



# Uganda Leadership Pioneers Cohort 1: AMR

## BACKGROUND: UGANDA LEADERSHIP PIONEERS

The Uganda Leadership Pioneers programme is the first of its kind in Uganda; developing leaders at the frontline of the fight against antimicrobial resistance (AMR) to drive change at their health facilities.

In February 2020, 16 leaders from the public sectors in Uganda and the UK came together for a five day workshop to develop their leadership skills and co-create low cost innovation ideas to combat AMR. In teams, professionals from the National Health Service (NHS) UK, Baylor College of Medicine Children's Foundation Uganda and five hospitals in Rwenzori Region received leadership training from the Cross Sector Leadership Exchange (CSLE), and visited 29 health facilities across the region to understand the day-to-day challenges AMR places on the Ugandan health system.

The teams developed robust action plans to improve AMR stewardship across five hospitals, which received endorsement from five District Health Officers and four Medical Superintendents during a productive presentation and brainstorm session on the final day of the workshop. When implemented, the action plans will place these five hospitals as forerunners in the fight against AMR in Uganda.



*“As a leader, I am inspired to find solutions, solutions I can work on and inspire others to believe in. We need to leverage what we have to achieve the solutions we want to achieve; we have to be pioneers.”*

*- Dr. Simon Seguya, Pharmacist, Fort Portal Regional Referral Hospital*



## THE CONTEXT: AMR IN UGANDA

*“Without **urgent, coordinated action** by many stakeholders, the world is headed for a **post-antibiotic era**, in which common infections and minor injuries which have been treatable for decades can once again kill.”*

*~ Dr Keiji Fukuda, WHO Assistant Director-General for Health Security*



Antimicrobial resistance is a growing health threat globally. If no urgent actions are taken, by 2050, AMR will cause an estimated loss of 10 million lives and \$US100 trillion.<sup>1</sup> In Uganda, the threat is exacerbated by the challenges of a low resource health system: high disease burden, underfunding, inadequate human resources, limited infrastructure etc.

Only 25 facilities in Uganda perform Antimicrobial Susceptibility Testing (WHO, 2015)

66% of health facilities in Uganda have access to running water (WHO, 2015)

49% hygiene coverage (handwashing with soap) across health facilities nationwide (WHO, 2015)

The Government of Uganda (GoU) has begun to address this pressing health challenge with the development of the **AMR National Action Plan 2018-2023** and the establishment of the **Uganda National Antimicrobials Resistance Committee**.

Baylor-Uganda, Pepal and CSLE acknowledged that leadership development could support the implementation of these plans by creating **motivated, accountable frontline health workers** who design low cost interventions to support the National Action plan's strategic interventions:

1. Promote public awareness for AMR
2. Improve infection control and prevention
3. Promote appropriate access to and use of antimicrobials
4. Implement AMR surveillance
5. Invest in research and innovation

Through improved leadership skills, cross-sector learning with colleagues from the NHS UK, and health facility visits, the programme aims to create informed, accountable leaders who can drive the GoU's vision.

# HEALTH FACILITY VISITS: OBSERVATIONS

The teams **visited twenty nine health facilities** across Kabarole, Bunyangabu, Kyenjojo and Bunyangabu districts. They conducted focus groups with staff and patients to understand the day-to-day challenges and opportunities for AMR stewardship. Below are some of the general findings:

## 1. GOVERNANCE

Infection Prevention Control (IPC) committees existed at about 50% of health facilities visited, but the frequency of meetings and their influence varied significantly. Medicinal Therapeutic Committees (MTCs), as recommended in the National Action Plan to combine IPC and AMR governance, were rare. Where oversight committees were existent, they often had no mandate and limited funding.

Some senior health facility staff such as In-Charges and clinicians were aware of AMR but often lacked time and financial resources to combat it. AMR knowledge tends to sit with technical staff in laboratories and pharmacies.

## 2. SURVEILLANCE

Tracking and monitoring antibiotic resistance was not done at any facility visited. There is no access to a centralised information system to track and analyse prescription variations; they are noted in a variety of dispensing logs at the health facilities e.g. dispensing logs at in-patient, out-patient and pharmacy departments.

There was little to no proactive analysis of trends or patterns in common infections (except TB) across all 29 facilities.

## 3. PRESCRIPTION PRACTICES

Patient record books compound the surveillance issues identified above as they are the quickest way for clinicians to access patient history. However, patients are accountable for these books, and often bring new books each time they visit the health facility.

Every health facility described patients who had resistant infections (urinary tract infections were a common example used). However culture and sensitivity testing is very uncommon except at FRRH. Further compounding this is a lack of variety of antibiotics stocked at health facilities; stock-outs; and under-use of the Uganda Clinical Guidelines to determine recommended prescription pathways.



