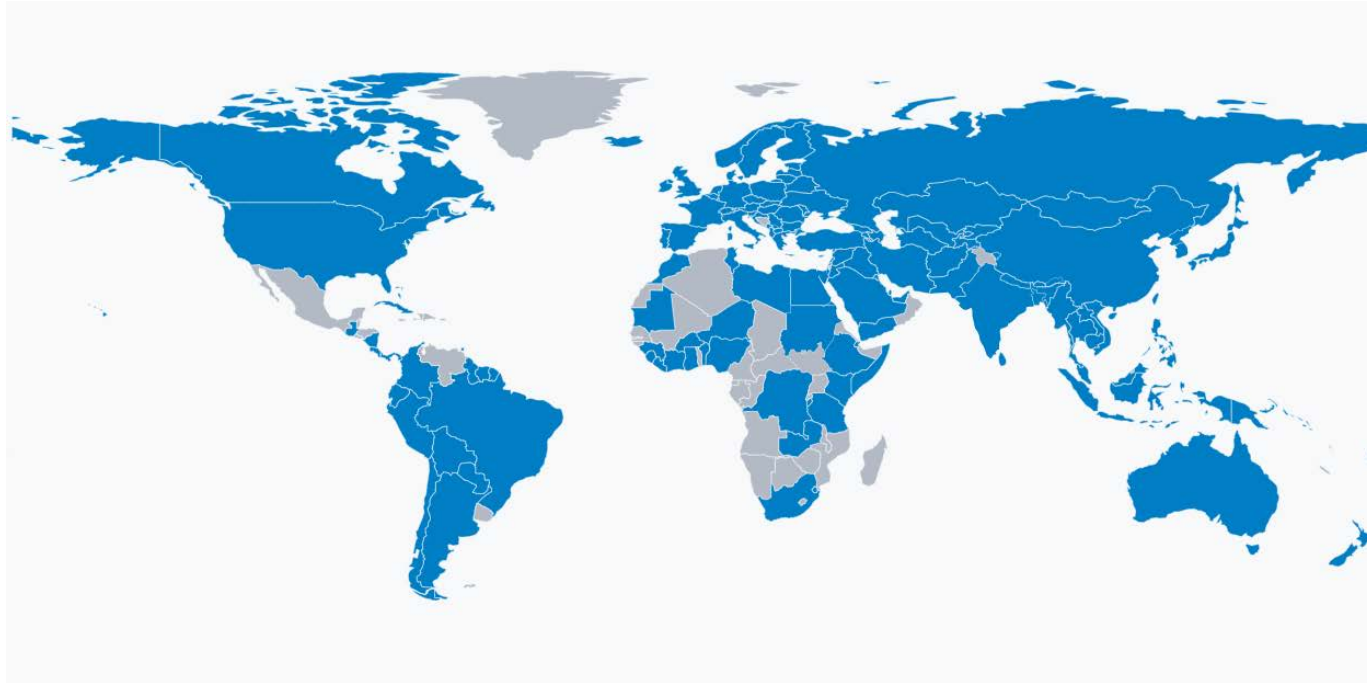


Ongoing research activities of AMR

Sr. No	Name of project	Funded by	Remarks
4.	Prevalence of Bacillus cereus and its toxin production in ready to eat food in Yangon	Research Title Bank	Dr. Pan Ei Soe Submit IRB
5.	Detection of methicillin resistance gene and toxin associated genes in Staphylococcus aureus isolates from food handlers working in 4 selected hotels in Yangon region	Research Title Bank	Dr. Yin Min Thwe Submit IRB
6.	Evaluation and Surveillance of Extended spectrum beta-lactamase (ESBLs) producing Escherichia coli in Myanmar	FMx (Fleming Fund grant)	Preparing to submit IRB



Tripartite AMR Country Self-assessment Survey (TrACSS 4.0)



Countries participated in TrACSS in 2019/2020



Tripartite AMR Country Self-assessment Survey (TrACSS 4.0) – on 15.1.2020 at NHL

Country progress in the implementation of the global action plan on antimicrobial resistance: WHO, FAO and OIE global tripartite database



