
The effectiveness of social marketing in global health: a systematic review

Rebecca Firestone,^{1,*} Cassandra J. Rowe,² Shilpa N. Modi³ and Dana Sievers¹

¹Population Services International, 1120 19th Street NW, Suite 600, Washington, DC 20036, USA, ²North Carolina Coalition Against Domestic Violence and ³The QED Group LLC

*Correspondence author: Population Services International, 1120 19th Street NW, Suite 600, Washington, DC 20036, USA. E-mail: rfirestone@psi.org

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Abstract

Social marketing is a commonly used strategy in global health. Social marketing programmes may sell subsidized products through commercial sector outlets, distribute appropriately priced products, deliver health services through social franchises and promote behaviours not dependent upon a product or service. We aimed to review evidence of the effectiveness of social marketing in low- and middle-income countries, focusing on major areas of investment in global health: HIV, reproductive health, child survival, malaria and tuberculosis. We searched PubMed, PsycInfo and ProQuest, using search terms linking social marketing and health outcomes for studies published from 1995 to 2013. Eligible studies used experimental or quasi-experimental designs to measure outcomes of behavioural factors, health behaviours and/or health outcomes in each health area. Studies were analysed by effect estimates and for application of social marketing benchmark criteria. After reviewing 18 974 records, 125 studies met inclusion criteria. Across health areas, 81 studies reported on changes in behavioural factors, 97 studies reported on changes in behaviour and 42 studies reported on health outcomes. The greatest number of studies focused on HIV outcomes ($n = 45$) and took place in sub-Saharan Africa ($n = 67$). Most studies used quasi-experimental designs and reported mixed results. Child survival had proportionately the greatest number of studies using experimental designs, reporting health outcomes, and reporting positive, statistically significant results. Most programmes used a range of methods to promote behaviour change. Programmes with positive, statistically significant findings were more likely to apply audience insights and cost-benefit analyses to motivate behaviour change. Key evidence gaps were found in voluntary medical male circumcision and childhood pneumonia. Social marketing can influence health behaviours and health outcomes in global health; however evaluations assessing health outcomes remain comparatively limited. Global health investments are needed to (i) fill evidence gaps, (ii) strengthen evaluation rigour and (iii) expand effective social marketing approaches.

Key words: Social marketing, global health, HIV, malaria, reproductive health, child survival, TB, systematic review, effectiveness

Key Messages

- Social marketing is commonly used as an intervention strategy in global health, but there have been few systematic reviews of its effectiveness in changing behaviours or influencing health outcomes in low- or middle-income countries.
- We systematically reviewed peer-reviewed literature published between 1995 and 2013 on social marketing for HIV, reproductive health, malaria, child survival and tuberculosis in low- and middle-income countries to assess the capacity of social marketing to achieve improvements in health outcomes, health behaviour change and behavioural factors
- Of 125 studies meeting our inclusion criteria, one-third ($n=42$) reported on measurable health outcomes, while most measured behavioural outcomes ($n=97$) or behavioural factors ($n=81$). Key strategies of effective programmes included using research to seek actionable insights into consumers and markets and addressing the costs and benefits of behaviour change.
- Evidence exists that social marketing can influence health behaviours and health outcomes. Better documentation of social marketing interventions is needed when evaluating these programs. Global health investments are merited in filling key evidence gaps, such as in social marketing to address childhood pneumonia, and to strengthen evaluation rigour. Investments are needed as well in scaling up and replicating effective social marketing approaches.

Introduction

Social marketing is commonly used as an intervention strategy in global health. Social marketing uses marketing concepts—product design, appropriate pricing, sales and distribution, and communications—to influence behaviours that benefit individuals and communities (Cheng *et al.* 2011). Social marketing interventions generally aim to ensure that the target audience adopts the behaviour being promoted (Lee and Kotler 2011). Social marketing supports markets to make health products and services appealing and affordable for both health care providers and consumers (Meadley *et al.* 2003; Cairns *et al.* 2011; Berg and Mitchell 2013). Social marketing programmes sell behaviours. This often includes products that support behaviours by subsidizing them and making them available at commercial outlets, but the purpose of making a product or service available is to support the practice of the behaviour being targeted (Cheng *et al.* 2011). In low- and middle-income countries, these programmes may sell subsidized products through commercial sector outlets such as pharmacies, distribute appropriately priced products to the poorest populations, deliver health services through social franchises or promote behaviours not dependent upon a product or service. Social marketing may also operate in a more upstream manner to address policy or social norms change (Andreasen 2002; Gordon *et al.* 2006; Weinreich 2006; Stead *et al.* 2007). Social marketing is commonly used as an approach in global health to reach vulnerable populations with health products and services (Price 2001; Mah *et al.* 2008; Berg and Mitchell 2013).

Although social marketing has been included in investments made within the context of development assistance for health, the effectiveness of social marketing for achieving improvements in major global health indicators has been questioned (Andreasen 2002; World Health Organization 2014). Promoters and detractors of social marketing may both agree on the ultimate goal of achieving behaviour change in target populations; however critics of social marketing have argued that behaviour change is difficult to achieve solely through the mechanisms adopted by social marketing (Buchanan *et al.* 1994; Lee and Kotler 2011). Even if social marketing may encourage people to try marketed products and services, it is not clear that this behaviour change can be sustained. Definitions of social marketing have expanded in response to critiques that social marketing can be effective only if the approach operates within an enabling policy and social environment (Buchanan *et al.* 1994; Andreasen 2002; Hornik 2002; Smith and Schneider 2009; Spotswood *et al.* 2012). Social marketing definitions now include

more explicit mention of the linkage to policy and advocacy (Stead *et al.* 2007). Others critique social marketing from a view of informed consent, asking whether having a socially beneficial end goal always justifies nudging audiences, especially vulnerable populations, toward behaviours they otherwise would not choose to adopt (Guttman and Salmon 2004; Spotswood *et al.* 2012).

A key issue in assessing the effectiveness of social marketing is whether social marketing programmes actually achieve behaviour change on a consistent basis. Programmes employing mass media or interpersonal communication channels may raise the target audience's awareness and intentions to use products and services. These behavioural factors—improved attitudes, knowledge or perceived self-efficacy—may facilitate the end goal of social marketing, but do not provide sufficient evidence that social marketing interventions have achieved their stated purpose. Rather, these factors may mediate the process of behaviour change or can be categorized as intermediate outcomes (Andreasen 2002). Demonstrated evidence of changes in behaviour or improvements in health status could address these concerns and provide a more reliable assessment of effectiveness and impact (Raphael 2000).

