



INFECTION PREVENTION NETWORK KENYA

7TH

**INFECTION PREVENTION
AND CONTROL (IPC)
SCIENTIFIC CONFERENCE**

THEME:
IPC IN ACHIEVING UNIVERSAL HEALTH COVERAGE

AT GREEN HILLS HOTEL, NYERI COUNTY

Date: 27th -30th November



Dear distinguished delegates!

On behalf of IPNET Kenya organizing committee and all members, it is my privilege and great pleasure to extend a warm welcome to IPNET Kenya 2018 conference!

Now in its 7th year, IPNET Kenya Conference has gained reputation as an inspiring and empowering event offering novel ideas for innovations in improving Infection control practices within healthcare scenario of our country. This conference has presentations and initiatives from various institutions that are oriented to meet Kenya's national and

regional ambitions for health care.

I congratulate you heartily that you joined this conference where leading experts will discuss the latest approaches to controlling and reducing the spread of dangerous infections and share their experiences on how infection rates can be cut with better hygiene and improved patient care in hospitals, clinics and communities. They will also share the latest innovations in technology and how they are improving outcomes in infection prevention.

Preventing infections has never been more important than in current times. Where antibiotics can be bought for use without a prescription and bought by kilograms for farm use, antibiotic resistance is accelerated tremendously as well as poor infection prevention and control. New resistance mechanisms threaten our ability to treat common infectious diseases such as pneumonia and bacteraemia, which become harder, and sometimes impossible to treat as antibiotics become less effective. Experts predict that if current trends continue, 10 million people globally will die every year from anti-biotic resistant infections. Our 2017 conference presented a demonstration on diagnostic stewardship and role of microbiology lab in tackling AMR. This year, the AMR/AMS pre-congress multidisciplinary workshop targeted Respiratory Tract Infections in detail to raise awareness in this area. We plan to continue this endeavour and intensify this effort into future. We will try and roll it out across the country if we are able to get adequate resources. These workshops are valuable tools and opportunities to "unpack" the agenda of empowerment of multidisciplinary teams in implementation of AMS in their own work place. An interdisciplinary group of experts discuss contemporary challenges and opportunities for practice, as well as examine some of the recent evidence on empowerment initiatives in resource-poor settings. The conference will focus on various challenges that confront specialists and policy makers seeking to construct policies and assess their impact on increasing well-being in Kenyans.

Our Scientific committee has put up a versatile feast of IPC topics of interest for you. Enjoy the conference and spread the light of knowledge!

PROF. GUNTURU REVATHI,
CHAIR IPNET-K



Welcome to the 7th IPNET-KENYA conference

After the highly successful regional IPNET-KENYA conference in 2017, in Eldoret, it is our great pleasure to welcome you to the 7th conference being held at green hills hotel, Nyeri county 27-30th November 2018

The conference is organized in partnership with ministry of health and other stakeholders. The theme this year is **“IPC a pillar for quality of care in universal health care”**. The conference is bringing together researchers, clinicians, health care managers and industries from around the region who are engaged in the provision of quality healthcare.

IPNET-KENYA is a unique professional organization in that it draws its members from all medical professionals and those whose focus is to reduce healthcare associated infections (HAIs) in the region. We believe that infection control policy and guidelines should be accessible and available to all healthcare workers. In line with this, IPNET – Kenya supported MoH in printing national guidelines for AMR and supported training of three facilities to establish their IPC committees. Additionally, in line with our goal to mentor, train and promote professional development in healthcare epidemiology, IPNET-Kenya conducted the 1st ever writing workshop that helped many participants in this conference develop high quality abstracts. We will continue in this venture to build more capacity for our members.

The scientific program reflects the progress made in Kenya in IPC. This year it will emphasize on the IPC as a pillar for universal healthcare. It does not make sense to have mothers deliver in the health facilities and then develop HAIs. Please join IPNET-KENYA in the fight against HAIs and antimicrobial resistance by improving IPC practices in Kenya and the region.

Enjoy the conference and enjoy the beautiful town of Nyeri and Mount Kenya

Ndegwa Linus, MPHE, PhD SHEA Amb.

Founder, Infection prevention network-Kenya (IPNET-K)/Infection Control African Network (ICAN) - Board member

International Federation of infection control (IFIC) –Board member representing Africa

www.ipnetkenya.org



REMARKS FROM THE SCIENTIFIC COMMITTEE CHAIR

On behalf of the Scientific Committee, It is with great pride and enthusiasm that we welcome you to the 7th Infection Prevention Network (IPNET)-Kenya conference in Nyeri, Green Hills Hotel. The conference has become an important forum to share and disseminate best practices in Antimicrobial Stewardship and infection prevention and control (IPC).

The IPNET conferences have also created a great opportunity for upcoming scientists to meet and learn best practices in the area of IPC. In the previous years, the conference has been attracting both local and international delegates of high repute with great knowledge on antimicrobial stewardship, IPC governance, surveillance of Hospital acquired infections, and health care waste management, Biosafety, injection safety, Blood safety, Respiratory infections and TB, Occupational safety and health which are critical areas in IPC.

We hope that IPNET 2018 participants will learn and actively participate in the conference, in addition to connecting with fellow IPC professionals from across the counties in Kenya. This conference provides a unique opportunity in Kenya to leverage advances for substantial improvements in the Quality of care as we aim at universal Health Coverage even in the face of limited resources.

The wide range of presentations by well-seasoned professional, first line health workers, researchers, program implementers, policy makers to academicians serves as a great opportunity to learn best practices.

At the end of this conference we will have an opportunity to recognize the best Oral and Poster presenters, and also the Best County based on their effort to disseminate IPC implementation in their facilities and sharing of best practices in this conference.

I wish to thank the scientific committee and the team of abstract reviewers who have worked tirelessly to ensure the conference delivers quality scientific information.

I wish you an exciting and educative experience and look forward to your participation in future conferences.

Mercy Njeru,
Chair Scientific Committee

General information:

Conference Venue: Green Hills Hotel, Nyeri County, Green Hills Hotel is part of the Nyeri history. It is set apart from the towns hustle bustle in a serene environment that gives you a profound encounter with purpose. Situated at the slopes of Mt. Kenya in a leafy environment area

General Contacts

Bishop Gatimu Road

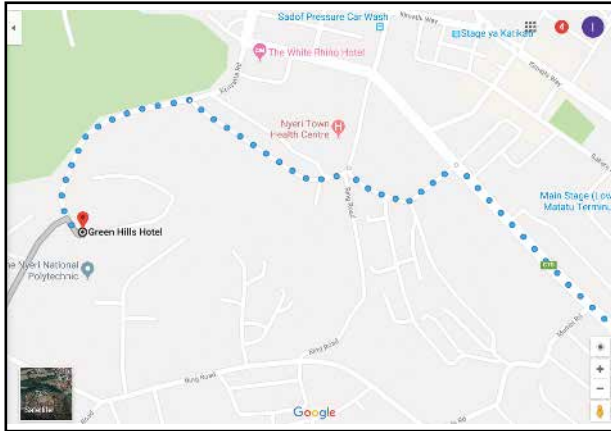
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Nyeri town Map - Green Hills Hotel



Nyeri County

Certificates:

Should you require a Certificate of Attendance, kindly contact the IPNET-KENYA Office and one will be emailed to you after the conference. Email: ipnetkenya@gmail.com /info@ipnetkenya.org

Language

The official language of the conference will be English. No simultaneous translation service will be provided.

Name Badge

Upon registration, you will receive your name badge and conference bag. Please wear your badge at all times during all the conference sessions.

Insurance

The congress organizers cannot accept liability for personal injuries sustained, or for loss of, or damage to, property belonging to congress participants (or their accompanying persons), either during or as a result of the congress. Please check the validity of your own insurance.

Safety and security

You are kindly requested not to leave any of your belongings unattended at any time, whether inside or outside the meeting venue. Please contact the bell captain in the hotel lobby to store any of your personal belongings.

Cell phones, pagers and other electronic devices

Electronic devices must be operated in silent/vibrate mode within educational sessions. No phone conversations will be permitted within the meeting rooms.

Registration

Onsite registration will be held outside the Mazingira meeting room. The registration fee includes the program book, access to all sessions and exhibition areas located at the Swallow Room next to the main conference room, morning and afternoon tea/coffee and lunch.

Information on any meeting changes will be available for meeting participants via signage or announcement.

Registration hours:

Tuesday, November 27th, 2018: 8.00am – 8.00pm

Wednesday, November 28th, 2017: 8.30 am – 5.30pm

Thursday, November 29th, 2017: 8.30 am – 5.30pm

Friday, November 30th, 2017: 8.30 am – 12.30pm

Speakers ready room

All speakers are required to submit their presentation as soon as they are available, and no later than 2 hours before they are scheduled to speak. Speakers must bring copies of their presentations on portable drives, CD-Rom. In the speaker's ready room, presenters will be able to review and update their presentations as well as check for any last minute problem. Speakers are required to arrive at their meeting room 15 minutes before their session starts in order to meet with the session chair of the session.

Lost and found

Please return any found items to the registration desk located in front of the meeting room

Posters

- a. Poster for the day sessions will be displayed in the morning and will be viewed during the tea and lunch break sessions.
- b. Poster presenters are requested to display their poster in the morning by 7.30am on the day they are to present their poster.
- c. Poster Presenters are requested to stand next to their poster board during morning and afternoon breaks for discussions regarding their posters.

- d. Poster presenters are requested to remove their posters by the end of the day, and it will be their responsibility to store their posters.

Exhibition

Exhibition will be held at the Swallow Hall, next to the plenary room. All delegates are invited to interact with the companies and view state-of-the-art IPC related products at the exhibition.

Currency Information

The currency will be Kenya Shillings (KES)

The Organizing Committee

Conference Chair:	Prof. Revathi Gunturu (Aga Khan University Hospital-Kenya)
IPNET Secretary:	Jemimah Katama (KNH)
Organizing Secretary:	Jane Ngivu (Gertrudes' Children Hospital-Kenya)
IPNET Administrator:	Lydia Ntisiki
Treasurer:	Mr. Eric Kitangala (University of Maryland)
Scientific Committee:	Mercy Njeru (CDC-Kenya)
Chair:	Dr. Samuel Mwalili (CDC-Kenya)
Trustee:	Dr. Linus Ndegwa (CDC-Kenya)

Contact Details for Conference Organizer: Mr. Timothy M. Ndambuki.

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About IPNET-KENYA

Background

Infection Prevention Network Kenya (IPNET-K) is a professional body whose mandate is working and lobbying to improve health workers and patient safety through evidence based infection control practices. The body encourages and facilitates multidisciplinary collaboration, creating opportunities for healthcare professionals with an interest in infection control to work together to identify priorities and solutions.

The Membership:

Individual (persons working in the field in or related to infection prevention and control: infection prevention and control professionals, epidemiologists, clinicians, public health experts, surgeons, nurses, microbiologist, occupational health professionals, environmental health professional patient safety experts and other healthcare professionals from across the continuum of healthcare).

Corporate (do not otherwise qualify for other categories of membership, are employed in a business or industry related to the field of healthcare and have a special interest in healthcare epidemiology).

Students (those enrolled in a institution of higher learning pursuing a program in a field related to healthcare epidemiology [infection control]).

Emeritus (must be a current member in good standing who has fully retired from the practice of healthcare epidemiology (Infection control)).

Patron –firms or companies, which have an interest in, or concern about healthcare epidemiology. They are not entitled to nominate trustees to the board, vote or hold office. However, they have priority choice of exhibition space and industry symposia. They will be partnered with a board member, invited to yearly meetings with the board and such have access to expert advice and gate keeping opportunities

Mission: The association/ Society mission is to promote patient and staff safety in the healthcare settings by promoting infection control measures and advance the field of healthcare epidemiology.

Objectives:

- a. To raise the scale of awareness of IPC issues nationally and regionally.
- b. Infection prevention and control will be recognized as a separate and distinct profession, whose members are positioned for leadership roles in healthcare.
- c. To educate stakeholders (communities, families, all health care settings, industries) on best practices of IPC.
- d. To provide a forum for regular exchange of information on IPC issues.
- e. To prepare and circulate SOPs for IPC issues, to meet JCI standards.

