



ANNUAL SCIENTIFIC CONFERENCE

2023

Climate Change and Environment: Understanding the Impact on Paediatric Practice to Secure our Children's Future

RAPPOTEUR SUMMARY REPORTS

Pride Inn Paradise Hotel, Shanzu-Mombasa

Tue 25th April - Fri 28th April 2023



RAPPATOUR SUMMARY REPORTS

For the last 4 days we have had several discussions revolving around the theme "Climate change and environment: Understanding the impact on Pediatric practice to secure our children's future. It is my hope that we have all learnt a thing or two that will enable us be better pediatricians in this evolving world as what we do today will have an impact on the future generations.

As rapporteurs we put together a summary of the different tracks so as to give all participants an opportunity to share in the immense knowledge base across the varied sessions.

PAEDIATRIC SOCIETY OF THE AFRICAN LEAGUE AGAINST RHEUMATISM (PAFLAR) - TRACK 1, 6, 11, 16

PAFLAR is an association of healthcare professionals, allied healthcare workers, patient support groups and all relevant stakeholders involved in the care and management of Rheumatic and musculoskeletal diseases afflicting the children of Africa.

This year the 3rd annual PAFLAR conference was held here in Mombasa, Kenya. The 2-day conference provided a platform for a robust discussion on a wide array of rheumatological conditions. Various challenges in Africa were outlined (such as access to specialized care, diagnostics, myths and community perspectives etc.) and what is so far being done in a joint effort to combat these challenges in Pediatric rheumatology.

Recommendations included developing priority areas in research, enhancing technology and innovation, investing in human resource for health and multidisciplinary approach to management and advocacy while maximizing partnerships.

"Working better together"

PROMOTING CHILDREN'S DEVELOPMENT AND CAREGIVER WELLBEING - TRACK 2

The health sector like many other sectors has an important role in early childhood development. Of note, the rate of adolescent pregnancies is increasing at an alarming rate. Male involvement could curb this rise. Integration and improvement of male involvement in the care of the adolescent should be worked on. KPA members need to give a picture of male involvement in taking care of children.

Supplementation of folic acid to young mothers in schools to prevent neural tube defects was highlighted.

UPDATES IN NEONATOLOGY - TRACK 3

This track focused on the latest updates in care for neonates in guidelines and research articles. Changes in the The Kenyan Basic Paediatric Protocol in regard to the use of caffeine citrate for treatment of apnea of prematurity. A notable challenge on caffeine citrate was its cost. Other focus areas included neonates with hemodynamic instability, parental nutrition particularly in special conditions (such as GI/cardiac strategy, HIE) and influence of social ties and communication on improving neonatal outcomes.

The need to improve on competency in neonatal care was highlighted. Two programs were highlighted. Established in July 2019, the Kenya Paediatric Fellowship Program (KPPF), was designed to set up paediatric specialty programs, including Neonatology and Neonatal Nursing among others, and to make Kenya a paediatric regional hub for Eastern and Southern Africa. While in Tanzania, PACE (Paediatric Acute Care Education), a self-directed web based adaptive electronic learning environment, was designed to increase provider proficiency in neonatal and paediatric evidence-based guidelines in the country

CLIMATE CHANGE & THE DETERMINANTS OF HEALTH IN AFRICA /COMMUNITY RESILIENCE, ANCESTRAL WISDOM, & THE EARTH - TRACK 4 & 9

This session focused on the role of social pediatrics, environmental degradation, increase in climate change emergencies such as flooding and drought, and financing climate change in determining the quality of health and what can be done.

Recommendations from this session included prioritizing partnership, advocacy, research, innovation and health systems strengthening in an effort to mitigate and build resilience to the effects of climate change. The youth also need to be empowered in climate action through capacity building and mentorship. A multisectoral approach is indeed required to realize the above recommendations.