Existing systematic reviews of social marketing

We identified six systematic reviews that touch on the effectiveness of social marketing for global health investments in low- and middle-income countries (Bertrand *et al.* 2006; Bhutta *et al.* 2008; Sweat *et al.* 2012; Beyeler *et al.* 2013; Evans *et al.* 2014; Naugle and Hornik 2014). A common feature of these and other reviews of social marketing, including of studies taking place in high-income countries, is the challenge of identifying social marketing interventions and the risk of mis-classifying social marketing as health promotion or social and behaviour change communication (McDermott *et al.* 2005; Stead *et al.* 2007; Quinn *et al.* 2010). The six reviews we found focusing on low- and middle-income countries used varied definitions of social marketing. Several considered social marketing as embedded within mass media interventions and defined the aims of these interventions as being to raise awareness or change behaviours among a broad audience (Bertrand *et al.* 2006; Bhutta *et al.* 2008; Noar *et al.* 2009; Quinn *et al.* 2010; Naugle and Hornik 2014). Others argued that social marketing comprises a broader set of intervention components, acknowledging that social marketing may operate through a marketing mix, i.e. factoring in pricing and sales strategies (Sweat *et al.* 2012; Evans *et al.* 2014). Many practitioners acknowledged that it difficult to determine whether

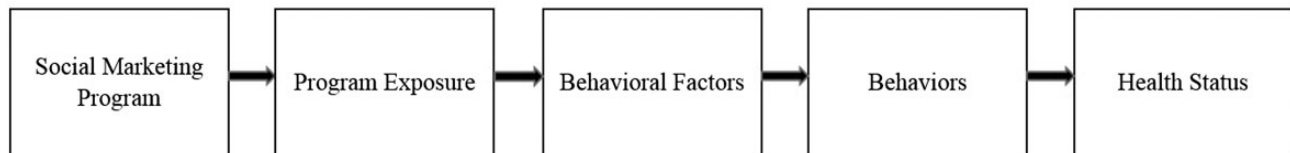


Figure 1. Logic model on the effects of social marketing.

interventions that identify as ‘social marketing’ are actually rooted in principle (Quinn *et al.* 2010). As a result of the varied definitions of social marketing, it is possible that these reviews inadvertently included behaviour change and health communications campaigns alongside more strictly defined social marketing programmes. Loose applications of the principles of social marketing as an intervention strategy make it difficult to trace the theoretical pathways by which social marketing achieves behaviour change and improved health outcomes, particularly for those health outcomes of greatest interest to the global health policy community.

These reviews found evidence of positive effects of social marketing campaigns on the target population’s behaviours, intentions to adopt healthy behaviours and factors mediating the process of behaviour change, such as awareness, knowledge and attitudes. However, studies tended to report more often on these mediating factors, or intermediate outcomes, than on behaviours. Studies that measured both types of outcomes often found that exposure to the intervention produced stronger associations with improvements in these mediating factors than in behaviours (Price 2001; Bertrand *et al.* 2006; Evans *et al.* 2014). Of three HIV-focused reviews, two were able to draw conclusions about the effects of social marketing on changing behaviour, finding that social marketing was associated with increases in condom use (Noar *et al.* 2009; Sweat *et al.* 2012). A review of social franchising, a sub-set of social marketing, found that franchised reproductive health clinics were linked to improvements in service utilization and uptake of family planning among clients (Beyeler *et al.* 2013). A recent review of social marketing of water and sanitation found mixed evidence of behaviour change related to water treatment (Evans *et al.* 2014). Two reviews that focused on social marketing as one of a range of delivery strategies assessing the effectiveness of behaviour change interventions related to reproductive or maternal and child health care outcomes did not present data specifically on the ability of social marketing to achieve behavioural outcomes (Peters *et al.* 2004; Bhutta *et al.* 2008). Authors have generally characterized the evidence reviewed as being inconsistent and of weak quality.

None of these reviews have addressed the full range of products and services for which social marketing may be mobilized in low- and middle-income countries. As a result, it is difficult from these reviews to assess the ability of social marketing as a strategy to contribute to meeting the health Millennium Development Goals (MDGs), which have set the course for global health investments, particularly development assistance, since 2000, and are still relevant as the global health field moves into targeting the post-2015 Sustainable Development Goals (UN Millennium Project 2005; Institute for Health Metrics and Evaluation 2014). Critically, none of these reviews has assessed whether social marketing programmes can achieve improvements in health status while also addressing whether social marketing can consistently change behaviour.

We aimed to review available evidence on the effectiveness of social marketing to achieve improvements in health outcomes, health behaviour change and mediating behavioural factors in low- and middle-income countries, focusing on major areas of investment in

global health by multilateral and bilateral donors, as evidenced by the presence by multilateral investment frameworks and large-scale investment by bilateral agencies and/or private foundations focused on achieving the health MDGs (Partnership for Maternal, Newborn, & Child Health 2011; The Global Fund to Fight AIDS, Tuberculosis, and Malaria 2011; Joint United Nations Programme on HIV/AIDS (UNAIDS) 2012; Family Planning 2020 2014; Stenberg *et al.* 2014). We used a logic model to conceptualize a generalized pathway for the expected effectiveness of social marketing (Figure 1). This model posits that a social marketing program, which may include many components of the marketing mix—product, price, promotion, place—and may involve both supply- and demand-side strategies—should lead to individual-level programme exposure by the target audience. Individual-level exposure should influence a change in mediating behavioural factors—access and availability to health products and services, knowledge, attitudes, social norms, intentions etc.—that will ultimately lead to adoption of a health-promoting behaviour. Healthy behaviour change (i.e. taking preventative and/or treatment action), should then lead to improvements in health status, as assessed through measures of morbidity, mortality, or fertility status (Glanz *et al.* 2002; Lee and Kotler 2011).

Methods

Eligibility criteria

This review was structured in accordance with the PRISMA statement (Liberati *et al.* 2009). Social marketing programmes were defined as programmes using marketing concepts to develop activities aimed at influencing people’s behaviours to improve the public’s health, assessed through application of the social marketing benchmark criteria developed by the National Social Marketing Centre (Cheng *et al.* 2011; The National Social Marketing Centre 2012). Studies were included if they: (i) were original research (not editorials or review papers that did not contain original data); (ii) took place in a low- or middle-income country as defined by the World Bank; (iii) published in English; (iv) assessed an programme that attempted to change a behavioural factor, behaviour or health outcome of interest within the global health investment areas of HIV, reproductive health, child survival, malaria and tuberculosis; (v) provided adequate information to determine if the programme met at least one of the Social Marketing Benchmark Criteria; (vi) and used an experimental, including randomized-controlled trials or quasi-experimental study design (World Bank Group 2016).