NHL, Yangon (20.11.2020)

SATREPS program for AMR

- Project name: Establishment of innovative antimicrobial resistance surveillance system and development of simple AMR detection tools optimized for Myanmar
- Duration: 5 years (2022-2026)
- Partners: NHL, Juntendo University, JICA





Meeting between National Health Laboratory and JICA on project for establishment of innovative antimicrobial resistance surveillance system and development of simple AMR detection tools optimized for Myanmar (9.9.2020)

CHALLENGES

1. **No separate budget** for National AMR surveillance in globally validated epidemiological proven one health data
2. Need to set up hospital level Antimicrobial Stewardship Programme **(AMSP)**
3. To develop National Antimicrobial consumption **(AMC)** and use with monitoring and evaluation system by GPPS
4. Need to function **Tripartite** agreement of AMR
5. **Human resource**



WAY FORWARDS

1. To adapt **WHO AWaRe** classification in National Essential Medicines List and standard treatment guidelines (End of 2020) by DMS & Essential Medicine project
2. To strengthen hospital level **AMSP** following development of National Antimicrobial stewardship policy (2020-2021) by MAMS, DMS and pilot hospitals
3. To develop National Antimicrobial consumption **(AMS)** and use with monitoring and evaluation system by global point prevalence surveys (2020-2021) by FDA, CMSD, UMFCCI, MoALi
4. To function **Tripartite** agreement of AMR



ADVANCEMENT IN CLINICAL PRACTICE THROUGH MICROBIOLOGY EDUCATION (ACME) PROGRAM



CONTEXT

Supporting efforts of hospitals, national laboratories and health ministry in the fight against AMR

Training clinical microbiologists and educating prescribing clinicians is crucial in the fight against AMR

Partnership between MoHS, NHL, a clinical microbiology company and a group of international experts

MILESTONES AND ACHIEVEMENTS



FUTURE

Under the leadership of NHL & MoHS, Myanmar leading its own expert group taking the ACME journey forward

Continuous improvement in education and AMR strategies within hospitals where trainings and education sessions were completed



Cascading educational activities and AMR strategies to other hospitals (Public and Private)



Building a strong local and national surveillance network



Implementing antimicrobial stewardship at Public and Private hospitals

1. INTRODUCTION

The knowledge, attitude, and practice on antimicrobials and antimicrobial resistance (AMR) of the general public in Myanmar remain to be insufficiently known. Without understanding these matters, the Ministry of Health and Sports (MoHS) cannot provide any technically sound actions and interventions, such as public communication, awareness campaign, and training for peoples' behavioral change to prevent AMR. Therefore, the National AMR Coordinating Center (NCC)/ National Health Laboratory (NHL) conducted the first National AMR Awareness Survey in 2020 in collaboration with the National Center for Global Health and Medicine (NCGM) in Japan and the Japan International Cooperation Agency (JICA) as a member of Awareness Technical Working Group (TWG).

2. OBJECTIVES

- To identify oral antibiotic use and its sources
- To evaluate the antibiotics literacy using true/false questions on antibiotics and AMR
- To evaluate the awareness on the use of antibiotics in farm animals
- To produce baseline evidence on public awareness of AMR in Myanmar

3. METHODOLOGY

- Nationwide Mobile Phone Panel Survey (MPPS)
- Interview in Burmese using a structured questionnaire including 4 components:
 - 1) knowledge about antibiotics
 - 2) awareness and usage of antibiotics
 - 3) knowledge about antibiotic resistance, and
 - 4) awareness of antibiotic use in farm animals
- Target population: 2,000 randomly selected from the panel
 - Male and females aged above 18 years old
 - Three quotas on urbanity, age group, and gender

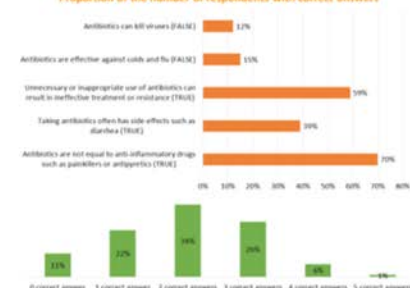
4. FINDINGS

This survey was participated by 2,045 respondents from 12 regions and states. Among them, 53% were female, 26% aged below 30 years old, and 23% aged 50 years and above. In addition, 51% and 49% lived in urban and rural areas, respectively. Meanwhile, 76% of the respondents attained an educational level of 11th grade or less or no school education at all.