- f. Recognition and certification of IPC professionals in partnership with other international bodies.
- g. To facilitate creation of an IPC database that would be useful in research and to inform decisions made at different levels.
- h. Mentor, train and promote professional development in healthcare epidemiology
- i. To promote patients and healthcare workers safety
- j. To advance the science of healthcare epidemiology by catalyzing for leading edge research for the prevention of infection and associated adverse outcomes
- k. To play a leadership role in emergency preparedness related to infection prevention and control, including emerging and re-emerging diseases, bioterrorism, natural disasters and other issues.
- l. Collaborate and share expertise with other organizations.
- m. To promote high ethical standards, principles in the practice of healthcare epidemiology

DAY 1

Tuesday-27th NOVEMBER 2018

SESSION 1

**Session Chairs: Prof. Revathi/Dr. Evelynne Wesangula
GSK Multidisciplinary AMR Pre-conference work-shop**

Theme:

8:30 -9:30	National AMR Surveillance Strategy	Dr. Jared Nyakiba / Dr.Evelynne Wesangula
09:00 - 09:30	Microbiology of Acute Respiratory Tract Infections (ARTIs) , Global AMR scenario in pathogens causing ARTIs – Global and Kenyan context	Prof. Gunturu Revathi
09:30 - 10:00	URTI- a strong driver of AMR in outpatient practice – Role of AMS -	Dr Loice Achieng
10:00 - 10:30	Plenary Discussions	
10:30 - 11:00	TEA BREAK: Exhibitions	
11:00 - 11:30	Community acquired pneumonia and AMR – current Kenyan scenario.	Dr Enoch Omonge
11:30 - 11:50	Control and Prevention of ARTIs in community and health care settings	Dr. Linus Ndegwa
11:50 - 12:20	Quality Samples for Quality Testing - Importance of point of rapid tests in control of AMR	Dr. Abubakar Abdilllah
12:20 - 12:50	Challenges and opportunities for Antimicrobial stewardship in our setting – Role of pharmacist	Dr Nath Arwa
12:50 - 1:00	Plenary Discussions	
13:00- 14:00	Lunch: Exhibitions	
SESSION 1		
Session Chair: Dr. linus Ndegwa		
14:00 - 16:00	Practicum and Demonstrations for all multidisciplinary participants	Aga Khan University Hospital Dept. of Pathology

17:00-19:00 OPENING CEREMONY AND NATIONAL INJECTION SAFETY POLICY LAUNCH ON TUESDAY 27TH NOVEMBER 2018 AT 5:00 PM -8:00PM			
Day 2			
WEDNESDAY-28TH NOVEMBER 2018			
SESSION 3			
Session Chair: Dr. Jared Nyakiba			
08:30-09:10	Keynote Speaker 1: IPC a pillar for quality of care in universal health coverage		Dr. Jane Mwangi
09:10-9:35	Guest Speaker : Role of injection safety in achieving HIV prevention targets		Dr. Kirgen Bartilol
9:35 – 9:45	Food Safety culture in Kenya		Prof. Cirra Kiyukia
9:45 – 10:00	Plenary Discussions		
10:00-10:30	TEA BREAK: Poster Viewing/Exhibition		
PARALLEL PLENARY SESSIONS			
SESSION 4		SESSION 5	
Session Chair: Loise Kihungi		Session Chair: Japheth Gituku	
10:30 – 13:00	IPC Governance and AMR	10:30 – 13:00	Occupational health and safety in health care settings
10:30 - 11:00	Role of IPC in Universal Health Coverage	10:30 - 11:00	Situational Analysis of Injection Safety and Waste Management practices in Selected Counties in Kenya
11:00-11:15	Not yet an Open Defecation Free County! Outcomes of Community Led Total Sanitation in Nyeri-Kenya, 2012-2018	11:00-11:15	Post Exposure Prophylaxis Utilization Among Health Care Workers At Thika Level Five Hospital
11:15- 11:30	Analysis of portable water sources, antimicrobial sensitivity profile and genetic basis of carbapenem resistance among isolates from suspected cholera patients during the cholera outbreak in Trans Nzoia and West Pokot Counties	11:15- 11:30	Needle stick injuries among health care workers at Nyeri County Referral Hospital between 2014 and 2017
		Dr. Evelyne Wesangula	Japheth Gituku
		Denis Muriithi Mwaniki	Lucy Nyawira
		Mr. Godfrey Sande Jumba	Rachel. W. Chege

11:30- 11:45	Water Sanitation and Sanitation(WASH) in Kenyan Hospitals; Where are we?	Michuki Maina	11:30- 11:45	Evaluation of nurses' competence in the prevention of peripheral venous cannulae-related infections	Doris Kinya
11:45- 12:00	Plenary Discussions		11:45- 12:00	Plenary Discussions	
SESSION 6					
Session Chair: Doris Bota					
12:00 – 13:00	Laboratory Quality and Biosafety as part of Infection Control		12:00 – 13:00	Occupational health and safety in health care settings / Immunization – Tool of Infection Prevention and Control	
12:00 – 12:20	Laboratory Biosafety and Biosecurity	Kennedy Yatch	12:00 – 12:20	Vaccines Safety	Lucy Mecca-MOH, DVI
12:20 – 12:30	Infection Prevention And Control Status Of Medical Diagnostic Laboratories In Western Kenya.	Henry Ogato	12:20 – 12:30	Hepatitis B Vaccination status among Health-care Workers in Infection Prevention at Busia County Referral Hospital 2018	Oscar Gaunya
12:30 – 12:40	Strengthening biosafety and biosecurity awareness in kenya and beyond	Patrick Okanya	12:30 – 12:40	Evaluation of Hepatitis B Knowledge and practice among laboratory staff in Bungoma County-Kenya	Phidelis Maruti
12:40 – 12:50	Riding on implementation of Laboratory Quality Management Systems to improve Facility Biosafety Practices at Nyeri County Referral Hospital laboratory.	Githinji Winfred Nyawira	12:40 – 12:50	The importance of infection prevention control in a Tuberculosis Reference laboratory in Kenya	Jennifer Njuhigu
SESSION 7					
Session Chair: Dr. Daniel Kimani					
11:45- 12:00	Plenary Discussions		11:45- 12:00	Plenary Discussions	
SESSION 7					
Plenary Discussions					
11:45 – 12:00	Plenary Discussions		11:45 – 12:00	Plenary Discussions	
Plenary Discussions					
13:00- 14:00	Lunch: Poster Viewing/Exhibitions		13:00- 14:00	Lunch: Poster Viewing/Exhibitions	

SESSION 8		SYMPOSIUM 1	
14:00-16:00		KEMRI WELCOME TRUST-Symposium 1	
16:00-17:30		IPNET-KENYA AGM	
DAY 3			
THURSDAY-29TH NOVEMBER 2018			
Session Chair: Dr. Ernest Makokha			
SESSION 9	08:30 – 09:00	Keynote 2: IPC Governance and coordination at national and county level	Dr. Rachel Kamau
	09:00 – 09:20	Guest Speaker: Innovations and use of Mobile technology in Health Care Worker Safety	Dr. Cathy Mwangi
	09:20 – 09:40	Guest Speaker: Infection Control in blood transfusion	Dr. Abdalla- UMB
	09:40 – 10:00	Guest Speaker: Role of IPC in achieving quality standards and accreditation in health care	Dr. Nyagah Thika Level 5 Hospital
	10:00 – 10:15	Which way to go on the use of chlorhexidine in Kenya?	Dr. Joseph Kimotho
10:15-10:30			
PLENARY DISCUSSIONS			
10:15-10:30			
TEA BREAK: Poster Viewing/Exhibitions			
SESSION 10		SESSION 11	
11:00-13:00		11:00-13:00	
11:00 – 11:30		11:00 – 11:30	
11:30-11:45		11:30- 11:45	
Session Chair: Erick Kitangala Infection Control in blood transfusion Infection Control in blood transfusion The prevalence of HIV, Hepatitis and co-infection amongst the Volunteer blood donors in Central Kenya region		Session Chair: Veronica Kamau Universal precautions in health care settings: Health Care Waste Management, Hand Hygiene, PPE Universal precautions in health care settings- Lessons from KNH Strengthening Health Care Waste Management (HCWM) systems in Kakamega County	
Daniel Kimani		Jemimah Katama	
Joseph Ndichu		Fred Okuku-PATH	

11:45-12:00	Prevalence of Hepatitis B Virus infection in Marsabit County	John Kariuki	11:45-12:00	Status of Infection Prevention Among Private Facilities In Samburu County	Wambura Boniface
12:00-12:15	Evaluation of Hepatitis B vaccination uptake and Awareness among Health Care workers at Mbale rural health training centre in Vihiga County	Brigid Soita	12:00-12:15	The Journey Of Hand Hygiene Quality Improvement At Thika Level Five Hospital	Lucy Beatrice Mwai
12:15-13:00	Round Table Symposium - Anios	12:15-12:30	Assess Health Care Waste Management (HCWM) in context of environmental safeguards in Universal Health Coverage. A case of Nyeri County		Kenneth Njuki
		12:30-12:45	Impact of IPC TOT training on Implementation of IPC core activities in FHI supported facilities in Kisii County		Oduor Susan
		12:45-13:00		PLENARY DISCUSSIONS	Oduor Susan
13:00- 14:00	Lunch: Poster Viewing/Exhibitions				
SESSION 12	Session Chair: Jemima Katama				
14:00- 16:00	IPC in Special Units		14:00- 16:00	Occupational health and safety in health care settings/Use of Innovative strategies	
14:00-14:30	IPC in Special Units- Renal Unit, Critical Care Unit, Dental Clinic, TB Units	Prof. Revathi	14:00-14:30	Using lessons learned to enhance uptake of PEP among healthcare workers through a mobile platform	Cathy Mwangi

14:30-14:45	Newborn Unit Audit For Infection Prevention And Control At JM Kariuki Memorial County Referral Hospital	Hellen Wangai	14:30-14:45	HIV Post Exposure Prophylaxis awareness and utilization among Health Care Workers at Busia County Referral Hospital Between Jan-May 2018	Oscar Gaumya
14:45-15:00	Nosocomial Infections Among Newborns At The Newborn Unit & Maternity At Lodwar County & Referral Hospital	Simion Leting	14:45-15:00	Laboratory Safety Audits A Game Changer In Infection Prevention And Control, Ministry of Health, Ahero County Hospital	Edward Oula Odhiambo
15:00-15:15	Reducing Healthcare-Associated Infections (HAIs) Through IPC Programs in Renal Units	Mercy Mbuti	15:00-15:15	A study on IPC education and provision of Hand hygiene products in improving compliance of Hand Hygiene in AIC Kijabe Naivasha Medical Center	Mary Njeri Njuguna
15:15-15:30	Factors Associated With Treatment Outcome Among Drug Resistant Tuberculosis Patients In Nyeri County	Martha Mugo	15:15-15:30	Improving hand hygiene compliance among health care workers at Kitale county hospital	Julia Ambeyi
15:30-15:45	Surgical Site Infection Surveillance In Post Cesarean Section Mothers At Kitale County Hospital, Kenya	Stella Mmochi	15:30-15:45	Infection Prevention Control In MTRH	Jackline Opondo
15:45-16:00	IPC Practice Experiences And Challenges In IDU	Zeddy Komen	15:45-16:00	Infection Prevention and Control in Machakos Level 5 Hospital Renal Unit	David Maundu
16:00-16:30	PLENARY DISCUSSION		16:00-16:30	PLENARY DISCUSSIONS	
16:30-16:45	Immunization-A tool of Infection Prevention and Control	Mary Njeri Njuguna	16:30-17:30	Round Table Symposium BD	BD

DAY 4		
Friday-30TH November 2018		
Session Chair: Linus Ndegwa		
08:30-09:00	Keynote 3: Antimicrobial Resistance and Stewardship	Dr. Ulizi -USA
09:00 - 09:15	Antibiotics stewardship to avert antibiotics resistance in Kitale county Referral hospital, Trans Nzoia county	Davies Opili
09:15 -09:30	Determinants of antimicrobial prescriptions in Kenyan hospitals: stakeholder and health worker perspectives.	Grace Kimemia
9:30 - 10:30 ITECH- MOH SESSION-1		
10:30-11:00 TEA BREAK		
11:00-11:45 CLOSING CEREMONY		
11:00 -11:30 AWARDS PRESENTATION		
11:30 -11.50 VOTE OF THANKS AND OFFICIAL CLOSING		
12:00-13:00 ITECH- MOH SESSION-2		
13:00 – 14:00 LUNCH		
14:00 – 16:00 ITECH- MOH SESSION-3		

CONFERENCE ABSTRACTS.