LUNGS ON FIRE: A MULTIDISCIPLINARY APPROACH - TRACK 5

This track brought together pulmonologist and radiologist all of whom are involved in the care of children with respiratory ailments. Their key findings and recommendations are were:

Findings

- Delayed care seeking/referral, lack of quality, ineffective treatment, and sub-optimal supportive care are factors affecting pneumonia management.
- Ten pathogens accounted for almost 80% of WHO-defined pneumonia in the cases analyzed (radiologically defined pneumonia)
- A lot of myths surround asthma in the community
- Post TB lung disease is common in LMIC and higher in HIV disease
- Lack of uniform documentation leads to missing out on important danger signs in children
- Very little history taking and examination in practice by pediatricians and medical officers

Recommendations

- Addition of macrolide in management of pneumonia in older children to cater for *Mycoplasma pneumoniae* and other atypical bacteria.
- Health education on asthma is important on discharge.
- Long-term asthma mx should be started with acute treatment
- Microkinetic agents, mucolytic, and cough mixtures are not useful in acute asthma and may be harmful.
- Follow up TB patients after management and look out for Post TB treatment symptoms and signs.
- Training and use of sick forms to improve assessment and treatment of pneumonia in children
- History taking and clinical examination not to miss out clearly delineable/identifiable conditions

Next steps

- SEARCH Trial results- comparing penicillin gentamicin vs ceftriaxone vs amoxicillin/clavulanate: study is on-going.

Time to win the battle and end TB in children and adolescents

PRACTICAL APPROACH TO PEDIATRIC MOVEMENT DISORDERS AND CEREBRAL PALSY - TRACK 7 and 12

1. History taking is the mainstay of treatment. A detailed subjective history of a patient suspected of a movement disorder should be tailored to family goals and therapeutic strategies.
2. Providers have to be trained to provide therapy for movement disorders in more rural areas and empower them with the ability to recognize and manage appropriately when needed.
3. The establishment of the East Africa Child Neurology Association is underway to expand the number of child neurologists in the country.

IMPROVING HOSPITAL CARE REFLECTING ON 10 YEARS OF CIN - TRACK 8

Group discussions were carried out to: Reflect and evaluate the 10 years of Clinical Information Network engagement in order to build, sustain and deepen respectful relationships and mutual understanding between CIN focal persons and the Program and to discuss how paediatricians can use CIN and other platforms to engage in policy dialogue at the county and National Level.

Use Of Evidence for Policy/Decision Making

Consistent evidence shows failure to translate evidence into practice. It takes 17 years for research to reach practice and only 14% of research enters day-to-day practice. Some of the factors from literature that can be attributed to this delay or lack of consistency in translating evidence into practice include; lack of evidence that is context sensitive and lack of timely and relevant evidence for policy-makers. Evidence is used in healthy policy or decision making to ensure that the best available evidence is used to inform policy/decision making, improve health outcomes, reduce harm and maximize resources. Therefore, the need to co-design and co-develop research ensures that the limited resources available for health research are used appropriately.

AMR AND IPC- WHAT CAN A PEDIATRICIAN DO - TRACK 13

Antimicrobial resistance is a major epidemic threatening our very own existence. During this track, a series of discussions were held to highlight current practices versus the recommended practices and what we are doing or are to do to get there.

We had a presentation on the experience of a neonatal unit at KNH and their success in combating a Klebsiella pneumoniae outbreak.

Recommendations included promoting the rational use of antibiotics, team work, consultation and advocacy.

“Infection control is in our hands”

WORKING TOGETHER FOR CREATIVE SOLUTIONS TO CLIMATE CHANGE CONSERVATION AND HEALTH - TRACK 14

How are we connected? We are all connected: earth, animals, people. Our ecosystem, our home.

What is the cost of climate change?

- Climate change is undermining many of the social determinants of health.
- Health impact of climate change: infections, malnutrition, family dysfunction, birth defects and intellectual impairment.
- Education disruption for school-going children.