1) KNOWLEDGE ABOUT ANTIBIOTICS

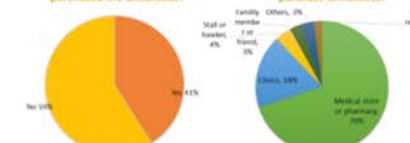
Approximately half of the respondents (51%) answered that they knew "antibiotics" in Myanmar. In addition, some of them had heard about the name of antibiotics commonly used in Myanmar. Consequently, 89% of the respondents answered that they had heard about or known antibiotics.

Proportion of the number of respondents with correct answers

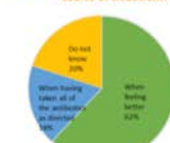


2) AWARENESS AND USAGE OF ANTIBIOTICS

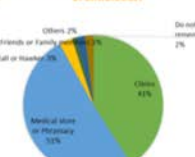
Q. Did you show a prescription when you purchased the antibiotics?



Q. When do you think you should stop taking antibiotics once you have begun a course of treatment?

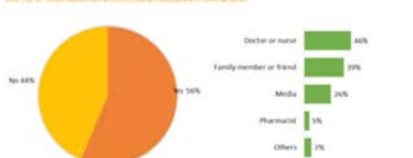


Q. Where did you get the last course of antibiotics?



3) KNOWLEDGE OF ANTIMICROBIAL RESISTANCE (AMR)

Q. Have you ever received any information about not taking antibiotics unnecessarily, for example from a card or the TV, or information on antimicrobial resistance? From where?



4) AWARENESS OF ANTIBIOTIC USE IN FARM ANIMALS

Proportion of respondents who were aware of antibiotic use in farm animals



5. DISCUSSION

KNOWLEDGE ABOUT ANTIBIOTIC Only 1% of respondents gave correct answers to all 5 questions while 11% of them gave wrong answers to all the question. The majority of respondents (72%) misunderstood that antibiotics worked against colds and flu, but the surveys in other countries also showed similar results.

AWARENESS AND USAGE OF ANTIBIOTICS The majority of respondents (89%) answered that they had heard about antibiotics or knew antibiotics. Respondents in Myanmar are noticeably less likely to have taken antibiotics recently, with only 36% of respondents having taken antibiotics in the past 6 months while more than half of respondents in other countries' surveys. The majority of respondents (92%) answered that they obtained their antibiotics from clinic, medical store or pharmacy. Only 41% of respondents answered that they obtained a prescription from medical professionals to purchase antibiotics. More respondents (62%) answered that they stopped antibiotics when they felt better in Myanmar.

KNOWLEDGE ABOUT ANTIMICROBIAL RESISTANCE (AMR) Only 56% of respondents answered that they heard about antimicrobial resistance. The majority of respondents answered that they received the information from doctor or nurse (46%) and family or friend (39%). TV (36%) and Facebook (21%) were the major information sources among media.

AWARENESS OF ANTIBIOTIC USE IN FARM ANIMALS While less than half of the respondents knew it in Myanmar (42%). Furthermore, in Myanmar, more than two-thirds of the respondents were not aware that using antibiotics in animals can develop resistance among them (73%), and the government banned the use of antibiotics as growth stimulator in livestock (64%).