Because previous reviews had identified few experimental studies of social marketing, and evaluation designs varied greatly in rigour, we aimed to be inclusive in our identification of eligible study designs. We defined studies as quasi-experimental if they had either a comparison group or both pre- and post-tests, and we excluded one-group post-test only designs, as they can only in rare circumstances demonstrate whether a change has occurred (Shadish *et al.* 2002). Economic evaluations were excluded, unless it was possible to identify behavioural factor, behaviour or health outcome results.

Health outcomes included measures of morbidity, mortality or fertility status. Specifically by health area, HIV health outcomes of interest included incidence and prevalence of HIV and sexually transmitted infections (STIs), as well as cure rates of STIs. Health outcomes of interest for reproductive health included reduction in fertility, maternal mortality and infant mortality. Malaria health outcomes included reduction in malaria incidence and prevalence, and malaria-related mortality. TB health outcomes included TB case identification and cure rate and TB-related mortality. Child survival health outcomes included incidence, prevalence and mortality due to diarrhoeal disease and pneumonia, undernutrition and stunting, anaemia, low birthweight, postnatal sepsis, maternal mortality and neonatal and under-5 child mortality.

Behavioural outcomes were defined as behaviours that could influence the aforementioned health outcomes. HIV/STIs behaviour outcomes included condom use, delayed sexual onset, HIV testing, partner reduction, male circumcision, safe injecting behaviours and HIV/STI treatment. For reproductive health, we categorized behaviour outcomes into client and provider outcomes. Client behaviour outcomes included modern contraceptive use, birth spacing, safe abortion, antenatal care, postnatal care and institutional delivery. Provider behaviour outcomes included quality of care (information given to clients, technical competence, interpersonal relations, follow-up/continuity mechanisms, methods mix) and client satisfaction (Bruce 1990). TB behavioural outcomes included TB testing, initiation and completion of Directly Observed Treatment Short course. Malaria behavioural outcomes included sleeping under an insecticide-treated net (ITN) or long-lasting insecticidal nets (LLIN), use of insecticide retreatment tablets or sprays, seeking care for fever and initiation and completion of antimalarial treatment, specifically artemisinin-combination therapies (ACTs). Malaria provider behaviour change outcomes included parasitological diagnosis using rapid diagnostic tests (RDTs) and provision of ACTs. Child survival behavioural outcomes included hand washing and other hygiene practices for prevention of both pneumonia and diarrhoea, pneumococcal vaccination and zinc supplementation and antibiotic treatment of pneumonia, water purification, use of latrines, and rotavirus vaccination. Other behaviours included use of oral rehydration solution (ORS) and/or zinc, antibiotic treatment for bacterial dysentery, complementary feeding including micronutrient supplementation and fortification, consumption of micronutrient-rich foods, therapeutic feeding including Ready-to-Use Therapeutic Foods and formula milks, and exclusive breastfeeding from 0 to 6 months. Behaviours to reduce neonatal mortality included use of iron folic acid and supplementation, use of clean delivery kits or chlorhexidine, misoprostol, oxytocin, magnesium sulfate and having a skilled attendant at birth.

Behavioural factors were defined as those conditions that affect the likelihood that an individual would perform a behavioural outcome of interest. Behavioural factors for all health areas included opportunity, ability and motivation to change health behaviours. Opportunity was defined as availability, access and brand equity; ability as knowledge, self-efficacy, social support and stigma; and motivation as attitudes, intention, risk perception and quality of care (Population Services International 2004).

Search strategy

We searched for peer-reviewed studies published from 1995 to 2013 that evaluated the effectiveness of social marketing programmes in the areas of HIV, reproductive health, child survival, malaria and tuberculosis using the bibliographic databases of PubMed, PsycInfo

(via Ovid) and ProQuest. Search terminology is described as follows:

'Social franchise' OR 'Social franchises' OR 'Social franchising' OR 'Social Marketing Theory' OR ['Social Marketing' AND (Health OR 'HIV' OR 'AIDS' OR 'STI' OR 'sexually transmitted infections' OR 'TB' OR Tuberculosis OR 'Reproductive Health' OR 'Family Planning' OR Contraception OR Condom OR 'IUD' OR 'Maternal Health' OR 'Women's Health' OR Youth OR 'Adolescent Health' OR Malaria OR 'Integrated Case Management' OR fever OR artemisinin OR 'artemisinin-based combination therapy' OR 'artemisinin-based monotherapy' OR 'ACT' OR antimalarial OR 'insecticidal bed nets' OR bednets OR nets OR 'ITN' OR 'LLIN' OR 'insecticide retreatment tablets' OR 'Rapid diagnostic test' OR 'RDT' OR 'Child Survival' OR 'Children's Health' OR 'Infant Health' OR 'Oral Rehydration' OR 'ORS' OR 'ORT' OR Salts OR Zinc OR 'Water Treatment' OR 'Water Purification' OR 'Water Filters' OR 'Water Filtration' OR Chlorination OR Chlorine OR Latrines OR Sanitation OR Soap OR Handwashing OR 'Hand washing' OR Nutrition OR supplementation OR 'micronutrient powder' OR fortification OR sprinkles OR 'RUTF' OR 'RUSF' OR 'Formula milks' OR 'iodized salts' OR vitamin OR 'complementary feeding' OR 'therapeutic feeding' OR 'LNS' OR 'lipid-based nutrient supplements' OR Iron OR 'folic acid' OR 'iron folic acid' OR prenatal OR antenatal OR 'low birth weight' OR 'Neglected Tropical Disease' OR 'Soil Transmitted Helminthes' OR Deworming OR Pneumonia OR 'Pneumonia treatment' OR 'Delivery Kits' OR Chlorhexidine OR CHX OR sepsis OR vaccine OR vaccination]

After duplicates were removed, two authors screened abstracts according to eligibility criteria. Full texts of studies were reviewed by three authors, and discrepancies were addressed through discussion.

Data abstraction

Key variables were extracted from eligible studies, including: study location, study population, intervention description, study outcomes, design, sampling methods and statistical analysis applied. To assess the core social marketing components of included interventions, eligible studies were scored against the following criteria defined by the National Social Marketing Centre (The National Social Marketing Centre 2012): (i) Behaviour: does the intervention aim to change people's actual behaviour vs their knowledge, attitudes, and beliefs? (ii) Customer Orientation: does the intervention focus on the audience and use a mix of data sources to fully understand their lives, behaviour, and the issue? (iii) Theory: does the intervention use behavioural theories to understand behaviour and inform the intervention? (iv) Insight: did customer research identify actionable insights that were used to develop the intervention? (v) Exchange: does the intervention consider the benefits and costs of adopting and maintaining a new behaviour? (vi) Competition: does the intervention seek to understand what competes for the audience's time, attention, and inclination to behave in a particular way? (vii) Segmentation: does the intervention identify audience segments, which have common characteristics, and then tailor interventions appropriately? (viii) Methods Mix: does the intervention use a mix of methods to bring about behaviour change?