Next steps

1. Have the organizations involved legally recognized.
2. Make children visible including street children and other marginalized children : child centered data, disaggregate data.
3. Gauge progress: make latest research available, in-depth analysis
4. Use child rights teaching to build leadership for child health.
5. Building partnerships-putting children first.
6. Designing child-and family-friendly services.

7. Addressing the broader social determinants of health.
8. Holding government accountable: school meals.
9. Build alliances.
10. Advocacy: Chemicals management bill, draft national climate change adaptation strategy, national sanitation policy
11. Prioritize children in policies: right to know, right to health.
12. Address the commercial determinants: protect, respect, remedy.
13. Become more proactive: document the impact of the pandemic on children and children's services.
14. Develop uniform advocacy skill sets.

There is hope for the future, for our children and children's children future.

RESEARCH ETHICS PRINCIPLES AND THEIR APPLICATION IN BREASTFEEDING RESEARCH AND INTERVENTIONS USING THE EFBRI - TRACK 15

Ethics is the formal study of what is right and wrong, the principles for deciding right and wrong and the analyses of the processes by which we decide what is right and wrong. Research ethics is the analysis of ethical issues that are raised when people are involved as participants in research.

Breastfeeding is the single most effective intervention to improve a baby's health and chance for a better life. Research ethics in breastfeeding aims to protect mothers and their infants while respecting women's autonomy.

Vulnerability is the inability to anticipate, cope, or resist harm or having possibility of incurring identifiable harm while substantially lacking ability to and/or means to protect oneself

Conflicts encountered in the profession of science are not inherently bad; they are to be expected. It's how they are handled that can lead to untoward, inappropriate or bad outcomes. Conflict of interest can incline researchers towards bias in favor of their secondary interest and thus undermine the reliability of research results, however, they do not necessarily amount to research misconduct.

FUELING THE FIRE; CLIMATE CHANGE AND ALLERGY EPIDEMIC - TRACK 17

1. We need to halve emissions by 2030 across all sectors, using washing machines at 30°C and not 40°C would reduce the carbon emission footprint.
2. For every match that is lit, we are in trouble, let's avoid lighting the match.
3. It's mandated on us to do the right thing, you and I have the opportunity to contribute to mitigate climate change

NUTRITION AND CLIMATE CHANGE - TRACK 18

Food insecurity is the major driver of malnutrition in drought. 21 counties out of 46 in Kenya are currently facing drought and 970,000 children are acutely malnourished.

In this session we discussed the differences between food allergy and intolerance, the use of probiotics, impact of climate change on nutrition and what strategies are existent to mitigate malnutrition, and demystifying plant-based milk alternatives.

Recommendations included amplifying Pediatricians role in raising awareness about climate change and its effects on child nutrition as well as being advocates for resource mobilization.

"A child born today will experience lifetime nutrition effects of climate change"

RESPONDING TO IMPACT OF CLIMATE CHANGE: A PAN-AFRICAN MOVEMENT - TRACK 19

Goal: "Meeting today's needs without compromising the ability of future generations to meet their needs"

What are your barriers to going green?

- 'It's too expensive'
- 'It's not in our mission.'
- 'I don't know how to.'

What next?

1. Role of African Health organizations: education to ensure the people know the importance, run campaigns.
2. Include climate change and environment sustainability in education curriculum at all levels of education. Include Climate change in the ECSACHAP curriculum.
3. Children are great change drivers: involve them.
4. Proper waste management and enforce laws.
5. Involve healthcare workers and other voices in the community in educating because people listen to them.
6. Work with the ministry of education as partners, schools are a great resource. Have pediatricians in the school boards and at the ministry of education.
7. Utilizing UNAPSA and not creating parallel groups ,and participating in the national technical working groups.
8. Building resilience at the communities and Early Warning systems.
9. Pediatricians to align with exiting national level movements.
10. Pediatricians to be proactive as gatekeepers of the community.
11. Make communication attractive: communicate in terms of monetary impact, utilize current affairs (For instance the Gastroenteritis outbreak (E.coli and Salmonella in one of the Secondary schools in Kenya),package language statistically for instance 2 in 3 people are affected.