	LIST OF POSTERS- TITLE	AUTHOR/ PRESENTER
1	Determining the amount of health care Waste generated at Busia County Referral Hospital Laboratory between January and April 2018	Monica Atieno Ogutu
2	Effects of sample rejections on care and infection prevention at Busia County Referral Laboratory for 2017	Frida Sirima
3	Family donor replacement infection assessment	Stephen Kimanizi
4	Healthcare waste management practices among healthcare workers in Karatina Sub-county Hospital, Nyeri County.	Josphat Mwangi
5	Impact of SIMS assessment on biosafety-Bumula Sub County experience	Maelo David
6	Medical waste segregation practices in Mukurwei-ni Sub County Hospital, 2018	Julia wachira
7	Poor sharps handling and disposal in government facilities Kisumu central sub county	Alfred Omullo
8	Prevalence of Hepatitis B Surface Antigen among Blood Donated at Nyeri Blood Transfusion Satellite between July 2017 and June 2018	Daniel Wachira
9	Prevalence of transfusion transmitted infections(TTIs) among secondary school blood donors in Busia county; between July 2017 –June 2018	Rosemary Okuku
10	Using injection safety and post exposure prophylaxis to reduce occupational health hazards in health care settings:	Jackline Nyamusi Ondieki
11	Assessment of compliance to use of gloves	Andedo Joseph Opondo
12	Defying the odds to reach adolescent msm/msw to uptake and adhere health services, including prep.	Justus Monye

13	Situation of infection control in outpatient and inpatient departments at Kitale County hospital	Daniel Wekesa
14	Hand hygiene practice among health care workers in Anderson medical center, Transzoia county	Sakong Fentra
15	Health care waste management practice at Kisii Teaching and Referral Hospital	Ongeri Richard
15	A model to keep hospital infection prevention and control committees active: continuous quality improvement approach adopted by Machakos level 5 hospital infection and prevention committee.	Noel Odhiambo
16	Determining the amount of health care Waste generated at Busia County Referral Hospital Laboratory between January and April 2018	Monica Atieno Ogutu

CONFERENCE ABSTRACTS

Day 1: Tuesday-27th November 2018

MULTIDISCIPLINARY AMR PRE-CONFERENCE WORKSHOP

Theme: Promotion of Anti-Microbial Stewardship through Skill based Training and Education of multidisciplinary health care worker teams.

Collaborating Organizers – Aga Khan University Hospital Nairobi, IPNET Kenya, IDSK, IPC and AMR secretariat at MOH Kenya, IPDRP & CMR at KEMRI.

Background of the problem

Respiratory tract Infections (URTI and LRTI) are the most common conditions seen in outpatient clinics all over the world among all age groups. A large number of antibiotic prescriptions are triggered by a clinical suspicion of bacterial infection. It is increasingly being recognized that majority of such antibiotics are not necessary. Careful clinical examination and evaluation of the patient is very important and dependable lab investigations on sputum and throat swabs if necessary are a fundamental requirement to cut down unnecessary antibiotic prescriptions for spurious or uncertain clinical diagnosis of URTI and LRTI. The role of standard radiological evaluation of LRTIs for confident case management cannot be over emphasized.

A lot of controversy and misconceptions surround management of these infections in special populations. Increasing awareness and promotion of continuing clinician education is the best way to overcome this problem.

This workshop is designed around the broad theme of controlling antibiotic resistance in the context of community respiratory infections, since these are the major targets for unnecessary antibiotic prescribing. The complex nature of lower respiratory tract infections is reflected in the various diseases, syndromes, microbial pathogens and host responses. As such, these infections are responsible for much morbidity and the use of healthcare resources which in turn have significant economic implications.

We propose to conduct a series of these workshops to promote best practices in diagnostics and infection prevention, which is a very effective tool to reduce irrational prescriptions of antibiotics. Through these workshops we are also hoping to engage and inform medics and paramedics from various disciplines to discuss rational utilization of laboratory services to enhance patient management and judicious antibiotic use when indicated.

Target Audiences

Doctors from various clinical disciplines, Nurses, Pharmacists, Lab technologists and Journalists.

Lab technologists and nurses are the specific target for the hands on training component (bench practicum) on rapid testing and quality control in microbiology.

Purpose of workshop

1. To promote best practice in clinical diagnosis of respiratory infections and rationalize prescriptions.
2. To recapitulate local / national pneumonia guidelines
3. To promote rational use of antibiotics through promoting rapid testing and standard reporting of clinical samples for standard diagnosis of RTIs.
4. To provide a multidisciplinary platform for discussions on crucial aspects of antimicrobial stewardship.

Methods – Presentations by multidisciplinary team, discussions in Q A format and practical demonstrations

8-30- 12-30

(with 30 minutes Coffee break)

Each ppt. 20 minutes and 10 minutes Q&A

1. National AMR Surveillance Strategy - Jared Nyakiba / Evelyne Wesangula and team
2. Microbiology of Acute Respiratory Tract Infections(ARTIs) , Global AMR scenario in pathogens causing ARTIs – Global and Kenyan context - Gunturu Revathi Clinical Microbiologist AKUH
3. URTI- a strong driver of AMR in outpatient practice – Role of AMS - Dr Loice Achieng ID Physician UON
4. Community acquired pneumonia and AMR – current Kenyan scenario. Dr Enoch Omonge ID Physician UON
5. Control and Prevention of ARTIs in community and health care settings – Dr. Linus Ndegwa IPC Manager CDC Kenya
6. Quality Clinical Samples for Quality Laboratory Investigations – Importance of rapid tests in control of AMR – Dr Abubakar Abdillah Clinical Pathologist AKUH
7. Challenges and opportunities for Antimicrobial stewardship in

our setting – Role of pharmacist.

Dr Nath Arwa Pharmacist AKUH

1-30 – 4pm Practicum and Demonstrations for all multidisciplinary participants by Microbiology Technical team of Aga Khan University Hospital Dept. of Pathology

Lead by Nelson Kuria and Esther Ngata

1. Point of care testing for Influenza A & B, RSV & GA BHS
2. Standard method of sputum and throat culture sample selection, collection and transport methods
3. Use of N95 and routine masks for health worker and patient safety
4. Quality checks of sputum sample and use of Gram smear
5. Standard sample inoculation methods
6. Reading culture plates, interpretation and identification of pathogens (Streptococcus pneumoniae, Hemophilus influenzae, β hemolytic Streps. Moraxella sp. Klebsiella pneumoniae)
7. Interpretation of various samples – Throat swabs, Sputum, Tracheal aspirates, Broncho-alveolar lavage, (plural fluid & lung biopsy to discuss)
8. Methods of Antimicrobial susceptibility testing and standard panels of antibiotics for pathogens of RTIs (K.B. method & E test for pneumococci and H influenzae)
9. Quality Control Methods in clinical microbiology lab.

DAY 2: WEDNESDAY-28TH NOVEMBER 2018

SESSION 4:

Theme: IPC Governance and AMR

Not yet an Open Defecation Free County! Outcomes of Community Led Total Sanitation in Nyeri-Kenya, 2012-2018

Authors: *Denis Muriithi Mwaniki, Kenedy Munene*

Background: Diarrheal diseases are ranked the number 6 cause of morbidity and 7 in mortality causes, In Nyeri County.. Sanitation is key to attaining Universal Health Coverage

Purpose: To highlight the challenges of of the program implementation , and suggest recommendations for optimal health benefits.

Methods: involves inculcating positive attitudes and concepts of positive behavior change towards diarrheal diseases prevention and control, such as ideal hand washing practices and use of latrines by all. This study adopted a census approach, assessing a universe data as received from the study population. aims to build local community capacities/ mind sets towards a total sanitation approach to ensure the program sustainability To measure the intervention success, various program milestones, such as no of ODF claimed villages and number of villages verified and certified were measured against the program implementation protocol.

Findings: The County is not on track towards attaining, open defaction free status. The program apparently is dying down as figures indicate, despite, the health benefits claimed, if it was implemented, as designed. There is a direct coleration between top level management support and target achievement. The program achievement noted an inverse proportion comparing the direct implementing officer's achievement and the top supervisors achievement.

Conclusion: There is need for the county to commit adequate resources to the program in order to attain the social, economic and health benefits envisaged by the intervention. Stemming from the study results, Nyeri County continues to loose sanitation, related health benefits, and subsequently spend more in addressing sanitation related preventable conditions.

ANALYSIS OF PORTABLE WATER SOURCES, ANTIMICROBIAL SENSITIVITY PROFILE AND GENETIC BASIS OF CARBAPENEM RESISTANCE AMONG ISOLATES FROM SUSPECTED CHOLERA PATIENTS DURING THE CHOLERA OUTBREAK IN TRANS NZOIA AND WEST POKOT COUNTIES.

Author 1: Mr. Godfrey Sande Jumba¹, Prof. Simon K2

Organization 1:

1. Kitale County Hospital, Laboratory department, Kitale, Kenya.
2. Jomo Kenyatta University of Agr

Background: Beta lactam antibiotics have been for a long time the mainstay of antimicrobial therapy for a large number of bacterial infections. Exposure of these bacteria to a multitude of beta lactams has induced a dynamic and continuous production and mutation of beta lactamases, expanding their activity even against fifth generation Cephalosporins and Carbapenems. Their efficiency therefore has been progressively reduced by emergence and spread of acquired resistance determinants among pathogenic bacteria.

Purpose: The study therefore sought to screen for carbapenem resistant enterobacteriaceae (CRE) isolates from suspected cholera patients presenting with diarrhea at Kitale County Hospital

Methods: A total of 100 Stool samples were collected from suspected cholera patients. Rapid cholera antigen test was done and samples inoculated directly into Selenite f broth and alkaline peptone water for overnight incubation. A subculture to MacConkey agar and Thiosulfate Citrate Bile Salts Agar (TCBS) was then done. Recovered isolates were then identified using biochemical tests and serotyping with antisera (bd) and antimicrobial susceptibility profile done using the modified Kirby bauer technique. Sixty two isolates with detected extended-spectrum beta- lactamases (ESBL), and Carbapenemase phenotypes were then screened for Carbapenemase genes using real time PCR. Data analysis was done using WHONET software.

Findings: Fifty water samples were analyzed during the epidemic. Majority of the residents (32%) sourced their water from rivers and about 14% from piped sources. Only about 4% of the water sources had 0CFU/100mls of water which is the acceptable standard for portable water. A total of 82 isolates were recovered from stool samples. Twenty seven percent of the isolates were ESBL producers and 89.2% of them resistant to Ampicillin, 77.8% to Ceftriaxone, 45% to Ceftazidime, 96.7% to Imepenem, 46.9% to Meropenem, 16.7% to Gentamicin and 13.5% to Amikacin. One hundred percent of the vibrio cholera O1 serotype Ogawa and Inaba (n=48) were resistant to Imepenem, 64.5% to Meropenem, 6.1% to levofloxacin and none resistant to ciprofloxacin. Carbapenemase genes detected include blaOXA-48 (Escherichia coli) blaNDM Escherichia coli), and blaVIM (Escherichia coli and Vibrio Cholerae O1 ser Ogawa). blaKPC and blaIMP genes were not detected.

Conclusion: Verona integron-encoded metallo- β -lactamase is the most common Carbapenemase among isolates analyzed. There is need for investment in infection prevention and control programs within and without the hospital in order to contain the spread of carbapenem resistance genes and organisms

WATER SANITATION AND SANITATION (WASH) IN KENYAN HOSPITALS; WHERE ARE WE?