*Q&A with staff at FRRH.*



*Meeting with pharmacist at Kidubuli HCIII.*

## 4. ANTIBIOTIC ADHERENCE / COMMUNITY AWARENESS

Antibiotic adherence practice by patients is often problematic:

- Underdosage: sharing drugs with family members who suffer from the same symptoms as the patient or not finishing full course of antibiotics because of cessation of symptoms
- Purchasing antibiotics at a cheaper price from local drug shops rather than the health facility pharmacy. Drug shops are unregulated and often distribute low doses of antibiotics depending on what the patient can afford
- Sharing antibiotics with animals to increase their weight
- Self-prescription before seeking medical advice and non-disclosure of this when describing symptoms to health workers



*Community education on AMR and IPC was often limited to posters on the walls of health facilities.*

Local healers and drug shops are unregulated and their practices inhibit good medical practice at the health facilities. Health workers shared stories of antibiotic resistance developing in patients who had tried ‘medicine’ prescribed by local healers who used low dosages of antibiotics. The cessation of transport refunds for Village Health Teams (VHTs) means that communities are no longer receiving health sensitisation on a regular basis; this is a missed opportunity for education on AMR and IPC.



*Piggery, Kamwenge.*

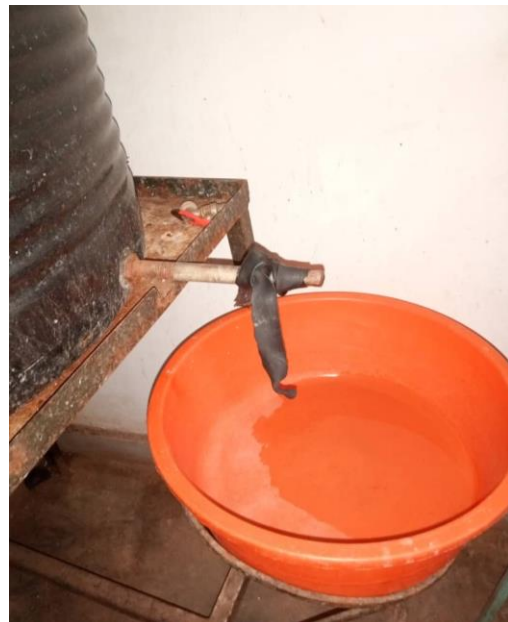


*Local drug shop stock, February 2020.*

## 5. IPC/ HAND HYGIENE

The majority of clinical staff had received some IPC training. This training was often on-job training or as part of a Continuous Medical Education (CME) session by in-house staff. Very few health facilities had included cleaning or general health facility staff in these sessions.

Hand washing stations were at every health facility visited in varying conditions. The majority of the stations lacked soap or alcohol rub; facilities often put some JIK (household bleach) in the water supply in these instances. The majority of taps were inappropriate requiring individuals to use their hands to turn them on and off. At one health facility a handwashing station was found to be harbouring E-Coli because of this. Hand washing stations were rarely at the point of care and often unsupervised. Posters from the WHO outlining proper handwashing practices were displayed at most facilities, but often not beside handwashing facilities.



*Maternity hand washing station, Kibubuli HCIII.*



*Cleaning with JIK at FRRH.*

Staff uniforms should be short sleeved, not long-sleeved for better IPC. Generally, the health facilities were only cleaned once a day and this cleaning was most often just of floors ignoring walls, door handles, and surfaces.

Sterilisation practices were sub-optimal at the majority of facilities visited.

In-patient departments were often crowded, leaving less than the WHO recommended 2m distance between beds to prevent spread of infection. Mattresses were rarely washed, and patients allowed to bring in their own beddings and mattresses (with their cleanliness unmonitored). Facilities did not have adequate space for isolation of highly infectious patients, except coughing corners for TB patients.



*Sterilisation practices at a HCIII in Kabarole District.*

## 6. LABORATORY PRACTICES

FRRH is the only facility in the region which performs culture and sensitivity testing for antibiotic resistance. It was noted by all health facilities visited that samples were rarely sent to FRRH, and if sent, results took up to two weeks to return at which point patients were hard to track and antibiotics prescribed in the meantime.

Laboratories at Kyenjojo General Hospital, Rukunyu Hospital, Virika Hospital and Kabarole Hospitals have the technical staff to carry out the testing, as well as the necessary infrastructural space. They lack the reagents and technical equipment.

There is an opportunity to leverage the existing hub system in place for other testing across the region to support faster turnaround for cultural and sensitivity testing.