We scored studies against the eight benchmark criteria using a process similar to that of Quinn and colleagues in their 2010 review of the design of social marketing interventions (Quinn *et al.* 2010). Each study was awarded an equally weighted point for each of the benchmark criteria identified in the description of the intervention, for a maximum score of eight. Our intent in structuring this scoring

process was to assess how well studies that were identified as social marketing interventions based on our search terms and eligibility criteria compared against the key characteristics of a well-designed social marketing program. Earlier reviews of social marketing, several of which included social marketing programmes from high-income countries, found that only a small proportion of their included studies explicitly mentioned all eight criteria (Gordon *et al.* 2006; Stead *et al.* 2007; Quinn *et al.* 2010). To account for wide differences in how interventions that identified as social marketing were described, we retained all included studies for analysis. We then developed a sub-analysis of studies that were scored as having six or more of the benchmark criteria and thus could be considered to have more rigorously implemented and/or reported on their use of social marketing principles (Quinn *et al.* 2010).

Assessment of study rigour

A strength of evidence grade was applied to individual studies to assess and compare validity of study findings. The 5-point grading scale was adapted from the strength of evidence framework in the *Cochrane Handbook* (Higgins and Green 2015). Each individual study was graded based on the measured outcomes, study design, generalizability and type of analysis used.

Analysis

Given the range of outcomes considered, we did not attempt meta-analysis. Rather, this review was designed to report on the breadth of the literature and indication of social marketing's effectiveness based on the direction and significance of results. We categorized studies by the direction and statistical significance of reported effect sizes, stratifying results by outcome type, study design, and health area. Study effects were categorized as 'positive' if all results reported were statistically significant and improved outcomes. We categorized studies as 'mixed' if results had any combination of the following (excepting positive and statistically significant): positive, negative, statistically significant, and not statistically significant. For example, many included studies had a mix of statistically significant, positive results and results that were positive but not statistically significant. Within the mixed category, we also included studies that reported statistical significance for some results and statistical non-significance for others. The remaining studies were categorized into 'not statistically significant/significance not reported' if all results were either not statistically significant or if authors did not report significance for any of the results. No studies reported only statistically significant negative results across all three outcome types; however statistically significant negative results are reported by individual outcome types. We report counts of all categorized studies.

We also report proportions of Social Marketing Benchmark Criteria for all included studies, in total and stratified by outcome type. Finally, we assessed evidence gaps within the health areas reviewed. For each health area we identified evidence gaps for the types of outcomes reviewed, according to whether there were fewer than two studies reviewed in that category (Ryan 2013).

Results

A total of 18 947 records were located using the described search terms. Of those, 1,443 duplicates were removed. Next, we reviewed 17 504 records at the abstract level. 16 936 studies were then eliminated based on the above inclusion criteria. Full-text review further removed another 440 studies, yielding 125 eligible studies for inclusion in analysis (Figure 2, see also supplementary material)

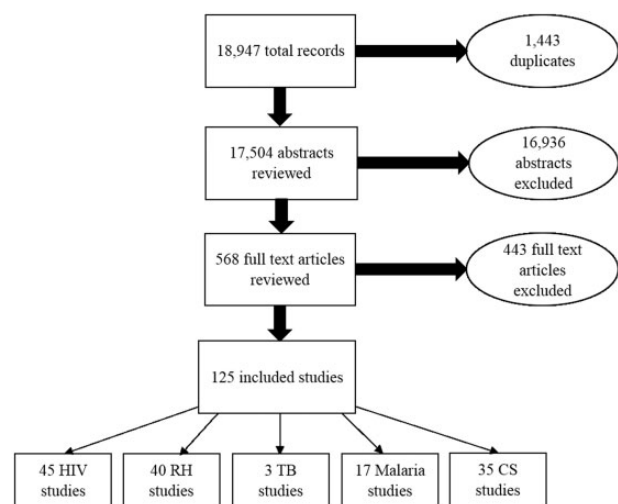


Figure 2. Flow diagram.

(Alisjahbana *et al.* 1995; Schopper *et al.* 1995; Pinfold and Horan 1996; Agha 1998; 2002, 2003, 2011; De Pee *et al.* 1998; Valente and Saba 1998; Ford and Koetsawang 1999; Pinfold 1999; Schellenberg *et al.* 1999, 2001; Laukamm-Josten *et al.* 2000; Meekers 2000; Van Rossem and Meekers 2000, 2007; Vaughn *et al.* 2000; Abdulla *et al.* 2001; Agha *et al.* 2001, 2006, 2007a,b; Babalola *et al.* 2001a, b; Curtis *et al.* 2001; Dunston *et al.* 2001; Karlyn 2001; Jaramillo 2001; Kim *et al.* 2001, 2006; Boulay *et al.* 2002; Rowland *et al.* 2002, 2004; Thevos *et al.* 2002; Collumbien and Douthwaite 2003; Jacobs *et al.* 2003; Tamashe *et al.* 2003; Zagrè *et al.* 2003; Basu *et al.* 2004; Nathan *et al.* 2004; Shefner-Rogers and Sood 2004; Warnick *et al.* 2004; Angeles-Agdeppa 2005; Crape *et al.* 2005; Goldstein *et al.* 2005; Kanal *et al.* 2005; Khan *et al.* 2005; Kikumbih *et al.* 2005; Mathanga *et al.* 2005; Meekers *et al.* 2005; Paulino *et al.* 2005; Baker *et al.* 2006; García *et al.* 2006; Hammett *et al.* 2006, 2012; Hutchinson *et al.* 2006; Keating *et al.* 2006; Shargie *et al.* 2006; Sweat *et al.* 2006; Decker and Montagu 2007; Hoke *et al.* 2007; Lönnroth *et al.* 2007; Noor *et al.* 2007; Plautz and Meekers 2007; Ross *et al.* 2007; Sun *et al.* 2007; Thuong *et al.* 2007; Wu *et al.* 2007; Garrett *et al.* 2008; Müller *et al.* 2008; O'Reilly *et al.* 2008; Rimal and Creel 2008; Yeung *et al.* 2008; Hanson *et al.* 2009; Hounton *et al.* 2009; Wang *et al.* 2009, 2011; Agha and Meekers 2010; Alba *et al.* 2010; Blanton *et al.* 2010; Baizhumanova *et al.* 2010; Casey *et al.* 2010, 2013; Gutierrez *et al.* 2010; Lutalo *et al.* 2010; Ngo *et al.* 2010; Piot *et al.* 2010; Qureshi 2010; Sheth *et al.* 2010; Angeles-Agdeppa *et al.* 2011; Bahromov 2011; Doyle *et al.* 2011; Elder *et al.* 2011; Hamby *et al.* 2011; Kassegne *et al.* 2011; Longfield *et al.* 2011; Mainkar *et al.* 2011; Nambiar *et al.* 2011; Pandey *et al.* 2011; Rachakulla *et al.* 2011; Shah *et al.* 2011; Thilakavathi *et al.* 2011; Agha and Beaudoin 2012; García *et al.* 2012; Harris *et al.* 2012; Hotz *et al.* 2012; Huntington *et al.* 2012; Patel *et al.* 2012; Russo *et al.* 2012; Azmat *et al.* 2013; Boily *et al.* 2013; Bowen 2013; Habib *et al.* 2013; Havemann *et al.* 2013; Jain *et al.* 2013; Juneja *et al.* 2013; Kang *et al.* 2013; Littrell *et al.* 2013; Loharikar *et al.* 2013; Monterrosa *et al.* 2013; Obare *et al.* 2013; Pawa *et al.* 2013; Pattanayak *et al.* 2009; Gupta *et al.* 2012). Fifteen studies contained results that were analysed for multiple health areas.