Author 1: Maina, Michuki, Tosas-Auguet, Olga, Mc Knight, Jacob, Nzosi, Mathias, Kimemia, Grace, English, Mike

Background: WASH in health care facilities is important in the provision of safe and quality healthcare services. Poor WASH has been associated with higher hospital acquired infections, increased hospital costs and can promote antimicrobial resistance.

Purpose: The survey assessed the WASH arrangements in 15 Kenyan hospitals using the World Health Organisation WASH facility improvement tool.

Methods: The survey was carried out between February and April 2017 across 15

purposefully selected county hospitals in Kenya. The survey was carried in all the inpatient wards and at the overall facility. Data were collected in the facility by a team of at least five members including hospital representatives; public health officers, nursing officers and doctors. Each indicator was assessed as either meeting, partially meeting or not meeting target. This score was determined by team consensus. The indicators were collected across the domains; water, sanitation, hygiene and organization management. An aggregate score was generated for each domain at ward, department and facility level.

Findings: We collected data on 34 ward indicators in 117 wards and 65 facility level indicators. We noted score variations within wards in a hospital and across hospitals. The water domain performed best with 7 facilities achieving a score of >75%. The organization management domain scored poorest across the facilities. At departmental level, maternity units performed best across all the domains. Some specific indicators performed poorly across all facilities: Only one facility had a toilet meeting the needs of patients with limited mobility.

Conclusion: We note marked variations in the state of WASH within facility units and across hospitals. This information is useful for hospital/county managers, Infection prevention and control committees to highlight the units needing more support and also highlights which indicators to focus on in an effort to improve the facilities standards of WASH and infection prevention and control.

SESSION 5:

Theme: Occupational health and safety in health care settings

POST EXPOSURE PROPHYLAXIS UTILIZATION AMONG HEALTH CARE WORKERS AT THIKA LEVEL FIVE HOSPITAL

Author: *Lucy Nyawira*

Background: Post exposure prophylaxis is a medical response given to prevent transmission of pathogens after exposure through percutaneous injuries and mucous membranes. Timely access to PEP is key in reducing transmission.

Purpose: The aim was to assess PEP utilization and establish the most exposed health care workers at Thika Level 5 hospital.

Methods: The study done was retrospective where by occupational PEP and daily activity register were reviewed from January to August 2018. The number of all the recorded health care workers was manually tallied according, carder and nature of exposure. The variables considered were age, Baseline HIV testing for the exposed

person, Hep B vaccination, type of risk, HIV and hepatitis status of the source and history of previous exposure. The data was analysed using excel and presented in form of pie charts and bar graphs and frequency tables. Data quality control, confidentiality and privacy were maintained throughout the study.

Findings: A total of 44 exposed health care workers were recorded. Out of these 42 (95.4%) were started on PEP and 4.6% were not started since they tested HIV positive at baseline. 43% were students, 15.9% clinicians, 11.4% nurses, 13.6% interns, 11.5% casual workers and 4% others. Of the total exposures 79.5% were needle stick injuries and 20.4% body fluid splash. All the injuries were documented as high risk. There was no documented Hep B baseline results. Those vaccinated against Hep B were 31.8%. HIV status of the source, 27.3% positive, 20.4% negative, 52.3% unknown status. Hep B status of the source, 25% positive, 56.8% unknown, vaccinated 9%. Only 2 (4.5%) had previous history of exposure.

Conclusion: Students were the most exposed group of health care. This could be linked to poor injection safety practice. All health care workers should be vaccinated against Hep B. The community needs to be sensitized on Hep B screening and vaccination considering the 25% positive sources. Documentation needs improvement for proper follow up and management.

TITLE: NEEDLE STICK INJURIES AMONG HEALTH CARE WORKERS AT NYERI COUNTY REFERRAL HOSPITAL BETWEEN 2014 AND 2017

Author: *Chege Rachel 1, Muthee J N 1, Gitonga R F 1, Michira, J K 2, Gituku J G 3, Watahi P 1, Dr. Saidi S 1*

Background: Healthcare workers (HCWs) are at occupational risk of exposure to blood-borne pathogens following needle stick injuries (NSIs). Interventions to reduce the risk include infection prevention control (IPC) training and hepatitis B virus vaccination. We set out to determine the rates of NSIs among HCWs at Nyeri County Referral Hospital (NCRH).

Methodology: Between 2014 and 2017, we prospectively collected NSI data in medical, surgical, theatre, pediatrics and maternity departments among 400 HCWs using an anonymous self-administered questionnaire. We captured information on cadre, age, location, duration of work experience, IPC training, post-exposure prophylaxis (PEP) uptake and hepatitis B virus (HBV) immunization. We used Pearson Chi-square test to compare proportions.

Results: Of the 400 HCWs interviewed 103 (25.8%) reported NSIs. NSIs rates did not vary by cadre; interns 56 (27.5%), nurses 28 (25.5%), cleaners 10 (20.8%) doctors 5

(29.4%) other cadres 4(19.1%), $p=0.821$. However, did by age; among ≤ 30 years 53 (35.6%), 31-40; 31(23.0%), 41-50; 15(14.7%), and >50 years 4(28.6%), $p=0.002$. Most NSIs were from medical department 27(26%), followed by surgical 20(19%), theatre 17 (17%), pediatric 17(17%), and maternity 11(10.5%). Over half of HCWs with ≤ 3 years' experience had NSIs 60(58%). Overall, 250(62.5%) had been trained on IPC. Untrained HCW, 75(30.0%) had NSIs while 28(18.7%) of trained HCWs had NSIs, $p=0.013$. Of the 400 HCWs, 75(19%) were fully vaccinated, 105 (26%) partially vaccinated while 220 (55%) were not immunized for HBV. Out of 103 with NSIs only 43(42%) had reported to their supervisors, out of whom, 38(88%) started PEP though only 21(55%) completed.

Conclusion: Needle stick injuries are common among HCWs at NCRH, especially at medical department, among less experienced staff and those without IPC training. Ongoing interventions such as orientation trainings for new interns, on-job trainings and continuous medical education may reduce NSIs. Reporting of NSIs and completing PEP are important infection risk-reduction measures.

EVALUATION OF NURSES' COMPETENCE IN THE PREVENTION OF PERIPHERAL VENOUS CANNULAE-RELATED INFECTIONS

Authors: Riungu, Doris Kinya, Okoth, John

Organization 1: Moi Teaching and Referral Hospital/ Masinde Muliro University of Science and Technology

Background: IPC control are critical activities influence the quality of health care services. Nurses should be educated on indications of intravascular access, its insertion while preventing risk for intravascular infections.

Purpose: The main objective was to evaluate the competence of nurses in preventing peripheral intravascular cannulae-related infections.

Methods: This was a study on nurses in the sub county hospitals in Uasin Gishu. A descriptive cross-sectional design and observation was applied. The study population will be selected using systematic random sampling where the selection will take place from every facility. A list of the nurses in the facility will be obtained and the names selected randomly after selection of one starting point. A questionnaire was administered and there was also direct observation of the insertion procedure. The competence was measured using a score of the procedure.

Findings: 9.02 percent of the nurses attained a 70 percent score of competency in preventing intravascular cannulae related infection. 68.75 percent of the nurses attained the average score of between 50 and 70 percent, while 22 percent of the nurses were below average in prevention of intravascular cannulae related infection.

During direct observation, 88 percent of the nurses did not perform hand washing, which is universally emphasized. However, all of them donned gloves while inserting the intravascular cannulae. 61 percent of the nurses attached correctly labelled infusion set.

Conclusion: Although nurses are educated during training on the procedure of insertion of intravascular cannulae, they still require on job training so that they can develop competent skills and improve quality of care given to the patients. Nurses also require to be evaluated frequently by the nurse educators and managers.

SESSION 6:

Theme: Laboratory Quality and Biosafety as part of Infection Control

INFECTION PREVENTION AND CONTROL STATUS OF MEDICAL DIAGNOSTIC LABORATORIES IN WESTERN KENYA.

Author 1: *Henry Ogaro¹, Ciira Kiiyukia², Stanely*

Background: KEY WORDS: Infection prevention and control, Medical diagnostic laboratory, Laboratory safety, Biosafety officer, Safety and health. Abstract Infection prevention and control in medical diagnostic laboratories is becoming increasingly important subject as a result of emergence of highly infectious viral diseases such as Marburg, Zika, Hepatitis and HIV and re emerging of multi drug resistance microorganisms. A growing numbers of health personnel in Kenya are employed in laboratories that range in size and complexity, equally the number of patients and health care workers who visit laboratories for test results and consultation need to be protected against laboratory related risks that threatens safety and health.

Purpose: Across sectional study was conducted to evaluate infection prevention and control measures employed in private and public medical diagnostic laboratories in western part of Kenya using the Kenyan biosafety and biosecurity policy guideline questionnaire and observation checklist. Study approval was obtained from National Commission for Science, Technology and Innovation and data analyzed using STATA v 13.

Methods: A total of one hundred and thirteen medical diagnostic laboratories were visited and evaluated for the presence of infection prevention and control measures employed, of which 77 (68.1%) were located in rural areas and majority 78 (69%) were private. The respondents gender male were the majority 72 (63.7%). Mean year of service of employees were 3.22 with majority 96 (85%) having active service of less than five years. Facility staffing of a mean of $2 \pm SD 1.63$, with laboratories having ≤ 2 staff (88%) Laboratory that had staff with appropriate vaccination were 68 (60.2%) of

with 23 (33.8%) were private and 45 (66.2%) were public. Vaccine record available 34 (30.1%), aware of laboratory accident SOP 107 (94.7%), training on laboratory incident and accident handling 109 (96.5%), designated biosafety officer 98 (86.7%) availability of post exposure prophylaxis policy and SOP 11 (9.7%), SOP posted in areas where all staff can see 20 (17.7%). Presence of hand washing sinks (71.7%).

Findings: Majority of laboratory personnel are trained on IPC and their facility have a designated biosafety officer however, there is a gap in implementation of the knowledge learnt evidenced by lack of verifiable documentation. Regular monitoring and assessment of diagnostic laboratories for compliance with infection prevention and control measures will not only promote a safer working environment, but could also impact greatly on maintaining quality and safe laboratory service delivery.

Conclusion: Therefore more strategies on the “know-do gap” that translates training into practice with proper documentation need to be employed to close identifiable gaps.

STRENGTHENING BIOSAFETY AND BIOSECURITY AWARENESS IN KENYA AND BEYOND

Author: *Patrick W. Okanya, Secretary General, BMAK*

Biological material can cause harm to the user or the environment if improperly handled. Biosafety rules entailing good laboratory practices are usually enforced to mitigate occurrence of such accidents. However, with the global concern on security, the use of biological materials as weapons of mass destruction by terrorist is real. People with malicious intentions can steal valuable biological material and use them as weapons to harm others either directly or indirectly. To circumvent this, biosecurity policies/measures should be implemented to ensure that all valuable biological materials within laboratories are protected, controlled and accounted for. The probability that a biological material will cause an accidental harm or will be stolen from the laboratory falls under Biorisk management. It is for this reason that the Biorisk Management Association of Kenya (BMAK), a registered nonprofit making organization was formed and is now affiliated to the International Federation of Biosafety Associations (IFBA). It brings together professionals involved in biosafety and biosecurity to discuss and exchange experiences, developments and issues in biorisk management practices and regulation. Its membership is drawn from students in the biological sciences to senior professionals in academia, research institutes, government institutions in health and agriculture, NACOSTI and policy makers in Kenya. Its mission include enhancing the knowledge and understanding of biosafety and biosecurity issues and the implementation of biorisk management practices in Kenya, a strive to establish and communicate best practices amongst its

members and to encourage inter-sectoral dialogue and regional and international collaborations on biological risk management, seek to influence and support legislation of policy and guidelines related to biosafety and biosecurity and to act as a focal point for the consolidation of views on biosafety and biosecurity and development of key strategic outreach messages and materials for raising awareness to all relevant stakeholders with the major objective of ensuring the prevention of harm to humans and the environment from biological materials.