*Q&A at Kyenjojo General Hospital Laboratory.*



*Laboratory at Padre Pio HCIII.*



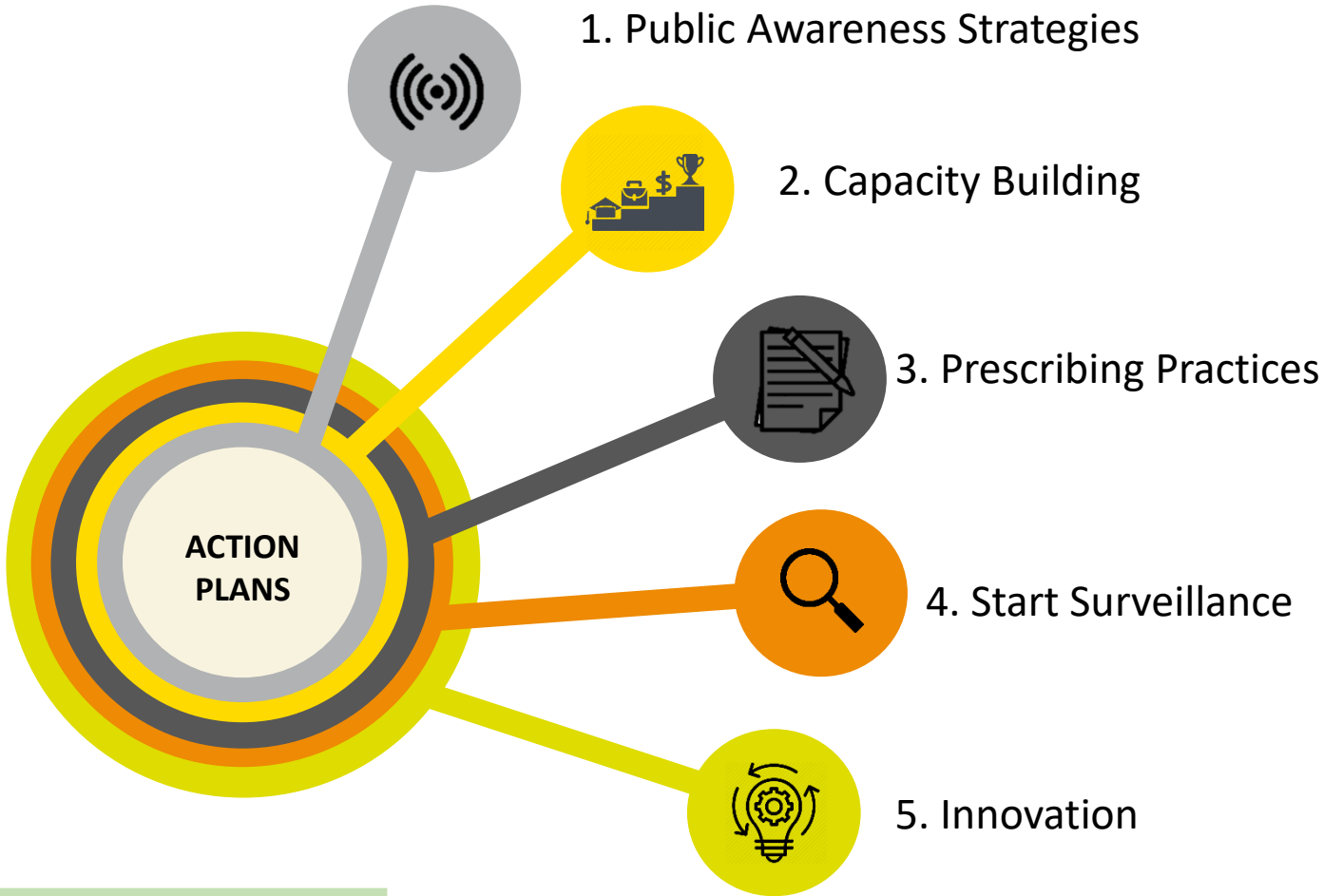
*Laboratory at Nyankwanzi HCIII.*








*Colour coded waste disposal bins often have bin liners of the same colour.*

# ACTION PLANS & INNOVATIONS

The four teams developed **six month action plans** based on their findings and presented them to **nine executive guests** on the final day of the workshop for their sign off.