6. RECOMMENDATIONS

- Urgent need of interventions to raise awareness of antibiotics and AMR in the general public
- Implementation of awareness campaigns using effective ways to reach more people
- Promotion of a more appropriate acquisition method and use of antibiotics
- Further involvement of the agriculture sector into the national AMR program
- Regular implementation of awareness surveys to assess the trend of the awareness level and evaluate the effectiveness of interventions

History of WAAW

In 2015, the 68th World Health Assembly, endorsed the Global Action Plan on Antimicrobial Resistance, dedicating a global campaign to raise public awareness and understanding of antibiotic resistance. World Antibiotic Awareness Week (WAAW) takes place every November to promote global education on antibiotics, how they should be used, and the growing risks of antibiotic resistance. But for now, global awareness of all these issues remains relatively low.

Aims

1. to increase awareness of global antimicrobial resistance
2. to encourage best practices among the general public, health workers and policy makers to avoid the further emergence and spread of drug-resistant infections.

The slogan for 2020 WAAW

For all sectors - "Antimicrobials: handle with care"
For human health - "United to preserve antimicrobials".

Activities of WAAW 2019 in Myanmar



Celebration of World Antibiotic Awareness Week 2019 at Mandalay (18.11.2019)



Celebration of World Antibiotic Awareness Week 2019 at Yangon (22.11.2019)



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World Antibiotic Awareness Week 2020
(18th to 24th November 2020)
Collaborative AMR activities of National Coordinating Centre



National collaboration



48th Myanmar Health Research Congress – on 13.1.2020
(Antimicrobial Resistance: A Threat of Global Concern)



Workshop to review the implementation of National Action Plan for the containment of AMR in Myanmar (Nay Pyi Taw) – 28.11.2019



Second stakeholders Consultation Meeting for Development of Research Proposals on Antimicrobial Resistance in Myanmar – on 31.1.2020



Meeting on National Antimicrobial Stewardship and Utilization Programme Development: on 21.2.2020 (led by MAMS)

Collaboration with WHO and JICA



Tripartite AMR Country Self-assessment Survey (TrACSS 4.0) – on 15.1.2020



WHONET Training at NHL/NCC for 37 hospitals – on 28.2.2020, 12.3.2020, 13.3.2020



Operational study on awareness of AMR among mobile phone users in Myanmar: Telephone Survey by NHL, DoMS, MoHS and JICA



World Antibiotic Awareness Week 2020
(18th - 24th November 2020)
Collaborative AMR activities of National Coordinating Centre



Collaboration with Fondation Merieux



Advocacy Meeting on AMR Surveillance Strengthening Program in collaboration with Fondation Merieux, NHL, JICA – on 10.6.2020



Country Coordination Meeting of AMR Program (Fleming Fund) with Mott MacDonald, Pf. HHT and NHL Team, FMx team, FAO and WHO – on 6.8.2020



Virtual Support Session on issue of Myanmar AMR data to GLASS platform by Dr. John Stelling with NHL, FMx, JICA – on 14.8.2020 and 19.8.2020

Research Works with Jutendo University and ADB

Research on carbapenem and/or colistin resistant Gram-negative pathogens, Jutendo university (August, 2020)



Research on Carbapenemase producers among *Enterobacteriaceae* clinical isolates in Myanmar, ADB (September, 2020)

Collaboration with Biomerieux and PARSE



ACME monthly online meetings – 25.6.2020, 29.7.2020, 27.8.2020



PARSE VIRTUAL GLOBAL MEETING – on 24/25/30th June and 2nd July 2020

Preparation for WAAW 2020



Preliminary Discussion on celebration of World Antibiotic Awareness Week 2020 with Upper Myanmar on 21.10.2020 and with Lower Myanmar on 22.10.2020





The slogan for WAAW 2020



For all sectors
“Antimicrobials: handle with care”

For human health
“United to preserve antimicrobials”

“ပဋိဂိုဏ်းသားအနီးသင် ကြာရှည်စွမ်းထက်ဖို့
အားလုံးထိန်းသိမ်းသုံးစွဲဖို့”



NHL, Yangon (20.11.2020)

AMR awareness raising in community (2020)



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NHL, Yangon (20.11.2020)



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**THANK YOU
FOR YOUR
KIND
ATTENTION**