The greatest number of studies focused on HIV-related outcomes of social marketing, followed by reproductive health and malaria (Table 1). More studies overall came from sub-Saharan Africa than any other region ($n = 67$). The majority of HIV and malaria studies

came from this region as well ($n=22$, $n=14$, respectively), while relatively few studies took place in Latin America/the Caribbean. Three studies took place in Europe/Central Asia, and three studies were multi-regional.

A total of 42 individual studies reported health outcomes, such as morbidity or mortality measures, in the areas of child survival, HIV, reproductive health, child survival, malaria and tuberculosis (Table 2). Baizhumanova *et al.* (2010) reported outcomes for both reproductive health and child survival as their intervention addressed iron deficiency anaemia. Only seven studies reporting on health outcomes used experimental study designs (Shargie *et al.* 2006; Ross *et al.* 2007; Wu *et al.* 2007; Lutalo *et al.* 2010; García *et al.* 2012; Habib *et al.* 2013). Of these, one study of reproductive health outcomes reported statistically significant decreases in occurrence of pregnancy, and one HIV/STI study reported mixed results with decreases in prevalence of hepatitis C and no change in prevalence of HIV (Wu *et al.* 2007; Lutalo *et al.* 2010). Another reproductive health study reported no difference in occurrence of

pregnancy, and one HIV study reported no difference in STI prevalence (Hoke *et al.* 2007; Ross *et al.* 2007). The majority of studies used quasi-experimental designs, with HIV having the largest volume of studies followed by child survival. Almost all of the studies on child survival and malaria outcomes reported positive or mixed results. Relatively more HIV studies reported mixed results, but these studies included a range of outcomes.

A total of 97 unique studies across all health areas reported behavioural outcomes (Table 3). Fourteen of these 97 studies used experimental study designs. Five experimental studies reported exclusively positive results (Shargie *et al.* 2006; Sun *et al.* 2007; Pattanayak *et al.* 2009; Lutalo *et al.* 2010; Hotz *et al.* 2012). Hotz *et al.* 2012 reported on both reproductive health and child survival outcomes. Four HIV RCTs reported mixed or non-significant findings (Garcia *et al.* 2012; Hoke *et al.* 2007; Wu *et al.* 2007; Bahromov and Weine 2011). About 85% of the included studies considering behavioural outcomes used quasi-experimental designs, with HIV leading on volume of studies. Studies on reproductive health also figured largely in the number of quasi-experimental studies measuring behaviours, with most of these studies reporting mixed findings. For example, Collumbien and Douthwaite's (2003) evaluation of an intervention using audiotapes to disseminate contraceptive information showed statistically significant increases in use of oral contraceptives but statistically significant decreases in IUD use (Collumbien and Douthwaite 2003). Almost all of the malaria studies reported positive or mixed results. Seventeen studies reported no statistically significant findings for behaviour change, with half of the studies coming from reproductive health.

A total of 81 studies reported behavioural factor outcomes across all health areas (Table 4), and there was substantial overlap between studies that assessed behaviours and behavioural factors. In total, 63 studies reported results for both behavioural and behavioural factors. A small proportion of studies measuring behavioural factors used experimental designs ($n=8$), and all of these studies reported mixed or no significant results, with more than half of these

Table 1. Included studies by health area and region

	TB	HIV	Reproductive Health	Malaria	Child Survival	Total
East Asia/Pacific	1	9	10	1	11	32
Europe/ Central Asia	0	1	1	0	1	3
Latin America/ Caribbean	1	3	4	0	2	10
South Asia	0	10	9	2	4	25
Sub-Saharan Africa	1	22	14	14	16	67
Multi-region	0	0	2	0	1	3
Total	3	45	40	17	35	125^a

^aFifteen studies were analysed for multiple health areas. Total reflects the number of unique studies.

Table 2. Health results by study design, direction, and statistical significance of results

	Positive results		Mixed results		No significant results		Total
	Experimental	Quasi-experimental	Experimental	Quasi-experimental	Experimental	Quasi-experimental	
HIV	0	3	2	8	1	3	13
RH	1	0	0	1	1	4	7
Child survival	0	4	1	7	0	0	12
Malaria	0	1	0	3	0	1	5
TB	0	0	1	0	0	1	2
Total	1	8	4	19	2	9	42^a

^aOne study reported results for both reproductive health and child survival. Total reflects the number of unique studies reporting health results.

Table 3. Behavioural results by study design, direction, and statistical significance of results

	Positive results		Mixed results		No significant results		Total
	Experimental	Quasi-experimental	Experimental	Quasi-experimental	Experimental	Quasi-experimental	
HIV	0	9	2	20	2	4	37
RH	2	5	1	14	0	8	30
Child survival	3	8	2	14	1	1	29
Malaria	0	3	0	6	0	1	10
TB	1	0	0	1	0	0	2
Total	6	25	5	55	3	14	97^a

^aEleven studies reported results across multiple health areas. Total reflects the number of unique studies reporting behavioural results.

studies focused on factors related to child survival. The vast majority of studies used quasi-experimental designs, and across all health areas except TB, the greatest numbers of studies reported mixed results. For example, participants from an intervention to improve malaria treatment-seeking behaviours in Tanzania showed improvements in correctly identifying cases of malaria; however, there was no change in beliefs that malaria is preventable through bednets (Alba *et al.* 2010).

In total, 82 studies reported on more than one outcome type. The greatest area of overlap was in studies reporting on health behaviours and behavioural factors ($n = 50$), while four studies reported on health outcomes and behavioural factors (Angeles-Agdeppa *et al.* 2005; Baizhumanova *et al.* 2010; Doyle *et al.* 2011; Hotz *et al.* 2012). Seventeen studies reported on health behaviours and health outcomes. Twelve studies reported behavioural factors, behaviours, and health outcomes, with five of these studies focused on child survival outcomes, one on reproductive health, three on HIV and one on malaria.