Riding on implementation of Laboratory Quality Management Systems to improve Facility Biosafety Practices at Nyeri County Referral Hospital laboratory.

Authors: Githinji Winfred, Gakuo Gerald, Ragwa Francis, Muoki Sebastian

Background: Biosafety is a key requirement in the on-going quality management system improvement for laboratory accreditation processes in Kenya. However, limited awareness of biosafety practices hinders the achievement of laboratory accreditation.

Purpose: To understand how biosafety practices improved based on stepwise laboratory quality improvement towards laboratory accreditation (SLIPTA) external audits.

Methods: Baseline, midterm and exit audits were conducted at Nyeri County Referral Hospital (NCRH) laboratory over between November 2016 and April 2018. Scores for the three audit reports were rated out of 43 possible points awarded for facility and biosafety practices out of a possible 150 points per the SLIPTA checklist. We also included for analysis the number of staff trained on biosafety and undergone refresher courses during this review period. Audit scores were expressed both as absolute points and percentages. The scores at the 3 audit points were analysed and summarized in tables and graphs.

Findings: The scores at the three external SLIPTA audits points were; 32/43(74.4%), 36(83.7%) and 43(100%) respectively. There was a corresponding improvement in biosafety practices out of a total score of 150 at 121(80.6%) 127(84.6%) and 134 (89.3%) for the baseline, midterm and exit audit respectively. The total number of trained staff on a 5-day biosafety training was 15/17(88.2%), 19/ 21(90.5%) and 20/21(95.24%) respectively.

Conclusion: Marked improvement in biosafety practices was noted over the last 3 years at NCRH laboratory. This was confirmed by improved safety audits over the same period. The ongoing lab QMS improvements have synergistic improvements on

biosafety practices in the healthcare settings.

SESSION 7:

THEME: Occupational health and safety in health care settings /Immunization – Tool of Infection Prevention and Control

Hepatitis B Vaccination status among Healthcare Workers in Infection Prevention at Busia County Referral Hospital 2018

Author 1: Oscar Adidi Gaunya

Background: Healthcare Workers are exposed to constant risk of Hepatitis B due to their occupational contact with blood, blood products and other body fluids as well as needle stick injuries

Purpose: To determine overall Hepatitis B vaccination coverage among HCWs at Busia County Referral during year 2018.

Methods: Specific Objectives To establish Hepatitis B vaccination status among Healthcare workers by Cadre and department at Busia County Referral Hospital
Methodology: We did a retrospective study involving extrapolation of data from Staff Personnel files as well as direct interviews of departmental Heads to determine staff HBV vaccination status at BCRH by cadre & department. Data was collected, analyzed by Microsoft Excel and represented in form of tables and graph

Findings: The vaccination status of HCWs against HBV at BCRH was at 13.2% (34) out of a total of 257 staff. This denotes Healthcare workers who had received at least one dosage of Hepatitis B vaccine while 7.9% (20) reported to have been fully vaccinated (3 doses). In regard to HBV vaccination status by cadre;100% (21) of the Lab Technologists had received atleast one dose and 90% (19) were fully vaccinated, 11%(2) of the clinical Officers had received atleast one dose and none had completed the 3 doses,20% (1) of the Physiotherapists had received atleast one dose while only 20% (1) were fully vaccinated & this applies to Radiographers.33.3%(1) of the Nutritionists,64% (7) HIV counselors were fully vaccinated,5.2% (1) Health Records Officers received all the 3 doses.The rest of the cadres/departments did not comply at all.

Conclusion: Hepatitis B vaccination uptake was low & due to the rise in number of cases of HBV in the region, Healthcare workers remain at risk. All Cadres are at risk of HBV and interventions should be addressed equally to all cadres Vaccines & vaccination

programs be enforced in all Facilities

Evaluation of Hepatitis B Knowledge and practice among laboratory staff in Bungoma County-Kenya

Authors: *Phidelis Maruti, Moses Oyaya,*

Background: Hepatitis B is a serious infection that affects liver and caused by hepatitis B virus (HBV). HB is a serious public health problem and the health professionals are most at risk. It is contagious and easy to be transmitted from one infected individual to another by blood to blood contact, mother to child, unprotected sexual intercourse, sharing of eating utensils and other barber shop and beauty salon equipment.

Purpose: The aim of this study was to assess knowledge and practices about transmissions and prevention of hepatitis B among laboratory in Bungoma County, Kenya.

Methods: A cross sectional study was conducted among 75 laboratory staff in nine facilities in Bungoma County from April to June, 2018. Self- administered structured questionnaire was used to collect information which included as to whether the staff knew what is Hepatitis B disease; why be vaccinated against Hepatitis B; How Hepatitis B is spread; who should get Hepatitis B vaccine; whether staff has been vaccinated against Hepatitis B; whether staff are aware about the availability of post exposure prophylaxis for Hepatitis B; Whether a facility had included Hepatitis B in its training program and whether the facility has Hepatitis B Vaccination program for its staff.

Findings: Out of 75 distributed questionnaires, 75 were returned with a response rate of 100.0%. Only 24% laboratory staff had been vaccinated against Hepatitis B, 100% knew what is Hepatitis B disease, 93% knew who should get Hepatitis B and 97% knew how Hepatitis B is spread. However only 17% of the laboratory staff were aware of the availability of post exposure prophylaxis for Hepatitis B. 11% of the visited facilities had Hepatitis B vaccination program while none of the visited facilities had included Hepatitis B in the training program.

Conclusion: This study indicates that as much as laboratory staffs are awareness about Hepatitis B, its route of transmission and who should be vaccinated, majority of staff are not aware of availability of post exposure prophylaxis. Similarly, majority of laboratory staff were not vaccinated against Hepatitis B, which makes them vulnerable to the disease. Very few facilities had Hepatitis B vaccination program and none had included Hepatitis B vaccination in there training program which might have contributed to majority of staff not being aware of the post exposure

prophylaxis for Hepatitis B vaccination.

THE IMPORTANCE OF INFECTION PREVENTION CONTROL IN A TUBERCULOSIS REFERENCE

LABORATORY IN KENYA

Authors: Jennifer Njuhigu^{1**}, Mamo Omuru¹, Nellie Mukiri¹, Zipporah Mwongera¹, Michael Mwangi¹, Christina Mwachari², Joseph Osoga², Beatrice Khamala¹, Pamela Juma¹, Margaret Mburu³

Author Affiliations

1. Kenya National Tuberculosis Reference Laboratory (KNTRL)
2. University of Maryland Baltimore (UMB-K), Nairobi Kenya
3. Division of Global HIV & TB (DGHT), United States Centre for Disease Control and Prevention (CDC), Kenya

Background

Specimen processing, culture and drug susceptibility testing (DST) procedures carried out at national tuberculosis reference laboratories have the potential for increased risk of tuberculosis (TB) transmission. These laboratories should ensure infection prevention and control (IPC) activities, such as risk assessments, are routinely implemented for timely risk identification and remediation.

Methods

Biological risk assessment was conducted at the Kenya National Tuberculosis Reference laboratory to determine any potential TB IPC gaps. A total of 7980 sputum specimens were reviewed from various categories of patients with test outcomes (smear microscopy and culture), staff competencies, annual staff screening for TB, N95 fit test outcomes, status of equipment calibration and service contracts.

Results

Out of 7980 samples received, 3389 (42.5%) were from previously treated tuberculosis patients, 2401 (30.1%) multi-drug resistant tuberculosis (MDR-TB) treatment follow-ups, 76 (1.0%) MDR-TB contacts and 462 (5.8%) did not have documented patient category. There were 25 (0.3 %) samples found to be leaking upon receipt. Out of the 7980 samples processed 3,192 (40%) were smear positive and culture positive, 314 (3.9%) were smear negative and culture positive, 69 (1.0%) were newly diagnosed as new MDR-TB. All staff [22 (100%)] had competencies for their assigned tasks, 22 (100%) had annual medical surveillance and had been trained on safety. All adhered to rules of wearing the appropriate personal protective equipment (PPE) while working; however, 5 out of 22 (22.7 %) failed fit testing for the N95 face mask. All the 7 biosafety cabinets had a current calibration status

Conclusion

This assessment showed that national tuberculosis reference laboratory receives highly infectious samples, identified IPC gaps in samples leaking on transit and staff that failed N95 fit tests. It is important to ensure staff who fail N95 fit test have alternative TB IPC compliant protection such as powered air purification respirator (PAPR) and training. Periphery sites should be trained on good sample packaging procedures.

SESSION 9:

Theme: Injection safety and technologies

SESSION 10:

Theme: Infection Control in blood transfusion

THE PREVALENCE OF HIV, HEPATITIS AND CO-INFECTION AMONGST THE VOLUNTEER BLOOD DONORS IN CENTRAL KENYA REGION

Author 1: *Ndichu J.M;1 Wiggins R.N2 Muguro D.M 3*

Background: AFFILIATES 1. National Blood Transfusion services satellite Nyeri. 2. Mombasa Polytechnic University College. 3. Nyeri provincial General Hospital Laboratory Department. BACKGROUND Nyeri Blood transfusion satellite was mandated to collect blood from Health volunteer donors in this region from the year June 2011 to date. Over 90% of blood supply comes from institutions of higher learning. We are situated at Nyeri Provincial General Hospital about 50 kilometers west of M.T Kenya and 1.5 Kilometers east Nyeri Town.

Purpose: RESEARCH QUESTION/OBJECTIVE • To determine the health status of the volunteer blood donor community • To know the most prevalent diseases amongst volunteer donors in this region

Methods: Method/design Retrospective data analysis is on all volunteer blood donors who visited the Nyeri satellite blood donor centre was carried out, between June 2011 to July 2018

Findings: Results 1. Between June 2011 to July 2018, 23,433 volunteer blood donors donated blood at the Nyeri satellite blood donor centre. all the 23,433 Units of blood were screened for 1. HIV 1;2 status 2. Hepatitis B Virus 3. Hepatitis C virus. 4. Syphilis A total of 509 blood units tested positive for HIV 1/2 101 (0.5%), Hepatitis B Virus 222(1.2%). Hepatitis C virus 67(0.4%) and Syphilis 144 (0.8%)

Conclusion: DISCUSSION/CONCLUSION The study shows that Hepatitis B virus (HBV)

is more followed by syphilis then HIV ½, hepatitis C virus is the least. Mostly blood donation exercise is done in the institutions of higher learning, because it targets youth who are above 16 years of age and Adults who are 65 years of age. Therefore, about 90% all the blood comes from secondary schools, tertiary institutions, colleges 7% from adults and 3% repeat volunteer donors. Those who mostly test positive for Hepatitis B virus and Hepatitis C Virus are school going children; very few test syphilis positive and a number of them test positive for HIV ½ This trend should be monitored and addressed because the school community stays together and the infection can easily spread to their colleagues. The students stay in the school facility for 3 months each term. Therefore public health awareness must be addressed and those who are sick should be treated promptly on time to reduce the incidences.

EVALUATION OF HEPATITIS B VACCINATION UPTAKE AND AWARENESS AMONG HEALTH CARE WORKERS AT MBALE RURAL HEALTH TRAINING CENTRE IN VIHIGA COUNTY

Authors: *Brigid Soita, Ruth Asega, Isaac Mugo.*

Affiliation: *Mbale rural health training center*

Introduction

Hepatitis B is a serious infection that affects liver and caused by hepatitis B virus (HBV). HB is a serious public health problem and the health professionals are most at risk. It is contagious and easy to be transmitted from one infected individual to another by coming in contact with blood, open sores or body fluids of somebody who has hepatitis B virus. It is estimated that globally out of 150,000 people who donate blood, 1200 were found to be HIV positive, while 3000 were diagnosed with Hepatitis B virus (Kemri 2017). The prevalence rate of HBV infection in Kenya is currently three times higher than that of HIV with a prevalence rate of between 5-8%. The aim of this study was to assess Hepatitis B vaccination uptake and Awareness among Health Care workers at Mbale rural health training Centre

Methods

A cross sectional study was conducted among 45 Health Care workers at Mbale rural health training centre in June, 2018. Self-administered structured questionnaire was used to collect information which included as to whether the staff knew what is Hepatitis B disease; why be vaccinated against Hepatitis B; How Hepatitis B is spread; who should get Hepatitis B vaccine; whether staff has been vaccinated against Hepatitis B; Whether a facility had included Hepatitis B in its training program and whether the facility has Hepatitis B Vaccination program for its staff.

