

The Review

The people that the ostomy industry forgot

An intestinal stoma is a profound alteration in body function that a patient must manage day to day over significant periods of time, often permanently. Although the creation of a stoma takes place in a tertiary care surgical context, long-term management is very often a primary care issue and most GPs and community-based nurses are familiar with patients with stomas.

In developed countries, where the costs of stoma management supplies are often met wholly or in part by state or insurance-funded health systems, patients with stomas can choose from a range of disposable collection systems for stoma management that afford hygienic, discrete, and reliable collection. An entire subspecialty of nursing has grown that focuses on stoma care and guidelines have been developed for best practice in pre-operative and post-operative care, often including elements of counselling and stoma management education as well as medical care.^{1,2} But despite the health care and products that are available, the undoubted difficulty in adjusting to having a stoma results in considerable psychological stress in many, and the incidence of dermatitis and other complications around stoma is relatively high at between 15–43%.^{3–5}

Living with a stoma presents even more serious challenges for many people in developing countries. The Philippine General Hospital (PGH) in Manila is a tertiary care centre attached to the country's national

university medical school that serves the large economically-disadvantaged sections of society as well as private patients. Through its charity wards, poorer patients can access essential surgery at affordable costs: the services of surgeons and a hospital bed are provided free of charge while the patient must cover the costs of medical and surgical consumables such as drugs or devices used during their surgery and hospitalisation. Following discharge patients must continue to self-fund any ongoing healthcare expenses and the creation of a stoma can present an ongoing financial burden that is insupportable for many: 21% of the population earn less than £250 per annum and disposable ostomy bags cost around £4 each and are designed to be used for only a few days at most.⁶

Unable to afford the commercial disposable ostomy systems, many have to rely on their own skills and ingenuity to find other means of management. In a small study conducted in PGH and presented at the European Society for Medical Oncology in Barcelona in 2011, 20.5% of patients with stomas attending outpatient clinics were not using commercially available collection systems. Some of these were reusing elements of commercial, disposable appliances, adapted to incorporate cheaply available plastic bags. Others had constructed entirely home made devices using pieces of plastic, jar lids, elastic garters, plastic bags, electric wire,

leather, and cloth. Many of the devices were surprisingly effective. The study found that there was no statistically significant difference in the prevalence of skin infection between commercial and non-commercial device users, but that the prevalence of skin excoriation was significantly more common in non-commercial device users compared with commercial device users.⁷ Many of the non-commercial appliances in use were both ingenious and effective and several of the users expressed a degree of pride in having found an affordable way to manage their stoma. Quality of life, measured with a recently validated stoma-specific instrument, was higher among those using the non-commercial devices, possibly because these were more long-standing ostomates whose homemade devices indicated that they had adapted relatively well to living with a stoma.⁷

But although human resourcefulness and resilience is humbling and encouraging, should it be necessary? Disposable stoma care systems offer advantages to patients in countries where their use is financially supportable. And, of course, they must surely offer advantages to the cash flows of the manufacturers. But has the shift to disposable systems by the companies that dominate the ostomy market been pursued at the expense of a great many patients with stomas around the world who simply cannot afford them? Can and should the stoma care industry do more for these people?

What is striking about some of the modified and homemade devices used in Manila is their similarity to commercially available appliances in the 1960s and 1970s, in which reusable belts and other reusable fixation systems were used to hold disposable collection bags in place.⁸ Suitable plastic food bags are available cheaply in most parts of the world. The challenge for those who cannot afford disposable ostomy products is devising a method for keeping those bags in place.

The social responsibility issues implicit in these questions about the stoma care industry are not unlike those that have been raised in the continuing debates about the affordability of drugs in developing countries.^{9–11} Is it time that these debates and awareness of the issues involved should be extended to medical devices and other consumables that are so often

Figure 1. Stoma appliance made from a cloth belt, medical tape, and a plastic food bag.



Credit: John Paul S Gonzalez.



Figure 2. Stoma appliance made from plastic jar lid, elastic garter belt and pin, and a plastic food bag.

needed in such healthcare areas as stoma and continence care? Currently charities work hard to provide products to developing countries, but the scale of the problem is more than they can address alone. Even with much reduced prices, disposable systems are likely to remain beyond the reach of patients with stomas whose daily financial decisions revolve around food and survival. Which brings us back to reusability, disposability, and finding practical solutions. Producing simple, affordable, reusable, and reliable devices that can hold a cheap plastic bag over a stoma presents a challenge for

individual patients with stomas, but is not an enormous engineering challenge for an ostomy care company with a social conscience.

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Figure 3. Stoma appliance made from a reused rim from a disposable system with elastic and a plastic food bag.



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