Implementation science to the rescue for solving health challenges from microbes and non-communicable diseases

Man faces health challenges caused by microbes and environmental factors including overindulgence in certain habits and neglect of health promoting activities. Research directs purposeful response against these factors and proffers solutions for overcoming the various challenges. The diet in this issue of the journal comprises a balance of papers on communicable and non-communicable research. Three of the papers provide information on the enigmatic Corona virus which has taken the world by storm for close to 18 months. The virus has continued to mutate resulting in more transmissible forms and perhaps more deadly infections worldwide. The recent mutation is the Delta variant B.1.617.2 which originated from India and was preceded by the Gamma, Alpha, Beta and Epsilon variants that affected various countries/continents. It is intriguing that the apocalyptic prediction for sub-Saharan Africa (SSA) has not happened and researchers continue to wonder why. Okolo reviewed the status of SARS-COV-2 infection in SSA and proffered 8 reasons why the pandemic has not been as severe as predicted. Israel and colleagues noted that COVID-19-lockdown resulted in the reduction of physical attributes of athletes and also caused psychological distress while Ogunyemi and others emphasized the need for the provision of welfare packages for mitigating against the effects of the pandemic as was done in some high-income countries.

Adejumo and colleagues' paper on quality check of ciprofloxacin brands available in the Nigerian market with regards to physico-chemical properties and efficacy is of interest. They noted an abysmally low dissolution rate of about 25% which could potentially cause low bioavailability. It is important for the regulatory arms of government to extend such a quality control study to other medications and maintain a tight control on pharmaceutical standards. Idowu reported on the spectrum of susceptibility of uropathogens to various antibiotics in use and showed that the extracts of *Dalbergia latifolia* (Fabaceae) has potential for managing individuals with urinary tract infections. A retrospective analysis of data on tuberculosis treatment in Ogun State of Nigeria by Sodeinde and colleagues noted a treatment success of 75.4% especially in individuals who were HIV-negative. Fayemiwo and others reported cryptococcal antigenaemia in 16% of stroke cases and this incidental finding was more likely among diabetic individuals. Poor vaccine uptake was blamed for increased predisposition to hepatitis B virus infection among in-school adolescents, and this would not surprise anyone knowledgeable about public health. There should be a policy on improved vaccination coverage for overcoming various communicable diseases where available.

With regards to non-communicable diseases, readers will find the review on the state of affairs with assisted reproductive technology in Nigeria by Obajimi and others worth reading. The finding that depression could be a co-morbid condition in over a quarter of patients with Type 2 diabetes mellitus should also stimulate further research, more so the link with physical inactivity as was reported in another study involving a secondary health facility in Ibadan. Nwaelugo and colleagues observed that autoimmune thyroid diseases could be linked with metabolic syndrome and this should arouse curiosity and lead to further mechanistic studies. Akinlade presented data that the radiation doses to the contralateral breast during unilateral breast external beam radiotherapy ranged between 21% and 67% depending on the distance from the source which could be important in determining collateral damage. Akinwale and colleagues showed that the administration of zolendronic acid was efficacious in reducing metastatic bone pain in cancer of the prostate. An innovative therapy using anti-vascular endothelial growth factor agents for managing vitreo-retinal disorders associated with vascular anomalies was reported by Ajayi and others.

Our readers will find the eighteen articles in this issue very interesting. The appropriate next step should be implementation of the results of these elegant studies. We advocate collaboration between basic, clinical and public health scientists for improvement in quality and depth of research findings for better health outcomes overall.

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