Findings

Out of 45 health care workers. Of which 5(11%) are Clinical Officers, 15(30%)

) nurses,4(9%) laboratory technologists,2(4%) pharmacists,2(4%) health administrators,2(4%) health records officer,5(11%) support staff 3(6%)HTS providers, 6(13%) casuals workers 1(2%) public health officer and 1(2%) CHEW only 3(7%) are vaccinated. Of the 3, 1 is laboratory technologist, 1 a public health officer, and 1 is a Clinical officer. 4 (9%) HCW reported to have received single dose of the vaccine at their former training institutions.38 (84%) knew who should get Hepatitis B and knew how Hepatitis B is spread. All the health care workers (100%) knew that hepatitis B vaccine is not available at the facility and Hepatitis B is not included in the training program.

Conclusion

This study indicates that as much as health care workers are aware about Hepatitis B, its route of transmission and who should be vaccinated, majority of them are not aware whether the vaccine is available or is their right. The facility does not have Hepatitis B vaccination program and has not included Hepatitis B vaccination in the training program.

Recommendations;

- Hepatitis B vaccination should be factored into the facility annual IPC budget and county budget for new employees and those existing.
- The facility should include Hepatitis vaccine as a policy requirement for any new employee or contractor.
- Training for all HCW to bridge the knowledge gap especially the support staff.

SESSION 11:

THEME: Universal precautions in health care settings: Health care waste management, Hand Hygiene PPE

STRENGTHENING HEALTH CARE WASTE MANAGEMENT (HCWM) SYSTEMS IN KAKAMEGA COUNTY

Authors: *Okuku, Fred, Chepkonga, Kennedy*

Background: 10-25% of healthcare waste (HCW) is hazardous the rest is non-risk of general waste. If not properly managed HCW cause infection. Sharps contribute to 21 million hepatitis B and 260,000 HIV new infections.

Purpose: To strengthen capacity of county and sub county health management teams to safely manage waste generated in healthcare settings in Kakamega County

Methods: APHIAPlus conducted sensitization workshops for county health management teams (HMT) on infection prevention and control (IPC) and HCWM

integration. National IPC guideline, HCWM guides and job aids were disseminated. Each sub county HMT developed a work plan and were supported to implement at sub county and health facility level. Color coded bins and bin liners were procured and distributed. Waste handlers were provided with personal protective equipment. Healthcare waste storage and disposal sites were renovated. Ongoing support supervision, technical assistance and mentorship was conducted by project staff. National IPC supervision checklist was used to monitor and document progress

Findings: HCWM and IPC activities were integrated into routine supportive supervision by county and sub county HMinutes. Facility level IPC committees were constituted or reactivated and work plans developed. Waste segregation, specifically, sharps is practiced in majority of health facilities. All facilities using color coded bins which enhanced segregation. Secure storage for sharps and infectious waste. Collection and disposal of safety boxes for centralized disposal has improved. Waste handlers especially incinerator operators have personal protective equipment.

Conclusion: A framework for HCWM is in place but it requires resources and infrastructure to build a functional HCWM system. CHMinutes should take the lead in strengthening HCWM systems. National guidelines have not been disseminated to facility level. County policy guidelines need to be developed to support effective implementation of HCWM.

STATUS OF INFECTION PREVENTION AMONG PRIVATE FACILITIES IN SAMBURU COUNTY

Author 1: *Wambura Boniface, James Saina, Joseph Gichuki, Ann maina*

Background: Existing knowledge gap on infection prevention in the private sector warrants an exploration of the gaps in these facilities and how partnership with public sector can mitigate these gaps.

Purpose: The study explores status of infection prevention in private facilities in Samburu County

Methods: The study was a rapid assessment conducted in two sub counties in Samburu i.e. Samburu central and Samburu east. A total of 18 private facilities were assessed with 4 in Samburu east and 14 in Samburu Central. The study was conducted by two Samburu county health management team members and two Afya Timiza project staff. All private facilities operational at time of study were eligible for inclusion. Data was collected using a facility checklist as well as questionnaire and analyzed using excel software. The methods of collection included observation as well as interviews.

Findings: All the assessed facilities had a source of clean water as well as soap or detergent for hand washing. 75% of facilities in Samburu East and all facilities in

Samburu central had a dedicated area for cleaning instruments. Only 55% of the facilities in Samburu central had a sharp container at time of study while all the facilities in East had one. All facilities had a chemical disinfectant mostly chlorine and were sterilizing their equipment either through auto cleave, boiling or three bucket process. 88% of facilities in Samburu central and 75% in East had a waste receptacle with container.

Conclusion: The findings of the study indicate there are still gaps in infection prevention in the private facilities particularly in disposal of waste and sharps. Hence there is need for the county government to include them in their routine supportive supervision which has been proven to enhance infection prevention practice.

THE JOURNEY OF HAND HYGIENE QUALITY IMPROVEMENT AT THIKA LEVEL FIVE HOSPITAL.

Author 1: *Beatrice Mwai, Catherine Mwangi, Esfer Mbua*

Background: Hand hygiene is the single most effective way of preventing Hospital Acquired Infections (HAI). According to WHO 80% of HAIs can be prevented by observing the 5 moments of hand hygiene.

Purpose: The study aim was to assess hand hygiene practice among health care workers and the impact of quality improvement interventions.

Methods: Direct observation on the 5 moments of hand hygiene using WHO observation tool. Health care workers who had direct patient contact were observed secretly. Baseline data was collected in April. Causes of low hand hygiene were analysed using the cause effect diagramme and an aim statement formulated then a drivers diagramme to help us achieve our aim. A work plan was then drawn and QI interventions carried out. Data was collected in the subsequent months of May, June, July and August. Analysis was done on every month and PDSA cycle used to apply the interventions. Compliance was measured as hand hygiene actions performed over total opportunities in percentage.

Findings: At base line 12% performed hand rub, 17% hand wash, 47% missed and 25% missed but used gloves. Compliance per profession, Nurses 27%, Doctors 28% others 11%. Total compliance 23%. After QI interventions, May compliance showed 27% hand rubs, 12% hand wash, 41% missed and 19% missed with gloves. Compliance per profession nurses 32%, doctors 55%, others 38%. Total compliance 40%. June data, 19% hand rubs, 18% hand wash, 45% missed, 18% missed with gloves. Per profession, Nurses 44%, Doctors 25% others 22% Total compliance 37%. July data, 20% hand rubs, 22% hand wash, 36% missed and 22% missed with gloves. Per profession Nurses 41%, doctors 38%, others 48%. Total compliance 42%. August compliance per

profession ,Nurses 50%,Doctors 41% .others 52%.Total compliance 47%.

Conclusion: After quality improvement interventions there was improvement on hand hygiene compliance from 23% to 47% within 4 months.This shows that continuous quality improvement with interventions such as constant supply of hand hygiene commodities,regular feedback,on job training,visual and verbal reminders can greatly improve hand hygiene compliance and thus improve patient safety.

ASSESS HEALTH CARE WASTE MANAGEMENT (HCWM) IN CONTEXT OF ENVIRONMENTAL SAFEGUARDS IN UNIVERSAL HEALTH COVERAGE. A CASE OF NYERI COUNTY

Author 1: *Kenneth K.Njuki*

Background: The government of Kenya has prioritized Universal health coverage (UHC) in its big 4 agenda. Nyeri county is among the first four piloting counties in UHC together with Kisumu,Isiolo and Machakos . Poor management of health care waste (HCW) may expose health workers and the community to infections/hazards from healthcare establishments.

Purpose: Environmental safeguards are key to UHC implementation hence it is therefore important to review and analyze the adopted practices in waste management.

Methods: Methodology A cross sectional study was done to assess availability of functional incinerators, burning chambers, well protected ash pits, well protected placenta pits, having colour coded bins and waste segregation. Seven hospitals, twelve health centers, and seven dispensaries public, faith based and private were surveyed by collecting data through an expert standardized national self-administered questionnaire/observation check list. This was carried out between July and September 2018. Data collected was latter analyzed using excel data analysis tool to determine the percentages.

Findings: The study revealed that 71% of the hospitals had a functional incinerator, 28% of health centers and 14% of dispensaries had burning chambers. On availability of colour coded bins 64% of hospitals, 33% of health centers and 100% of dispensaries had them .Thirty eight (38%) of hospitals, were segregating wastes. Sixty four (64%) of hospitals, 32% of health centers and 33% of dispensaries had well protected ash pits. Seventy one (71%) of hospitals 41% of health centers had well protected placenta pits.

Conclusion: More resources need to be allocated by the County Government to be spent on provision of basic commodities/amenities and training of staff on health

care waste management.

TITLE: IMPACT OF IPC TOT TRAINING ON IMPLEMENTATION OF IPC CORE ACTIVITIES IN FHI SUPPORTED FACILITIES IN KISII COUNTY

*Oduor S^{1**}, Bota D², Onyango D¹, Ogweno P¹*

1. Family Health International (FHI 360)
2. County health government, Kisii- Kenya

Introduction

Infection prevention and control (IPC) is a scientific approach and practical solution designed to prevent harm caused by infection to patients and health workers. It is grounded in infectious diseases, epidemiology, social science and health system strengthening (WHO). The infection control programme will be effective so long as it is comprehensive and includes surveillance and prevention activities, as well as staff training (WHO,2004). This study was done to evaluate the impact of an IPC TOT training in kisii county.

Method

This study was done between August and November 2018. A baseline assessment was conducted using a structured questionnaire and findings analyzed. A sensitization meeting was conducted for the County and facility health management team (HMT). Health Care Workers (HCW) were then trained as IPC TOTs. A set of IPC indicators were selected and monitored overtime i.e. Availability of IPC Committee, scheduled CME , IPC specific Budget, practicing IPC Scrubs, hand hygiene and sensitization of support staffs.

Results

28 HCW from seven health facilities were trained as IPC TOTs for six days. Of the facilities trained, 7(100%) of the facilities constituted an IPC committee, 86% developed scheduled IPC CMEs, 42% had IPC specific budgets, 57% had IPC scheduled Hospital Scrubs, 86% practiced hand hygiene, 86% improved on waste management and 48% had an IPC sensitization meeting targeting support staff.

Conclusion

This research highlights the importance of equipping all hospital staffs with requisite IPC knowledge, skills and attitudes for good infection control practices. Facilities that improved most are the ones that included the Facility In charges and hospital management teams in the trainings. This finding correlates with WHO (2004) guidance that health administrators should also be oriented towards the importance

of the infection control programme.

SESSION 12:

Theme: IPC in special units

NEWBORN UNIT AUDIT FOR INFECTION PREVENTION AND CONTROL AT JM KARIUKI MEMORIAL COUNTY REFERRAL HOSPITAL

Author 1: Helen Wangai¹, Keziah Mwangi²

Background: Background and Objectives Neonates, especially those requiring specialized care in the newborn units are more susceptible to health care associated infections. Immunodeficiency related to extreme prematurity, low birth weight, central venous catheter use and exposure to broad spectrum antimicrobials are some of the multiple factors responsible for high risk of infection in this special group. These HAIs are preventable and unacceptable and adherence to standard precautions is the most critical step towards sustainable reduction. Several factors may hinder the successful implementation of IPC practices in the NBU such as heavy workload, congestion and inadequate supplies of essential commodities.

Purpose: The overall objective of this study was to audit IPC practices in the NBU

Methods: A cross sectional descriptive study was conducted in the Newborn unit of the County referral hospital. Simple random sampling technique was used to sample the unit. Data collection method were both quantitative and qualitative using a structured checklist and observations respectively. Data analysis was done using Microsoft excel.

