

**EMF AND HEALTH
ISSUES IN
NIGERIA:
LOCALIZING
RESEARCH AS A
BASIS FOR POLICY
FORMULATION**

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INTRODUCTION

- ELECTROMAGNETIC FIELD
 - NON-IONIZING RADIATION
 - PERVASIVE
 - MEASUREMENT
 - GAUSS
 - GAUSS METER
 - TRIPLE AXIS
 - FREQUENCY WEIGHTED
 - AMBIENT LEVEL : @ 60HZ = 0.5mG

GSM TELEPHONY IN NIGERIA

- FASTEST GROWING TELECOMMUNICATION MARKET
- >100 MILLION SUBSCRIBERS
- MARKET PENETRATION
 - >60% AND GROWING
 - > SOUTH AFRICA AS LARGEST MOBILE TELEPHONY MARKET IN AFRICA
- INCREASE Pervasiveness
 - MOBILE INTERNET ACCESS > PC -BASED INTERNET ACCESS

CURRENT PERSPECTIVE ON EMF AND HEALTH IMPLICATION

- SHORT TERM EFFECT:
 - TISSUE WARMING
 - NO SIGNIFICANT TEMPERATURE RISE
 - SKIN EASILY ABSORBS MOST OF ENERGY GENERATED
 - NO SIGNIFICANT EFFECT
 - ON BRAIN ELECTRICAL ACTIVITY
 - COGNITIVE FUNCTION
 - SLEEP, HEART RATE AND BLOOD PRESSURE
- LONG TERM EFFECT
 - EPIDEMIOLOGICAL RESEARCH
 - CARCINOGENESIS

CURRENT PERSPECTIVE ON EMF AND HEALTH IMPLICATION

- EMF GREATEST AT ITS SOURCE
- DIMINISHES QUICKLY WITH DISTANCE
- BASE STATION AND WIRELESS NETWORK EMF EXPOSURE VERY LOW
 - NO SIGNIFICANT EFFECT ON HUMAN HEALTH
- BODY ABSORBS MORE FROM FM AND TV SIGNALS DUE TO LOWER FREQUENCY
- TV AND RADIO INDUSTRY > 50 YRS
 - ? NO HEALTH EFFECT

CURRENT PERSPECTIVE ON EMF AND HEALTH IMPLICATION

- **WORLD HEALTH ORGANIZATION**

- DOES EMF CAUSE CANCER?
- INTERPHONE-IARC STUDY
- MAY 2011 : "POSSIBLY CARCINOGENIC" (2B)
 - CAUSAL ASSOCIATION IS CREDIBLE
 - BUT CHANCE, BIAS, OR CONFOUNDING FACTORS CAN NOT BE RULED OUT WITH REASONABLE CONFIDENCE.
 - "IT LOOKS LIKE BUT IT IS NOT CLEAR AND WE ARE NOT SURE"
- FACTS SHEET JUNE 2011:
 - " NO ADVERSE HEALTH EFFECT HAVE BEEN ESTABLISHED AS BEING CAUSED BY MOBILE PHONE USE

CURRENT PERSPECTIVE

- CANCER DEVELOPMENT (CARCINOGENEIS) TAKES A LONG TIME
- PAUSITY OF DATA OF MOBILE PHONE USE OVER LONG (>20YRS)
- BUT
 - INCREASED USE BY YOUNGER GENERATION
 - POTENTIAL FOR A LONGER LIFE EXPOSURE
 - IS THE YOUNG MORE SUSCEPTIBLE?
 - ONGOING RESEARCH ON EFFECT ON ADOLESCENT AND CHILDREN

RESEARCH DRIVES POLICY

- RESEARCH RIVES POLICY
- SCIENTIFIC EVIDENCE
 - EPIDEMOLOGICAL = HUMAN POPULATION
 - IN VIVO = IN ANIMALS
 - IN VITRO = CELL CULTURES
- DISTINGUISH BETWEEN
 - MYTH AND REALITY
 - EVIDENCE BASED SCIENCE OR POOR SCIENCE

RESEARCH DRIVES POLICY

- STUDIES MUST
 - WELL DESIGNED
 - ETHICAL
 - REPLICABLE
 - ABLE TO ELIMINATE CONFOUNDING FACTOR
 - PEER REVIEW
 - = CLEAR CUT EVIDENCE OF EFFECT OF EMF ON HEALTH

CUURENT STATE OF RESEARCH IN NIGERIA

- INTERNATIONAL DATA DOES NOT INCLUDE NIGERIA!
- MOBILE INDUSTRY IS ABOUT 10YRS OLD
- NOT A SINGLE RESEARCH PAPER REFLECTING WORK DONE IN NIGERIA INDEXED ON **PUBMED.**
- PUBMED:
 - LARGEST MEDICAL DATABASE OF PUBLICATIONS
 - "GOOGLE OF MEDICAL RESEARCH"

CURRENT STATE OF RESEARCH

- TIME IS NOW TO BEGIN
- SETUP A LONG RANGE (>20YRS) EPIDEMIOLOGICAL STUDY
 - WELL DESIGNED
 - WELL FUNDED
 - NIGERIAN ORIENTED
- WHY?
 - DIFFERENT GENETIC MAKEUP
 - NUTITION
 - ENVIRONMENT
 - UTILITY - NO ALTERNATIVE

MOVING FORWARD

- UNIVERSITY COLLEGE HOSPITAL
 - NIGERIA'S PREMIER AND LARGEST TERTIARY HEALTHCARE INSTITUTION
 - TELEMEDICINE , RADIOTHERAPY, PUBLIC HEALTH DEPARTMENTS
 - COLLABORATIVE RESEARCH IN PARTNERSHIP WITH
 - NCC
 - WHO
 - INDUSTRY PLAYERS
 - OTHER STAKEHOLDERS
 - CRITICAL STUDY FOR NOW AND THE FUTURE

CONCLUSION

- RESEARCH IS CRITICAL TO POLICY FORMULATION
- URGENT NEED TO LOCALIZE OUR RESEARCH
- USE LOCALIZED RESEARCH TO DRIVE POLICY AND REGULATION



THANK YOU

● Q & A