Sharing the Gift of Water Treatment in a Packet

By Joan B. Rose, PhD

How is drinking water purified in regions of the globe where treatment facilities are unavailable? The answer can lie in a tiny packet of powdered "point-of-use" water treatment chemicals. For example, the Proctor & Gamble [P&G]Purifier of Water™ is a mini-treatment system in a packet that helps extend the advantages of water treatment to people in developing countries, refugee camps and other venues in which safe water is needed but not centrally supplied. The product was developed in collaboration with the US Centers for Disease Control and Prevention (CDC) and has been used to help provide affordable, life-sustaining drinking water around the world for over 10 years. P & G recently announced that for every view of its "Power of Clean" video (above), it will donate one day's requirement of clean drinking water to one child in the developing world.

Life Saving Technology in an Envelope

Each packet contains the chemicals necessary to transform

10 liters of turbid water from a stream or other natural source into clean, drinkable water in 30 minutes. There are two steps in the process that uses water treatment chemicals:

(a) *Step 1: Tiny suspended soil particles, including minerals and organic matter, clump together and settle to the bottom of a container over a period of five minutes of stirring.* The packet ingredient responsible for this is powdered ferric sulfate. After the particles have settled, the clarified water should be decanted or poured off and then filtered through a clean, fine weave cotton cloth, and into a second container.

(b) Step 2: *Disease-causing and life-threatening microorganism in the water are destroyed over a period of 20 minutes*. After the water is filtered, it must be allowed to sit while powdered calcium hypochlorite disinfects. According to the CDC, the P&G product "has been proven to remove the vast majority of bacteria, viruses, and protozoa, even in highly turbid waters" and "has also been documented to reduce diarrheal disease from 90% to less than 16% incidence in five randomized, controlled health intervention studies."

Helping to Achieve the UN Post-2015 Sustainable Development Goals

On September 24, the UN General Assembly will adopt the post-2015 UN Development Agenda, known as "Transforming Our World: The 2030 Agenda for Sustainable Development". The agenda includes 17 new ambitious Sustainable Development Goals. Goal #6 is to "Ensure availability and sustainable management of water and sanitation for all." P&G's Children's Safe Drinking Water Program is one effort to help achieve that goal. The company "has set a goal of 15 billion liters of clean drinking water to be delivered by 2020 to reduce illness caused by contaminated water and to help save lives in developing countries." Since 2004, 9 billion gallons have been delivered.

As of this posting, the 79 second video has been viewed nearly 20,000 times. By sharing the video with others you can help share the gift of clean water with a child in need.

Joan B. Rose, PhD, is the Homer Nowlin Chair in Water Research at Michigan State University and a member of the Water Quality and Health Council.