Findings: 524 neonates were admitted between January- June 2018. 22 deaths reported (8 deaths due to prematurity and 14 due to asphyxia). No neonatal death audits carried out. The NBU appeared to be too small and congested with no isolation room for babies with sepsis. No log of needle stick injuries or other employee exposure maintained although PEP was available for HCWs for free. None of the HCWs was immunized against hepatitis B. Hand hygiene facilities easily accessible but soap and hand drying facilities unavailable. Hand sanitizers in use, hand wash basins and ABHR dispensers were clean. Posters demonstrating proper hand hygiene technique unavailable and adherence to hand hygiene not periodically monitored. PPEs supply was inefficient. Gloves and masks were adequate but gowns insufficient for mothers, HCWs and visitors. Hair covers were available but used inconsistently while sandals were used instead of shoe covers. The floor was tiled and curtains clean and stain free. Patient chairs had water proof covering, were clean and intact. The overall cleanliness wanting: dust was found on some equipment, low/high places and corners. Some equipment had rust and stains and furniture not in working conditions. No cleaning schedule available. Healthcare waste management suboptimal. No waste

segregation done as per the national guidelines. One colour coded bin, with no cover and overflowing with waste found.

Conclusion: Gaps in the implementation of the national IPC guidelines evident in OSH, environmental hygiene and healthcare waste management. Lack of inadequate supplies for hand hygiene and PPEs. Hospital IPC committee not executing its mandate well and the need for an IPC focal person is inevitable.

NOSOCOMIAL INFECTIONS AMONG NEWBORNS AT THE NEWBORN UNIT & MATERNITY AT LODWAR COUNTY & REFERRAL HOSPITAL, TURKANA COUNTY.

Author 1: *Simion Leting*, **2:** *Elikanah Wachira*

Background: A sudden increase in newborns cases developing fever at the maternity newborn unit before they were discharged was noted, a number of cases returned to the hospital after discharge with similar complaints.

Purpose: The objective is to determine the potential causes of nosocomial infections and outline strategies employed to minimize its upsurge.

Methods: Being a suspicion of possible contamination as a result of compromised infection prevention measures, an experimental microbiological study was carried out. This was done by collecting samples from suspected contaminated equipment including; trays, pans and weighing scales. Samples were then inoculated in various culture media notably MacConkey, chocolate blood Agar and DCA. Furthermore, a questionnaire was generated to all the maternity staffs including the students. The questionnaire aimed to investigate other possible factors contributing or compromising safety in their department. The study was carried out between May and August 2018.

Findings: After inoculation, growth was noted in Chocolate Blood Agar and MacConkey media. After further isolation, the organisms were confirmed to belong to the genus staphylococcus and pseudomonas. The two isolated organisms were also subjected to antibiotics and almost all drugs were resistant to pseudomonas spp but only two drugs were resistant to staphylococcus. Data collected through questionnaire gave the following findings; contamination of the umbilical cord, poor sanitation of the mothers hence contaminate, poor techniques in equipment handling and sterilization and poor hand hygiene as some of the contributing factors.

Conclusion: Proper hand hygiene is important including the need to have hand sanitizing gels in place. It is important that mothers handle their newborns in a safe way that minimizes contamination, Need for competence assessment after training

and mentorship of students and interns on the application of sterility procedures.

REDUCING HEALTHCARE-ASSOCIATED INFECTIONS (HAIS) THROUGH IPC PROGRAMS IN RENAL UNITS

Author 1: Mercy Mbuti

Background: Because of the underlying renal failure and existence of procedural or environmental illnesses, dialysis patients have a high risk of infections, hence the need to establish a comprehensive IPC program

Purpose: To evaluate the main agents of infections in dialysis patients and stress the importance of IPC programs in renal units

Methods: A prospective observational study of 20 dialysis patients was conducted. Data from central-line associated bloodstream infections, surgical site contagions, and environment (dialyzer couplings and hospital couch) was collected. The HAIs observed from the patients were assessed against the failure by HCW to follow aseptic techniques during dressing. Blood from the coupling was collected for culture while 20 patients were observed during three months and had pericatheter skin samples collected for pus swab and culture according to standard techniques. The research also evaluated whether HCW complied with the aseptic rules when handling a patient

Findings: The specimen from 8 (40%) patients had considerable organism (*Staphylococcus aureus*, *E. coli*, *Staphylococcus epidermidis*, and *Pseudomonas aeruginosa*) growth. Failure to follow aseptic rules was associated with high infection rates and high levels of readmission with the high rate of infection associated with increased rates of mortality. Dialysis acts as a lifeline for patients with renal failure, hence it is imperative to establish evidence-based IPC practices including hand hygiene, waste management, aseptic technique, appropriate PPE, and continuous cleaning of the environment. Consequently, the improvement of environmental sanitization between treatments in the renal unit prominently diminishes contamination rates

Conclusion: Central-line access, couplings, and failure to follow aseptic guidelines were associated with high levels of infections in patients. The infection was predictive of high levels of readmission, lethality, and mortality, hence the importance of implementing IPC programs. The outcomes have significant nursing implications in the incorporation of future IPC strategies

SURGICAL SITE INFECTION SURVEILLANCE IN POST CESERIAN SECTION MOTHERS AT KITALE COUNTY HOSPITAL, KENYA

Author 1: Stella Mmochi

Background: Surgical site infections (SSIs) are among the most common healthcare-associated infections (HAIs) in low- and middle income countries (LMIC). SSI is a common complication following cesarean section (C-Section) that cause increased maternal morbidity, mortality, and significant financial burden on the health care system. Kitale County Hospital (KCH) is a 250-bed facility serving Kitale town, the capital of Trans-Nzoia County, and the surrounding communities in the northern rift valley of Kenya. The population is predominantly rural and agricultural. Health facility births represent approximately 40% of all births. A medical doctor attends approximately 27% of health facility births. This abstract describes the successful establishment of an ongoing SSI surveillance program, including post-discharge case finding, following C-section at KDH.

Purpose: N/G

Methods: Surveillance is done prospectively based on patient chart review, labor and delivery staff reports, and patient interviews. The SSI case definition is based on the 2012 WHO simplified criteria for hospital-associated infection (HAI) surveillance as any purulent discharge, abscess, or spreading cellulitis at the surgical site during the month after the operation. Surveillance activities include visiting eligible patients prior to discharge for education regarding symptoms of infection and an initial wound assessment. Following discharge, patients are contacted for a wound assessment interview between day 20 and 30 post-procedure. Patients meeting the case definition are requested to return to the health facility for evaluation and care.

Findings: Results: In the first quarter of data collection, 98, 82 and 96 C-sections were performed respectively. A total of 26%, 20% and 27% respectively of patients could not be reached for follow-up. SSI prevalence was, 4%, 7% and 3% respectively reported symptoms meeting our SSI case definition. All case patients returned to the health facility and received treatment. Post-discharge interviews identified C-section patients were not well integrated into the existing postnatal clinic infrastructure. This finding prompting reevaluation of discharge instruction and revision of our surveillance data collection to standardize assessment of post-discharge instruction. A surveillance report was developed and distributed to facility administration, the Infection Control Team, and a copy was posted for patient care teams.

Conclusion: The establishment of a pragmatic, facility led and rapidly established SSI surveillance program in a low-resource setting, while limited in the detail collected, provided meaningful information to identify

IPC PRACTICE EXPERIENCES AND CHALLENGES IN Infectious disease unit (IDU)

Presenter: *Zeddy Komen*

Introduction

The inception of Infectious diseases unit (IDU) in KNH resulted after the popular HAEMORRHAGIC VIRAL DISEASE OUTBREAK In Africa. It was mandated to be the regional unit when Infection Control Risk Assessment (ICRA) for construction containment in healthcare environments became a MERS focal point. Coincidentally the unit has become an epicenter for handling not only infectious diseases but also various outbreaks occurring simultaneously within the community settings. Significant patient numbers with respiratory conditions, hemorrhagic fevers, cholera, sars, and those identified with MDROS were admitted. Rigorous training and practice in IPC is continuous with good outcomes.

IDU is sectioned into suspected and confirmed patients of 7 self-contained rooms installed with a negative air machine (NAM) fitted with filters. CCTV cameras are installed and can be monitored in the 'SAFE' area. Patient safety is continuously monitored.

Multidisciplinary team work harmoniously to ensure patient safety through coordinated IPC practices.

Method

The unit was strategically placed, team members selected and trained on IPC. Patients were selected with inclusion and exclusion criteria being followed to the later. Weekly cultures are done to rule out any organisms growth. The is periodical DRILLS and AUDITS in the unit to maintain IPC standards.

Results

This Unit isolation method provided CDC compliance for Infectious diseases Isolation. HCW concerns were alleviated and patients remained within their room. The strategy was extended to isolation of a dedicated multidisciplinary team and segregation of the Emergency Admissions Department.

Discussion

IDU Isolation facilities provide a useful rapid response resource for patient isolation, physical barriers, air controls and staff safety precautionary measures for any uncertainty especially for Haemorrhagic viral diseases and other emerging infections.

SESSION 13:

Theme: Occupational health and safety in health care settings/Use of Innovative strategies

USING LESSONS LEARNED TO ENHANCE UPTAKE OF PEP AMONG HEALTHCARE WORKERS THROUGH A MOBILE PLATFORM

Author 1: *Mwangi Cathy, Mukanya Collins, Maina Stephen, Gituku Japheth*

Background: Health care workers (HCWs) are at risk of occupational exposures through needle stick injury, mucous membrane splashes or non-intact skin to blood borne pathogens. Thus protecting them is critical.

Purpose: To improve reporting of exposures, increase uptake of post exposure prophylaxis (PEP) and adherence among HCWs in Kenya.

Methods: A mobile PEP platform (mPEP) was developed and piloted in 125 facilities between 2011 and 2014. mPEP was a mobile telephony application to support reporting of occupational exposures and create a virtual database of the injuries. Training on mPEP was done in 22 facilities across 14 counties. In 2015 an assessment was conducted in 53 facilities offering occupational PEP services in 18 counties.

Findings: Results showed that 18/22 facilities (82%) were using the system. Initial registration rate was 78% with further 22% post training registration rate. Of 1,665 exposures encountered, 4.4% were reported through mPEP system. Challenges with the mPEP system included stigma associated with "mPEP", breach of confidentiality, and limited system interaction. Care for the Carer (C4C) was developed as a progeny of mPEP system. C4C ensures improved health outcomes among HCWs by allowing easy self-registration, tracing, referral, scheduling visits, updating final test result, sending adherence reminders, risk assessment on exposure, sending counseling short messages and reporting on adverse effects to PEP regime.

Conclusion: Optimal use of C4C system could influence policy and programmatic efforts to ensure care for HCWs. Continuous involvement of stakeholders in developmental stages and sensitization leads to better acceptability and ownership. Review of the system's operations and provision of technical support ensures a user-friendly system.

HIV Post Exposure Prophylaxis awareness and utilization among Health Care Workers at Busia County Referral Hospital Between Jan-May 2018

Author 1: *Oscar Adidi Gaunya*

Background: The study was done to assess HIV Post Exposure Prophylaxis utilization, identify factors associated with utilization & HIV PEP support measures among Health Workers at Busia County Referral Hospital.

Purpose: Aimed at determining the Level of utilization of PEP services and knowledge of H/care workers on Post Exposure Prophylaxis

Methods: Purposive sampling study design was used whereby self-administered questionnaires containing open and closed ended questions were used to collect data from the respondents. The questionnaires contained three sections: Section A, with demographic information, Section B, knowledge and Section C, utilization of PEP services. Healthcare workers were subjected to the Questionnaires to answer voluntarily and a total of 115 respondents were achieved comprising of Lab tech, Clinical Officers, Nurses, Medical Officers, Student Interns, Oral technologists and Support staff. The responses were analysed using Microsoft Excel in form of tables, graphs and Pie charts.