We found 26 studies that could be scored on six or more of the Social Marketing Benchmark Criteria (Table 5). Across the 26 studies, distribution by health area was more even than that of the full analysis. The health area with the greatest number of studies was

child survival (8), followed closely by HIV (7), reproductive health (6) and malaria (4). One study was on a TB intervention. One study reported results for both reproductive health and child survival.

The study designs and direction of results among the 26 studies were similar to that of the full analysis. Twenty-one studies reported on behavioural outcomes and 19 reported on behavioural factors—as in the full analysis, most of the 26 studies reported both outcome types together. Only five studies reported health outcomes. The majority of studies used quasi-experimental designs. Table 5 shows that for behavioural outcomes, the results were closely split between positive and mixed results; while for health outcomes, more studies reported mixed results or no statistically significant results.

Adherence to social marketing benchmarks

We assessed how well studies adhered to the core characteristics of social marketing by investigating frequencies of benchmark criteria (Table 6). Only three studies met all 18 benchmark criteria: two described a condom campaign in urban Pakistan, and one described the social marketing of iron-fortified soy sauce in China (Sun *et al.* 2007; Agha and Meekers 2010; Agha and Beaudoin 2012). The most common benchmark criteria were behaviour, customer

Table 4. Behavioural factor results by study design and direction and statistical significance of results

	Positive results		Mixed results		No significant results		Total
	Experimental	Quasi-experimental	Experimental	Quasi-experimental	Experimental	Quasi-experimental	
HIV	0	6	1	16	0	3	26
RH	0	5	1	19	0	3	28
Child survival	0	2	4	14	1	2	23
Malaria	0	4	1	6	0	4	15
TB	0	1	0	0	0	0	1
Total	0	18	7	55	1	12	80 ^a

^aThirteen studies reported results across multiple health areas. Total reflects the number of unique studies reporting behavioural factor results.

Table 5. Results of studies meeting six or more benchmark criteria by study design, direction, and statistical significance of results

Health results							
	Positive results		Mixed results		No significant results		Total
	Experimental	Quasi-experimental	Experimental	Quasi-experimental	Experimental	Quasi-experimental	
HIV	0	1	0	0	0	0	1
RH	0	0	0	0	0	0	0
Child survival	0	0	0	2	0	0	2
Malaria	0	0	0	0	0	1	1
TB	0	0	0	0	0	1	0
Total	0	1	0	2	0	2	5
Behavioural results							
	Positive results		Mixed results		No significant results		Total
	Experimental	Quasi-experimental	Experimental	Quasi-experimental	Experimental	Quasi-experimental	
HIV	0	3	0	3	0	0	6
RH	0	2	0	2	0	2	6
Child survival	2	2	1	1	0	2	6
Malaria	0	1	0	2	0	0	3
TB	0	0	0	1	0	0	1
Total	2	8	1	9	0	2	21 ^a

^aTwo studies reported behavioural results for both reproductive health and child survival. Total reflects the number of unique studies.

Table 6. Adherence to social marketing benchmark criteria

Social marketing benchmark criteria	Total % (<i>n</i> = 125)	Health outcomes % (<i>n</i> = 42)	Behaviour outcomes % (<i>n</i> = 97)	Behavioural factor outcomes % (<i>n</i> = 81)
1. Behaviour	81	79	88	75
2. Customer orientation	63	55	65	70
3. Theory	22	14	23	31
4. Insight	56	40	58	62
5. Exchange	43	40	44	41
6. Competition	26	19	29	27
7. Segmentation	42	38	41	43
8. Methods mix	84	93	84	80

orientation, and methods mix. This suggests that most social marketing programmes directly targeted behaviour change to a specific audience of interest, using a range of communications channels to do so. Relatively few studies were coded for competition, defined as addressing 'direct and external factors that compete for the audience's time and attention' and attempting to decrease such competition. This may be because it is a more challenging concept to operationalize. Theory was the least commonly coded criterion, somewhat surprisingly, given that large number of studies focused on behaviour. These trends held across all outcome types. Frequencies of coded benchmark criteria were generally lower for studies reporting health outcomes. Of the studies that met six or more benchmark criteria, the most common criteria were customer orientation and insight (reported by all 26 studies), method mix and behaviour (by 25 studies each), segmentation (by 23 studies) and exchange (by 21 studies).

When we stratified studies by their categorization as having positive versus mixed results, social marketing characteristics of audience insight and exchange, i.e. addressing the costs and benefits of behaviour change, were more frequent in studies with exclusively statistically significant and positive effects than in those studies with mixed effects (insight: 80% of positive studies vs 49% mixed; exchange: 60% positive vs 39% mixed). The characteristics of competition, method mix, and audience segmentation were also found in higher frequencies in studies with positive effects than in studies with mixed results, while audience segmentation was in 42% of studies with positive results and 42% of studies with mixed results. These findings suggest that social marketing programmes designed with a deeper understanding of the target audience's motivations and fears were better equipped to influence that audience. For example, a diarrhoea-prevention social marketing programme in Thailand found through quantitative and qualitative research that cleanliness was associated with spirituality and then capitalized on this in their messaging. The evaluation found statistically significant increases in proper hand washing, dish washing, reduced fecal fingertip contamination and reduced incidence of diarrhoea (Pinfold and Horan 1996). Effective programmes also weighed costs and benefits of changing behaviour to offer appealing incentives and rewards to their target audience. Kang *et al.* (2013) evaluated a social marketing intervention designed to reduce HIV risk and improve treatment adherence among female sex workers in China (Kang *et al.* 2013). This programme aimed to reduce social barriers to HIV prevention and treatment for female sex workers through anti-stigma workshops and policy advocacy as well as increased availability and accessibility of condoms. Benefits of seeking and adhering to treatment were maximized for people living with HIV through enhanced coordination of care, including psychosocial and nutritional support, and poverty alleviation. This evaluation found statistically significant improvements in HIV knowledge and increases in condom use and receipt of HIV-related services.

We identified several evidence gaps in this review, by assessing health areas where we found less than two studies that met our inclusion criteria. In child survival, we found no studies that specifically addressed treatment of pneumonia, such as through provision of antibiotics, or socially marketing of vaccination for childhood illnesses. Within HIV, we found no studies addressing voluntary medical male circumcision, while in reproductive health we found no studies that addressed the social marketing of products for safe abortion or post-abortion care and only one study that addressed emergency contraception.