COMMUNICATION TRAINING FOR HEALTHCARE WORKERS- KEMRI WELCOME TRUST - TRACK 20

Health communication is a complex interpersonal ability to engage in a critical, reflective and constructive way. There is an emotional competence gap in education and practice for Health professionals. Some of the challenges in practicing the new skills include workload and sarcasm from colleagues. Participatory 'on the job' training process can impact positively on individuals and teams. Training strengthens healthcare workers and related stakeholders' awareness to recognize emotions, step back from automatic reactions and take responsibility to communicate well. Patient experience narratives elicit rich accounts and provide deeper understanding of what matters to patients and families.

UNDERSTANDING HOW CLIMATE CHANGE AFFECTS CHILDREN WITH SENSITIVE SKIN - TRACK 21

Researchers are studying the role of climate change in influencing environmental factors that affect the development and severity of atopic dermatitis (AD). Genetic, immune, and environmental factors play a role in the development of AD.

Decreased biodiversity is thought to be one of the reasons why there are more cases of atopic dermatitis now than in the past. Many people live in areas with few microorganisms hence negatively affecting their immunity and making them more susceptible to developing atopic dermatitis.

When it comes to eczema and food allergy, more evidence now suggests that to eat is better than complete avoidance of foods thought to be allergenic from the child's diet. Moreover, early introduction of these foods is recommended as early as 6 months of life.

LET ME BREATHE: SAFEGUARDING A CLEAN AND SUSTAINABLE ENVIRONMENT FOR OUR CHILDREN - TRACK 22

This track stressed the need for pediatricians to safeguard clean air for our children. We are urged to ask deeper questions in social pediatrics and to be advocates with regard to air pollution.

The resolution was to have a one health approach hence prioritize dealing with health through the interconnection of humans, animals and environment.

PANDEMIC PREPAREDNESS AND SURVEILLANCE-WHAT IS YOUR ROLE AS A CHILD HEALTH SPECIALIST - TRACK 23

KEY POINTS:

1. In the context of pandemics, indirect impact far outweigh the direct effects.
2. Disruptions (increases/decreases) in both essential and non-essential services were observed in the COVID-19 pandemic.
 - 49% reported decreases in sick child visits
 - 23% increases in mental health cases.

3. Increased SGBV occasioned by staying at home during COVID.
4. Immunization rates declined, some counties recording up to 25% decline.
5. Decrease in children presenting with pneumonia, attributed to anti-COVID measures or declined health seeking.

Mitigating factors to improve service delivery:

Changing service hour, targeting high risk patients

Challenges

- Data quality: incomplete reports and inaccurate entries
- Poor availability of mortality data
- Lack of resources and competing priorities
- Acceptance of vaccines by the communities
- Fear of contracting COVID19 was the greatest barrier to care.

How do we handle the next pandemic?

- Strengthening syndromic surveillance: to pick out signals early.
- Identify vulnerable/priority groups before/early in a pandemic: HCWs, essential service providers, chronic illness patients.
- Find ways to quickly determine effectiveness and safety of a new vaccine: conduct test negative case control study, sentinel surveillance for AEFI.
- Modelling: explaining observed patterns of infection and predicting potential impact of pandemic.

What next?

- Health facilities encouraged to submit complete data
- Dis-aggregate Paediatric data for instance by age.
- Get data from both private facilities and not-for profit organisations.
- PAEDIATRIC HIV - TRACK 24

PAEDIATRIC HIV - TRACK 24

The role of the Pediatrician was emphasized in HIV care and management. This included;

1. Leading mentorship for HCWs at technical working groups, facilities and during internship programs.
2. Leading integration of HIV with maternal child health, non-communicable diseases and mental health.
3. Addressing persistent low-level viremia
4. Making early decisions as to when to do drug resistance testing.
5. Advocacy- championing adolescent rights/ space/ voice
6. Strengthening AHD care- identification and management.