Findings: KNOWLEDGE; (73) 63.4% out of the 115 respondents lacked information on PEP, (50) (43.5% out of the 115 who had information on PEP did not know the correct meaning of PEP. UTILIZATION; (43) 21% respondents had been exposed to risk factors for HIV infection. However, only 19% (8) out of 43 exposures were reported, (39) 34% of the respondents thought were not at risk of contracting HIV infection, 32% (37) were convinced that the source of the prick had no signs of HIV, 14% (16) did not want to do a HIV test whereas (23) 20% of the respondents did not report occupational Exposures

Conclusion: There is need to Formulate clear PEP policy guidelines at all Service delivery points Offer peer counseling services to all interns since it was evident students lacked knowledge on PEP & Creation of awareness on PEP Provision of youth friendly services to staffs especially students exposed to risk factors

Title: LABORATORY SAFETY AUDITS A GAME CHANGER IN INFECTION PREVENTION AND CONTROL

Author: *Mr. Edward Oula Odhiambo; DMLS, BMLS*

Affiliation: *Ministry of Health, Ahero County Hospital*

Background: Facility and biosafety is one of the quality system essentials envisaged in the Kenya Quality Manual for medical laboratories. ISO 15189-2012 Management

requirements' clause 4.12(continual improvement) stipulates that a laboratory shall participate in improvement project activities and where opportunities for improvement are identified, the management shall address them exhaustively. Clause 4.14, Evaluation and audits of the standard further stipulate that a laboratory shall conduct internal audits at planned intervals to identify nonconforming activities and institute corrective/preventive actions. Safety requirements are also highlighted in Section 12(Facility and biosafety) of WHO SLIPTA assessment checklist for clinical and public health laboratories.

Problem Statement: Baseline safety audit indicated low scores in this section. In view of this, the laboratory embarked on this project to ensure compliance with this section requirement with the ultimate goal of improving safety, infection prevention and control.

Objective: To improve facility and safety section scores of WHO SLIPTA assessment checklist and the general laboratory's safety.

Methods: The laboratory conducted baseline safety audit using section twelve of the WHO SLIPTA assessment checklist. Action plan with strict timelines were developed with the primary goal being closing the gaps identified during the audit. Laboratory management appointed a safety focal person whose primary role was to spearhead closure of the nonconformities. Three follow up audits were thereafter conducted at an interval of one, three and four months respectively.

Results: The key findings identified were;60% score at baseline with waste comingling, no annual medical surveillance and hepatitis B vaccination to staff, no first aid/ spill kits and emergency eye wash/showers, sample transporters not trained on biosafety and no clear policies on PEP among others. 77% score in audit one, 88% score in audit two and 100% score at exit audit. Tremendous progress were noted with regards to SLIPTA scores and ultimately the laboratory safety.

Conclusions: Laboratory safety audit is an essential component of IPC in clinical and public health laboratories. It is also an important tool that can be used to mobilize resources for laboratory improvement and ultimately resulting in safe conducive and friendly laboratory working environment.

Keywords: Infection Prevention and Safety, SLIPTA, Safety audits.

TITLE: IMPROVING HAND HYGIENE COMPLIANCE AMONG HEALTH CARE WORKERS AT KITALE COUNTY HOSPITAL**JULIA AMBEYI** ^{1**}, *Stella Mamuti* ²

3. Kitala county hospital
4. County health government, Transzoia- Kenya

Introduction: Hand hygiene (HH) reduces 80% of Healthcare associated infections (HAIs). Insufficient or very low hand hygiene compliance rates have been reported from both developed and developing countries. Adherence of HCWs to recommended hand hygiene procedures has been reported as variable, with mean baseline rates ranging from 5% to 89% and an overall average of 38.7% (WHO). This study was designed to develop an intervention approach to improve Hand hygiene (HH) compliance among the healthcare workers at Kitala County Hospital.

Methodology: The study was spearheaded by the hospital IPC committee in collaboration with the MOH and partners. The observing team included the IPCC members and other staff trained on HH as a quality improvement project. It was an observational, prospective, quasi experimental (before and after intervention) study. The study involved multidimensional intervention approach in all categories of healthcare workers in the hospital. Data was collected through secret observation using WHO Hand Hygiene observation tool and the Ward Infrastructure Survey tool.

Results: Based on three months observation period, the rate of HH compliance improved from 3% at baseline to 31% with continuous intervention. Baseline ward infrastructure survey indicated 38% of the sinks had soap, with only two departments having alcohol based handrub. There was no supply of ABHR throughout the time of observation but a budget to manufacture our own was made.

Conclusion: This study demonstrates that HH compliance is still a challenge in facilities. One of the contributing factors is lack of Hand hygiene supplies. Our study correlates with WHO regarding the main factors that may determine poor hand hygiene include risk factors for non-adherence observed in epidemiological studies as well as reasons given by HCWs themselves for lack of adherence to hand hygiene recommendations. Hand hygiene can be improved through systemic, multidimensional interventions including provision of

INFECTION PREVENTION CONTROL IN MTRH

Author: *Jackline Opondo, Ipc Co-Coordinator*

Background; The hospital embraced infection prevention and control (IPC) practices in 2008, with establishment of IPC secretariat at MTRH working full time in IPC unit.

Objectives: The study aimed to assess the milestone on IPC since 2008 to 2018 in MTRH and staff compliance with infection prevention and control practices in the facility specifically on environmental hygiene, hand hygiene, waste management, I.V fluids and drug administration.

Subject: Data collected from 100 randomly selected staff in various units.

Tools: Two tools were utilized, interviewer administered questionnaires and structured observational checklist.

Result: 80% were compliance with recommended hand hygiene practices, environmental hygiene at 92%, waste management at 93%, I.V fluid at drug administration at 94%

Conclusion; The involvement of the hospital management and IPC staff has had a great impact, there is a good allocation of resources and more training of staff on IPC measures in MTRH

IMPLEMENTATION OF BLOOD SAFETY ACTIVITIES AT COUNTY LEVEL-THE MACHAKOS COUNTY EXPERIENCE

Authors: *David Maundu¹; Antony Masika²; Julius Tome³; Dr. Hellen Nzuki⁴*

Affiliation: *1,4Machakos CRH, 2, 3 Amref Heath Africa SLQS project*

Background

Blood transfusion is a life -saving intervention that has an essential role in the total patient management. However, it may be a source of disease transmission if appropriate Infection Prevention and Control measures are not put in place and especially if facilities result in family replacement donations. Centralized collection of blood and blood products ensures proper screening of potential donors, aseptic collection and quality assured screening of HIV, HBV, HCV & syphilis. This paper describes the approach used in Machakos County to optimize the operations of the KNBTS Machakos satellite.

It is therefore important that key stakeholders partner to ensure that the blood banks in the country have the basic requirements in terms of human and financial re-sources and the necessary infrastructure to provide adequate supplies of safe blood and blood products. Though transfusion services a national function, there is need for partnership with all stakeholders to promote the optimal operations of the satellite to meet the blood needs of the region.

Method : Lower Eastern has three counties: Machakos, Makueni and Kitui that are served by one KNBTS Satellite located in Machakos level 5 Hospital, it serves 30 blood transfusing facility that totally relies on the satellite for blood and blood products. Engagement and sensitization strategies meetings with the county and hospital management teams and one stakeholders meeting that brought together hospital administrators to discuss the challenges facing the satellite was conducted held in Machakos in June 2014. Key areas that needed support were identified as: staff shortages, lack of a reliable vehicle and refreshments.

Results: The engagement and sensitization of the CHMinutes and HMinutes resulted in the deployment of 5 staff from the county to the satellite, , allocation of one vehicle to the satellite was a success, provision of fuel and other facilities sending staff to the satellite on specific days to support its Operations, the key outcomes of the stakeholders meeting was an agreement of facilities rotational support based on the Machakos satellite work plan though this was agreed as a short term solution as high advocacy engagements are done at the national level for increased national government support. Even with the reduced support from the national level, the County has kept the gains of blood collections with 11,120 units collected between January to October 2016 compared to 10,867 units collected in the same period in 2017 which has been key in management of cases that need blood.

Conclusion: Centrally coordinated blood collection activities are key in infection prevention and control because of the careful donor selection, vigilant screening of the donated blood at KNBTS, aseptic blood collection and proper storage of blood. The counties support for blood safety activities has led to an increase in blood collection from voluntary donors. To sustain these gains and achieve more, there is need for continued support from both the national and county governments to strengthen the capacity of the regional and satellite blood transfusion centers.

SESSION 14:**Theme:**

Title: Antibiotics stewardship to avert antibiotics resistance in Kitale county Referral hospital, Trans Nzoia county.

Author: Davies Opili

1. Kitale County Referral Hospital
2. County health government, Transzoia- Kenya

Background

Infections that cannot be treated with antibiotics are rapidly increasing due to rising rates of hospitalization and indiscriminate use of antibiotics and consequently resistance. The Centers for Disease Control and Prevention (CDC) states that studies indicate 30-50% of antibiotics prescribed in hospitals are unnecessary or inappropriate. It is estimated that more than two million people are infected with antibiotic-resistant organisms, resulting in approximately 23,000 deaths annually. Growing body of evidence demonstrates that hospital-based programs dedicated to improving antibiotic use, commonly referred to as "Antibiotic Stewardship Programs (ASPs)", can both optimize the treatment of infections and reduce adverse events associated with antibiotic use. We undertook a survey of antibiotic consumption linked to clinical diagnosis, organizational, human and material resources to affect antibiotic stewardship.

Methodology

An antibiotic prescribing in relation to clinical diagnosis was conducted in adult children and neonates among in patients admitted before 8:00am between June – July 2018. A standard operating procedure and data capture forms currently in use as part of global point prevalence survey on Antimicrobial consumption and resistance was used.

Results

Total in patient were 231, beds were 228 with bed occupancy of 101.3 Patients on antimicrobial treatment were 132 with apporportion of 57.1%. Proportion prescriptions by department were as follows: Adult medical 42%, Adult surgical 78%, Neonatal 42%, Pediatric medical 81%, Pediatric surgical 84%. Proportions of classes of drugs prescription were as follows: Antibacterial 91%, Ant parasitic 5%, Antifungal 2%, Antiviral 20%. Common antibiotics used across departments were cephalosporin's 40%, aminoglycosoles 50%, penicillins 62% and imidazole derivatives 40%.

Conclusion

We recommend and conclude that targeted diagnosis as opposed to empirical diagnosis be enhanced to avert antibiotic resistance.

DETERMINANTS OF ANTIMICROBIAL PRESCRIPTIONS IN KENYAN HOSPITALS: STAKEHOLDER AND HEALTH WORKER PERSPECTIVES.

Author 1: Grace Kimemia, Jacob McKnight, : Michuki Maina, Tosas Auguet: Mike English

Background: Antimicrobial resistance (AMR) is viewed as a major threat to humanity and we are witnessing the emergence of new strains of infections that are resistant to many antibiotics. In Kenya, several factors are known to contribute to AMR: misuse of antibiotics, availability of substandard drugs and poor infection prevention and control practices.

Purpose: To understand AMR surveillance and antimicrobial prescription practices in Kenyan public hospitals from the perspectives of policy makers and healthcare workers.

Methods: This is a qualitative, cross-sectional study conducted in six purposively selected hospitals across five counties in Kenya. The data were collected using in- depth interviews (IDI) with stakeholders involved in the development and implementation of AMR policies in Kenya, health managers, and frontline healthcare workers who prescribe or administer antibiotics. We analysed the data using a grounded theory approach initially, before linking findings to theory through the Extended Case Method.

Findings: Currently, there is no systematic national AMR surveillance beyond individual pilot studies driven by a need for AMR data. However, the pilot studies indicate that AMR is an emerging public health issue. Laboratory-based AMR surveillance requires well-equipped microbiology labs that most public facilities lack. Prescribing practices in public facilities are dominated by: drug availability; treatment guidelines, especially in paediatrics; social economic class; apprenticeship; doctors preferences and patient demand. In events of drug shortages, the patient or the carer is requested to acquire the drug from commercial pharmacies. This may expose the patients to substandard drugs, counterfeit medicines and irrational' use.

Conclusion: To tackle AMR, systematic national surveillance needs to be active in Kenyan hospitals, while antibiotic prescribing guidelines need to be put in place and enforced to ensure adherence. We propose dynamic, hospital-level AMR monitoring and practices such as infection prevention and control and antimicrobial stewardship.

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