## Rukunyu Hospital

				
<ul style="list-style-type: none"> <li>- Work with other teams to develop radio messaging</li> </ul>	<ul style="list-style-type: none"> <li>- Weekly staff sensitisation on AMR</li> </ul>	<ul style="list-style-type: none"> <li>- Spot tests to monitor quality of prescribing practices</li> </ul>	<ul style="list-style-type: none"> <li>- Form an AMR committee which meets once a month</li> </ul>	<ul style="list-style-type: none"> <li>- Design a data capture tool, using NHS best practice</li> </ul>
<ul style="list-style-type: none"> <li>- Adapt WHO AMR/ IPC posters.</li> <li>- Create a poster on patient records books.</li> </ul>		<ul style="list-style-type: none"> <li>- Develop a form to capture demand for C&amp;S testing</li> </ul>		








# ACTION PLANS






## Fort Portal Regional Referral Hospital

				
- Work with other teams to develop radio messaging	- Procure stethoscopes for all clinical officers	- Develop 1 page prescription guidelines poster	- Advocate that the existing AMR / IPC committee should involve heads of all departments	- Laminate and distribute prescription guideline page to other HFs in Kabarole

## Kyenjojo General Hospital

				
- Work with other teams to develop radio messaging	- Hold departmental meetings once per quarter for education and brainstorming	- Work with smaller nearby facilities to supervise and support AMR stewardship	- Form an AMR / IPC committee and advocate for cultural and sensitivity testing to be established	- Standard Operating Procedures for IPC in maternity care to tackle high sepsis rates

## Virika & Kabarole Hospitals

				
- Work with other teams to develop radio messaging	- Continuous Medical Education sessions for staff	- Draft guidelines for AMR management in absence of cultural and sensitivity testing	- Form an AMR / IPC committee at both hospitals and develop Terms of Reference	- Coloured ties for waste disposal bags (which are all black) - Develop a safety cross

## LEADERSHIP: LESSONS LEARNED

I have grown more confident in what I am able to do. I was always worried what I was able to do was very contextualised: I knew the politics and the way things are done, the culture of the NHS and the system. To take things out of that, somewhere different, and apply the same things in a different way.

*- Esther Taborn, Gram Negative Blood Stream Infection Improvement Lead, NHS UK*



My leadership skills have improved so much. I am confident and able to communicate effectively. I can now work outside of my comfort zone without losing myself.

*- Dr. Dennis Ojok, Medical Officer, Rukunyu Hospital, Uganda*

I have absolutely grown as a leader, and played a significant leadership role in my team to get them out of their shells and become the leaders they already are. Personally, I can take a lot from the experience. I appreciate the difference in cultures and can bring that back to my work in the UK.

*- Sally Davies, Director, Stagenhoe Sue Ryder Trust*



I like that we are trying to identify the real issues surrounding AMR. Using our experience to find sustainable solutions, based on the findings of our field visits. This means we have found solutions relevant to our health system.

*- Dr. Simon Seguya, Pharmacist, Fort Portal Regional Referral Hospital*



1. O'Neill J . Tackling drug-resistance infections globally: final report and recommendations, 2016.

## 2. Health Facilities Visited

Fort Portal Regional Referral Hospital (FRRH)	Kisimoro HCIII
Rubona HCIII	Kibiito HCIV
Mugusu HCIII	Kiyombya HCIII
Bukuku HCIV	Kabarole Hospital
Virika Hospital	Kaswa HCIII
Kataraka HCIV	Kijura HCIII
Kidubuli HCIII	Rukunyu Hospital
Nsorro HCII	Kamwenge HCIII
Nyantaboma HCIII	Kyenjojo Hospital
Padre Pio HCIII	Kyarusenzi HCIV
Nyankwanzi HCIII	

## 3. Executives

- DHOs Kabarole, Bunyangabu, Kamwenge, Kyenjojo
- Medical Superintendents Kyenjojo & Rukunyu Hospitals
- Medical Directors Virika and Kabarole Hospitals

## 4. Cohort 1 Participants

### *Team Fort Portal Regional Referral Hospital*

- Martin Riley, Managing Director, Medway Community Healthcare CIC UK
- Dr. Simon Sseguya, Pharmacist, FRRH
- Sarah Namuyanja, Lab Technologist, FRRH
- Dr. Emma Mugisa, Clinical Mentor, Baylor-Uganda

### *Team Kyenjojo General Hospital*

- Esther Taborn, Gram Negative Improvement Lead, NHS UK
- Dr. Zahura Adolph, Surgeon, Kyenjojo Hospital
- Mercy Kabagabu, Lab Technologist, Kyenjojo Hospital
- Bonny Mulindwa, Lab Coordinator, Baylor-Uganda

### *Team Rukunyu Hospital*

- Sally Ann Davies, Neurological Director, Sue Ryder UK
- Dr. Dennis Ojok, Medical Officer, Rukunyu Hospital
- Wyckliffe Twesiime, Lab Technician, Rukunyu Hospital
- Julius Mwijukye, Manager Medical Supplies, Baylor-Uganda

### *Team Kabarole & Virika Hospitals*

- Lesley Smith, Nurse Consultant IPC, NHS UK
- Dr. Joseph Kato, Medical Officer, Virika Hospital
- Ibrahim Tumukunde, Enrolled Nurse, Kabarole Hospital
- Peter Oballah, Manager, Laboratory Services, Baylor-Uganda