NEONATOLOGY - TRACK 25

NEST360 Newborn Essential solutions and technologies.

This track focused on interventions for improving survival of preterm and sick newborns. We were joined by representatives of front-line organizations that is NEST360 and Hatch technologies. Hatch technologies focuses on improving access and uptake of essential technologies for care of small and sick newborns. It is a non-profit organization that deals in subsidized equipment. NEST is a multi-country program that aims to end preventable newborn deaths in African countries. One intervention at a time will not save our newborns and therefore embracing technology is vital. Guidelines may be existent, however these won't be effective unless we have a way to implement these. The NEST Newborn tool kit provides resources that may aid in effecting these.

We discussed and navigated the comprehensive newborn care protocol to ensure maximum benefit for the participants. Neonatal hypothermia a major challenge in newborn care especially in preterms was highlighted and the recommendation to formulate strategies to strengthen the weak links to warm chain adherence. An overview of the phases of the caffeine for apnea study at KNH was done which aims at developing a clinical care bundle for babies with apnea of prematurity.

VACCINES IN PAEDIATRICS - TRACK 26

Challenges noted included; Suboptimal vaccine coverage, Vaccine hesitancy, Vaccine refusal; individual to healthcare level, Lack of information, misinformation, disinformation, Lack of male involvement, Fear of AEFI and safety concerns, Cost, Anti-vaxers: Religion, Lack of services, Low perceived benefit. Current emerging issues include; Lower disease risk perception, Lower vaccine demand from populations and Emerging shifts in national priorities.

Recommendations included; Becoming vaccine ambassadors, Interpersonal communication skills, Dissemination information, Having it mandatory for children to be vaccinated before joining school: present immunisation cards, Integration of vaccination into IMCI, ETAT, Get influenza vaccine into KEPI and Indicating the other available vaccines for HealthCare workers to know on protocols and Immunization cards.

Pathogens don't fly, humans give them wings.

SHEDDING LIGHT ON MISSED DIAGNOSIS; ENDOCRINOLOGY - TRACK 27

The need to have more differential diagnoses was emphasized. Indeed, proof that a given condition always preceded or accompanies a phenomenon does not always warrant concluding with certainty that a given condition is the immediate cause of that phenomenon. It must be established when this condition is removed, the phenomenon will no longer appear. For instance, the association of dehydration and muscle cramps. There may be more than one cause of the condition before you even if it looks obvious- jaundice, muscle cramps, rickets, wheezes, - think metabolic causes.

Gaucher's disease is the commonest lysosomal storage disorder. Enzyme assays and genetic testing are available. Currently ERT is available in the country

STRATEGIES TO FIND MISSING PEOPLE WITH TB IN KENYA - TRACK 28

Presenters in this session represented various stakeholders that is Amref, USAID, National TB and Lung program, the county government led by professor obimbo from UON. This is a vivid example of the importance of collaboration. Discussion on strategies to improve TB case finding across the country, what is being done and what we can do better with emphasis on new technologies. We had a discussion on the updated guidelines and encourage all pediatricians to be conversant with these.

Recommendations included a call to action to all pediatricians to get involved in the fight against TB. Pediatricians are urged to engage diligently in the care of children with TB and provide expert opinion at health facilities, community, county and country level. A kind reminder not to forget the adolescent child when it comes to TB management as we know they are also at increased risk of acquiring the disease.

Remember "Cough may be a late sign of TB in children, watch out for other respiratory signs persisting more than 2 weeks"

KANGAROO MOTHER CARE A PUBLIC HEALTH PERSPECTIVE - TRACK 29

The first 28 days of life are the most vulnerable for a child's survival. A third of all neonatal deaths occur on the day of birth. Neonatal deaths account for 66% of infant deaths and 51% of under-5 deaths. The major causes of newborn mortality are prematurity, sepsis and intrapartum related birth events.

