ICASH-KEYNOTE

NEGLECTED TROPICAL DISEASES : FOCUS IN INDONESIA

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EXTENDED ABSTRACT

Neglected Tropical Diseases (NTDs) in the word are : Protozoan infections (African trypanosomiasis, Chagas Disease, Leishmaniasis), Bacterial Infections (Buruli Ulcer, Leprosy, Trachoma), Helminth Infections (Ascariasis, Hookworm Infection, Trichuriasis, Schistosomiasis, Lymphatic Filariasis, Onchocerciasis, Dracunculiasis), Dengue, Yaws, and Fascioliasis.

They are named neglected because these diseases persist exclusively in the poorest and the most marginalized communities, and have been largely eliminated elsewhere and thus are often forgotten. Most can be prevented and eliminated. They thrive in places with unsafe water, poor sanitation, and limited access to basic health care. They cause severe pain and life-long disabilities and are often less visible and have a low priority. They are mostly concentrated in settings of extreme poverty in remote rural areas, in urban slums or conflict zones and thrive in conditions of impoverishment. People in remote areas often become ill or die before the disease can be diagnosed. Neglected tropical diseases are now on the international agenda.

The successes achieved to date prove that the interventions are technically feasible, immediate, visibly powerful and highly cost-effective. They demonstrate that programmes to tackle NTDs can be, and must be rapidly scaled up.

WHO recommends five public-health strategies for the prevention and control of neglected tropical diseases: Expansion of preventive chemotherapy; Intensified case-detection and Case management; Improved vector control; Appropriate veterinary public health measures; Provision of safe water, sanitation and hygiene.

NTDs in Indonesia are Lymphatic Filariasis, Soil Transmitted Helmintiasis (Ascariasis, Ancylostomiasis, Trichuriasis), Leprosy, Yaws (Frambosia), Dengue, Schistosomiasis, and Trachoma. Leprosy, one of the few diseases which can be eliminated. Leprosy meets the demanding criteria for elimination, practical and simple diagnostic tools; can be diagnosed on clinical signs alone. Indonesia prevalence of leprosy (2017) is 6.1 / 100.000 people and disability value 10,4%; the availability of an effective intervention to interrupt its transmission : multidrug therapy; a single significant reservoir of infection: humans.

Lymphatic Filariasis : mosquito-borne disease (Anopeles-Aedes spp), 90% cases Wuchereria brancofti; Clinical symptoms are fever, progressive lymphatic inflammation, acute or chronic severe swelling of extremities, breast, hydrocele (men), secondary bacterial infection. Human Filariasis transmitted by many vectors : Culex fatigans, Mansoni, Anopeles and Aedes mosquito. Until 2013 in Indonesia cummulative number of clinical chronic cases reported is 12.066 spread on 378 municipals with prevalence rate average (Mf rate = 19,78). Population at risk in endemic areas is around 123.478.265

people. Strategy for elimination are interrupt transmission through MDA every year for 5 years in endemic areas. Mass drug admisntration of human filariasis are Diethyl Carbamazine Citrate (DEC) 6 mg/kgBB and Albendazole 400 mg : once a year for minimum 5 years for all people > 2 years old . Others strategies are to prevent and reduce disability through morbidity control.

The Unholy Trinity are Ascariasis (Roundworm), Trichuriasis (Whipworm) and Hookworm Infection. Soil Transmitted Helminths (TSHs) part of development occurs in thee soil average 3-4 weeks in soil until infective. Infection via egg in contaminated soil (Ascariasis, Trichuris) or skin penetration (hookworm). General facts about STHs are frequently non specific symptoms, often asymptomatic until worm burden becomes large, weight loss, gastrointestinal discomfort, diarrhea less common, fever from nematodes very uncommon, polyparasitism. Worm classified as a parasite; contaminate food, water, air, feces, pets, wild animals, toilet seats and door handles; strategy of prevention are frequent hand washing, frequent cleaning of bathrooms and kitchens, thorough cooking of beef, pork, sausage, and bear meat.

Roundworm : Ascariasis lumbricoides, largest of nematodes infecting humans, adult habitat in small intestine (jejenum), obligatory extra-intestinal migration (eosinophilia), intensity of infection greatest in children age 5-10 years. Whipworm (Trichuris trichiuria), adult habitat in cecum and colorectum, no extra intestinal phase, lifespan 1-3 years, 90% infection are asymptomatic, symptoms with heavy infections-intensify of infection peaks by age 10. Clinical features :physical weakness, anemia stunted growth, cognitive deficits, stool frequency (12 + /day, trichuris dysentery syndrome, trchuris colitis, rectal prolapse.

Hookworm (Necator americanus & Ancylostoma duodenale), one-tenth the worlds population infected, significant cause of anemia and protein malnutrition, adult habitat in small intestine, life span 1 year (A.duodenale) and 3-5 years (N.americanus), clinical feature are ground-icth in primary infection, abdominal discomfort, progressive iron – deficiency anemia (>> 140-160 worms associated with the anemia (HB < 11 gr/dl), failure to thrive, extreme fatique, missed schooling, IQ loss. At – Risk population hookworm Disease : women and children (Physical growth stunting, cognitive deficits and intellectual retardation),women of childbearing age : puberty, pregnancy : increased maternal mortality (anemia), low birthweght and infant mortality.

Dengue is Arbovirus Infection : Arthropode-borne-viruses, causes 4 type dengue virus, in Indonesia mostly Den-2 (65%) and than Den-3 (15%); Den-4 (12%) dan Den-1 (8%). Characteristic of vector dengue/dengue haemorrhgic fever are : Anthrophophilic, Multiple bitter; Blood for reproduction. Main Vector are Aedes aegypti; Co-vector Ae. albopictus; Ae.polynesiensis. The Ministry of Indonesian Health reported has the largest number of dengue patients among the ASEAN region, more than 150,000 people were infected, case fatality rate is 1-2%, mostly children or young people.

The Community Directed Intervention (CDI) can be used to extend approach intervention in communities poorly served by existing health infrastructure, empower communities to look after their own health and promote health-seeking behaviour and awareness of other health issues.

Keywords *: Neglected Tropical Diseases, Soil Transmitted Helminths, Leprosy, human filarisis, Dengue, CDI*