

APUA Cautions on Routine Outpatient Use of Antibiotics in Malnutrition Therapy

BOSTON, Mass. (June 20, 2013) -- In a [letter](#) published today in *The New England Journal of Medicine*, three researchers affiliated with the [Alliance for the Prudent Use of Antibiotics](#) (APUA) Nutrition Group expressed reservations on behalf of the group about the proposal to routinely give antibiotics along with special food intended to treat malnourished children in an outpatient setting. A January paper in the same journal by a team led by Dr. Indi Trehan claimed significant improvements in recovery and mortality rates when antibiotics were administered along with ready-to-use therapeutic food (RUTF) given to 3212 children with uncomplicated severe acute malnutrition.

The APUA Nutrition Group members, Drs. Iruka Okeke, Jose Cruz and Gerald Keusch, did not object to adding antibiotics to RUTFs administered in a supervised inpatient setting, which is current practice. They, however, warned that extending this practice to a community setting would add selective pressure on bacteria, leading to increased antibiotic resistance. Higher deaths due to infections by resistant bacteria might well exceed the benefits found in the published study. The APUA team pointed out that a recent meta analysis found weak support for the use of antibiotics in the absence of diagnosed infectious disease in such settings and called for an assessment of the likely cost in lives due to increased resistance caused by the proposed outpatient antibiotic use in RUTFs.

Letters submitted to the NEJM by two additional groups of researchers support the views of the APUA Nutrition Group regarding the interpretation of the trial findings (Koumans, Routh and Davis) and the need for longer-term solutions and for interventions that do not induce antimicrobial resistance (Bowen, Tauxe). The APUA Nutrition Group and others recommended immediate expansion of other childhood nutrition interventions, such as encouraging breastfeeding, the use of probiotics, increased access to traditional RUTFs and ensuring access to clean water, suggesting that these proven methods will be more specifically effective in reducing deaths from malnutrition in the long-run and avoid the consequences of antibiotic resistance.

"As up to 50% of children are malnourished in some settings, routine outpatient administration of antibiotics represents significant selective pressure that could result in unforeseen consequences," said lead writer, Dr. Iruka Okeke, Associate Professor of Molecular Microbiology at Haverford College. "Evolutionary theory and recent experience predict that a policy that requires antimicrobial use in a significant fraction of these children will eventually obliterate its own usefulness and compromise the treatment of life-threatening infectious diseases in resource-limited settings where these are the commonest cause of illness and death."

"When antibiotics are provided on an outpatient basis in areas where financial and medical resources are scarce, it is difficult to ensure that they are administered properly and that the course of treatment is completed," said Dr. Stuart Levy, Professor of Medicine and Molecular Biology/Microbiology and the Director of the Center for Adaptation Genetics and Drug Resistance at Tufts University School of Medicine. "Incomplete treatment or sharing of antibiotics among family members creates ideal conditions for the emergence and spread of antibiotic resistance."

The APUA Nutrition Group encourages future studies that assess the value of all major variables including HIV and breastfeeding and the costs of adding antibiotics to RUTFs. In their reply to the three published letters, Trehan and collaborators conclude that their findings on the potentially lifesaving benefit of antibiotics should be implemented judiciously.

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About APUA

The Alliance for the Prudent Use of Antibiotics (APUA) has been the leading non-governmental organization fighting to preserve the effectiveness of antimicrobial drugs since 1981. With affiliated chapters in over 66 developed and developing countries, we conduct research, education and advocacy programs to control antimicrobial resistance and ensure access to effective antibiotics for current and future generations. APUA conducts large-scale national and international research and educational projects to control and monitor antibiotic resistance. We facilitate the exchange of up-to-date information by forging national and international partnerships among scientists, healthcare providers, consumers and policy makers. For more information regarding APUA, please visit www.apua.org.

The APUA Nutrition Group includes:

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