Discussion

We aimed to assess the effectiveness of social marketing for achieving changes in health status and health behaviour in major areas of global health investment. We found evidence of the effectiveness of social marketing in global health in both health and behavioural outcomes as well as behavioural factors. Of the 125 studies meeting our inclusion criteria, roughly one-third reported on measurable health outcomes, while the bulk of the evidence assessed behavioural outcomes (*n* = 97) or behavioural factors (*n* = 81). Almost one-half of studies reported positive, statistically significant results. Effective studies acted upon audience insights and used a cost-benefit analysis to maximize incentives and increase likelihood of behaviour change. Few studies were coded as applying theories of behaviour change, suggesting some social marketing interventions included in this review did not have clear pathways to change and possibly that social marketers may need support in applying behavioural theories in intervention design.

HIV

Much of the evidence on the effectiveness of social marketing was concentrated in HIV/AIDS, with 45 included studies. Most of these studies focused on the ability of social marketing interventions to influence condom use and other sexual behaviours. Many interventions used peer educators to disseminate HIV education and promote condoms. Studies focused on several populations including youth, female sex workers (FSW), men who have sex with men (MSM), truck drivers, migrant workers and people who inject drugs. However, only three studies considered how social marketing could influence HIV outcomes via safe injecting behaviour (Hammett *et al.* 2006, 2012; Wu *et al.* 2007). Relatively few studies addressed HIV testing behaviours (Gutierrez *et al.* 2010; Boily *et al.* 2013; Kang *et al.* 2013; Pawa *et al.* 2013). Despite being the health area with the greatest evidence base, only a small number of experimental studies were identified.

The vast majority of HIV studies were categorized as having mixed results. This may have contributed to previous reviews questioning the effectiveness of social marketing and the quality of social

marketing evaluations (Pawa *et al.* 2013). However when considering the overall impact of social marketing interventions, many of those studies defined as ‘mixed’ had results that were mostly statistically significant and positive across outcome types. For example, in their evaluation of the Frontiers Prevention Project, which aimed to reduce STIs among men who have sex with men and female sex workers in India, Gutierrez *et al.* (2010) reported statistically significant decreases in prevalence of syphilis in both MSM and FSW, as well as herpes simplex virus type 2 (HSV-2) in FSW (Gutierrez *et al.* 2010). However, decreases found in HSV-2 among MSM were not statistically significant. Similarly, both male and female participants in the condom social marketing programme 100% *Jeune* in Cameroon had statistically significant increases from baseline to follow-up in ever use of condoms, use of condoms during last sex with regular and casual partners, and consistent use of condoms with casual partners (Meekers *et al.* 2005). Increases in consistent use of condoms with regular partners were only statistically significant among female participants. We categorized these studies as having mixed results for health and behavioural outcomes, respectively, although in both cases all results reported were positive, and only one of those results in each study was found not to be statistically significant.

Reproductive health

Slightly less than one-third of included studies reported on reproductive health outcomes. Several HIV and reproductive health studies overlapped (Meekers 2000; Vaughn *et al.* 2000; Babalola *et al.* 2001a; Meekers *et al.* 2005; Kim *et al.* 2006; Plautz and Meekers 2007; Van Rossem and Meekers 2007; Doyle *et al.* 2011). These studies largely targeted adolescents with sexual and reproductive health education and promoted condoms as a means for contraception and HIV prevention. Many reproductive health studies focused on iron-folic acid supplementation to reduce and prevent iron-deficiency anaemia in women of reproductive age. Supplements were distributed for free or sold in stores. One study examined the impact of socially marketed iron-fortified wheat flour (Baizhumanova *et al.* 2010). Others looked at social franchising of reproductive health services, where providers received technical training such as on IUD insertion (Agha *et al.* 2007a; Decker and Montagu 2007; Ngo *et al.* 2010; Qureshi 2010; Shah *et al.* 2011; Huntington *et al.* 2012; Azmat *et al.* 2013). Branded logos and multiple media outlets were used to promote antenatal care and contraceptive services in franchise clinics. A few interventions involved training and deployment of community health workers to generate demand for and promote family planning services.

TB

With the smallest body of evidence, all three TB studies assessed case identification interventions. Each intervention used different methods including training of community health workers in TB outreach, education and diagnosis (Shargie *et al.* 2006); improved services through franchise clinics (Lönnroth *et al.* 2007); and promotion of screening through television and radio public service announcements (Jaramillo 2001).

Child survival

With a smaller number of studies overall, child survival was the health area reporting the greatest proportion of exclusively statistically significant and positive results for all outcome types. Child survival studies also included a proportionately greater number of experimental studies and studies reporting health outcomes. Six

child survival and reproductive health studies overlapped (Warnick *et al.* 2004; Kanal *et al.* 2005; Khan *et al.* 2005; Baizhumanova *et al.* 2010; Angeles-Agdeppa *et al.* 2011; Hotz *et al.* 2012). These six studies each focused on either iron-folic acid or vitamin supplementation for women of reproductive age, pregnant women, and/or children. Many of the included studies focused on educating caregivers on child health care or nutritional practices. For example, Havemann *et al.* (2013) examined the impact of a community nutrition programme that, among other methods, trained caregivers in organic farming to prevent undernutrition and stunting in children (Havemann *et al.* 2013). Some interventions directly targeted children with hand washing education and distribution of water treatment products in schools to prevent diarrhoeal diseases (Pinfold 1999; Curtis *et al.* 2001; O’Reilly *et al.* 2008; Blanton *et al.* 2010; Patel *et al.* 2012).

Malaria

Malaria studies examined interventions that sold or distributed insecticide-treated nets and promoted their correct use through community dramas, text messages, music videos and community health volunteers. Several studies promoted other malaria prevention products such as DEET and insecticidal soap. Fewer studies analysed the impact of malaria treatment interventions, such as accredited drug dispensary outlets offering artemisinin-combination therapy (Alba *et al.* 2010). One study on community case management also reported child survival outcomes as it focused on treatment of both malaria and diarrhoea (Littrell *et al.* 2013).

Evidence gaps

Although substantial evidence was found in the effectiveness of social marketing in global health, we identified evidence gaps in each health area. Male circumcision has been shown to be effective in decreasing risk of HIV acquisition (Siegfried *et al.* 2009; Perera *et al.* 2010). This evidence has led to a programmatic scale-up of voluntary medical male circumcision (VMMC) in eastern and southern Africa by USAID, the Bill & Melinda Gates Foundation, WHO, UNICEF and others, many of which programmes utilize social marketing to promote VMMC (USAID 2011). However, no evaluations assessing the effectiveness of social marketing in VMMC were identified in this review. We found three studies addressing the social marketing of tuberculosis case identification, but the evidence base in this area is still quite limited.