Kangaroo mother care (KMC) is a preventative, low cost, high impact, evidence-based intervention that improves the survival and development of small babies and it should be started immediately after birth for premature and low birth weight babies. Many benefits of KMC are related to oxytocin secretion released by touch, light pressure and warmth. Oxytocin helps in pain control, stimulates digestion, weight gain and growth. Moreover, less handling of the baby by other persons reduces the risk of infection.

CARDIOLOGY - TRACK 30

This session highlighted the importance of an early diagnosis in cardiac conditions. Pediatricians need to know the red flags for cardiac conditions and how to manage our pediatric patients. All these can significantly improve outcomes for children, allowing them to grow up healthy and enjoy an improved quality of life.

PLENARY SESSION 1 THURSDAY

The climate, environment and pediatrics were yet to meet until this year where they have met- cholera, malnutrition in the face of desertification. The cost of climate change globally results in 13 million deaths due to environmental factors. Heat waves are growing in intensity. Diminishing water supplies, increased prevalence of pest diseases increased hunger rates and malnutrition in children and adults have rusted in food security. The health sector contributes 4.4% of greenhouse gas emissions. Children are disproportionately affected by effects of climate change including people of extreme ages, malnourished in LMIC, poor communities with little access to education, migrants and displaced persons and those working outside. In 2019, 50million children worldwide were forced to leave their homes due to climate change.

What can KPA do to limit the carbon foot print?

PLENARY SESSION 2 THURSDAY - CLIMATE CHANGE AND CHILD HEALTH

The impact of climate change to Child Health cannot be ignored. Our actions have consequences. Primary prevention is too little, too late. The answer is primordial prevention: This is done by reducing emissions of CO₂ into the air.

African countries are the most vulnerable to the effects of climate change yet they emit less than 4 % of the total carbon emissions of the world. Adolescents are exceptionally vulnerable to the effects of climate change especially because of their life course stage in development compounded by issues such as poverty, disability and refugee status. Therefore, there is need for active involvement of adolescents in mitigation measures involving climate change.

PLENARY SESSION 3 FRIDAY

Climate change is critical in the world today. The economic cost of climate change in Africa is about 5 – 15% of GDP. The intergenerationality in climate risks highlights that what is happening today may only be seen in the next generation. Pediatricians need to work with experts in other fields to create a joint effort in ensuring sustainability of the earth. We need to promote advocacy, new partnerships and evidence based technologies. Pediatricians need to advance their knowledge and that of the team taking care of the children so as to provide the best care.

Lastly, mental health among child health workers is vital and we must remember to take care of ourselves so as to be in the right position to assist our patients.

In Summary

Pediatricians ought to be more involved in evidence-based advocacy, policy making, research, innovation and technology in order to protect our children in this error of climate change. (It is not enough to only do research; this has to be utilized in our policies and management of patients.) and as we do this remember that we care for all children from neonates to adolescents.

Multisectoral collaboration is a pre-requisite for all the above. We can't achieve this alone- we need to be in touch with the policy makers, county governments, non-governmental organizations, international organizations, research organizations, schools, even companies engaged in medical supplies and diagnostics. As pediatricians we are a piece in the puzzle of ONE health in an effort to achieve mutual flourishing of the planet. We need to get involved with those outside our field and find innovative ways to solve our challenges together.

It is our duty to regularly update our knowledge base from the evidence available, know the current updates and best practices for our children.

We are reminded about the basics. Our strength lies in a good history and examination. Our patients speak to us and provide us with the pieces of the puzzle. It is our duty to look at this holistic picture and find the best solution for our patients.

Investment in the human resource we have available and also our own training. We need to invest in training for the various cadres through Fellowship programs, various short courses etc. Invest in the younger generation through mentorship. We need to understand The importance of supportive policies and supportive leadership styles in the motivation of doctors. Remember pediatricians lead the teams that take care of children, it is your duty to ensure that all members in this team are in the right position to provide the best care.

Last but not least, we need to take care of ourselves as this is the only way we will be able to care for our patients.

From this summary we will be able to derive specific conference resolutions that will be shared with all delegates via email.

Thank you.