Due to legal limitations and political sensitivities, social marketing of medication abortion has not been implemented on as large of a scale as other reproductive health products and services (Winikoff and Sheldon 2012). However, non-governmental organizations have used social marketing to engage providers and women in access to abortion and post-abortion care in several countries. Despite this, we did not find any evidence on the effectiveness of social marketing of abortion products and services. Further, we only found one study examining social marketing of emergency contraception.

In the area of child survival, we did not find evaluations assessing child immunization interventions. Specifically, while many interventions evaluated diarrhoea prevention programs, none evaluated social marketing of rotavirus vaccines. WHO recommended scale-up of rotavirus vaccines in 2009, and programmes have since been introduced in 26 countries in sub-Saharan Africa (Mwenda *et al.* 2014). It is unclear as to whether social marketing techniques have been used to promote rotavirus vaccination. Additionally, no studies examined pneumonia prevention and treatment through social marketing. Pneumonia accounts for 4% of neonatal deaths and 14% of

deaths in children under the age of 5 (WHO/UNICEF 2013). From this review, we cannot determine whether pneumonia has not been addressed by social marketing, or if there is a gap in evaluations of existing programs.

Limitations

This review has several limitations. Studies were limited to those that labeled the assessed intervention as social marketing or social franchising. As such, we were not able to locate studies that did not self-identify as social marketing, despite potentially qualifying based on intervention design (Evans *et al.* 2014). Despite this limitation, we may also have inadvertently included studies that might be better classified as health promotion due to definitional challenges in identifying social marketing interventions. Additionally, we did not fully specify types of populations that were of interest, and we did not include grey literature, despite the likelihood of many relevant evaluations being found in the grey literature.

Our inclusion criteria included a broad range of study designs, several of which may not have been included in other review methodologies using more stringent criteria. The intent of our criteria was to identify a full range of evaluations with some degree of rigour. Other reviews have already identified the variable quality of social marketing evaluations, but for practitioners and policy-makers, a compilation of evaluations of moderate to high quality may be more valuable than relying on the highest standards of evidence, when this evidence is in short supply and not always feasible to procure (Shelton 2014). We excluded strictly observational studies.

We suspect that publication bias may have influenced the extent of positive and mixed results reported on in this review, but we did not systematically assess this. Nevertheless, we found 16 studies that reported at least one negative result. Given the range of outcomes considered in this review, we were not able to conduct a meta-analysis to provide a quantitative summary of trends.

It is possible that identified social marketing interventions were misclassified on the social marketing benchmark criteria due to minimal programme documentation included in published papers. Too often, authors focused on details of evaluation design and implementation, giving little focus to how the intervention being evaluated was designed and carried out. If social marketing interventions are evaluated to determine possibilities for scale-up and replication, greater detail on intervention design needs to be included in the peer-reviewed literature, following more detailed reporting guidelines (Quinn *et al.* 2010). This is especially critical for addressing risks of mis-classification between social marketing and other related intervention strategies.

Policy implications

When we looked at the frequency of included studies by health area, HIV stands out for the numbers of included studies. Other reviews and meta-analyses have investigated the role of social marketing in HIV prevention in low and middle-income countries previously and found the results to be mixed (Bertrand *et al.* 2006; Noar *et al.* 2009; Sweat *et al.* 2012; Evans *et al.* 2014). Our results coincide with these findings, but we were able to compare HIV-related studies to those in other areas of global health investment to assess how evaluations of social marketing are distributed across health and disease areas.

We suspect that funding trends in development assistance for health explain some of how included studies were distributed by health area. Analysis of funding trends indicates that HIV has been the predominant area for global health investment for more than a

decade. Maternal, newborn and child health received the second largest share of recent development assistance in analyses up to 2010 (Ravishankar *et al.* 2009; Murray *et al.* 2011). Further, HIV prevention leads in share of development assistance for women of reproductive age, with family planning receiving a smaller share (Hsu *et al.* 2013). Assessed according to disease burden, \$330 was spent per HIV-related disability-adjusted life-year (DALY over the 2006-2010 period), while only about \$75 was spent per malaria- and TB-related DALY (Hanlon *et al.* 2014).

We cannot determine from this review whether an evidence base on the effectiveness of social marketing follows funding trends, or if the relationship goes in the other direction. However, these findings suggest that multi-lateral and bilateral donors can certainly influence this evidence base. The potential for development assistance to invest in filling evaluation gaps has been well documented, including specific actions to be taken to ensure that budgets and timelines are structured to ensure that rigorous evidence of development effectiveness can be generated (Savedoff *et al.* 2006).

Specifically for social marketing, this will require investments in strengthening evaluation quality. Only a fraction of included studies in this review used experimental designs. Strengthening the quality of evidence requires investment in rigorous evaluation designs that will meet the expectations of a range of stakeholders, from those who make decisions solely based on randomized trials to those who will consider a range of methodologies calibrated to context (Shelton 2014; Finkelstein and Taubman 2015; Hatt *et al.* 2015). A key part of investing in improving evaluation quality will be in ensuring that rigorous documentation of intervention strategies and processes is included in any social marketing evaluation (Quinn *et al.* 2010). The challenge of disentangling social marketing from other potentially effective intervention strategies such as social and behaviour change communications will continue to hamper the field of social marketing unless social marketers and their evaluators invest in documenting more explicitly how these interventions apply social marketing principles.

Another key need is to expand the evidence base on the effects of social marketing for improving health outcomes. Less than half of the studies included in this review addressed measures of morbidity, mortality or fertility. These outcomes can frequently be modelled, but models are always improved by greater access to empirical evidence, while the empirical evidence itself contributes to improving exercises in evidence synthesis (Longfield *et al.* 2013).

We have identified specific evidence gaps where direct evaluation investments are needed to assess the effectiveness of social marketing. These areas included childhood pneumonia, voluntary medical male circumcision, medication abortion and post-abortion care and emergency contraception. Further evaluations of the social marketing of tuberculosis treatment services are sorely needed as well. Although social marketing will certainly not be an appropriate intervention strategy in all cases, its effectiveness cannot be known until programmes currently in operation are evaluated. Better evidence is needed as well to isolate highly effective programmatic components that are scalable.

Although this review has illuminated further evidence needs, it also suggests that a sizeable evidence base exists now on whether social marketing can change behaviours and influence health outcomes in low- and middle-income countries. Assessing the content and strategy of the social marketing interventions evaluated in this review indicated that most did focus on changing specific behaviours—and not just on raising awareness, while they used a range of strategies to reach their target audiences. Audience insight and exchange were specific characteristics of programmes with positive,

statistically significant results. Many of the interventions included in the review were already operating at scale. These findings improve our understanding of how to ensure that social marketing programmes can achieve measurable improvements in the lives of the people they seek to reach. As such, they provide a basis for investments to replicate and further scale effective social marketing.

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