

The Side-Effects of Targeted Health Interventions

A Systematic Approach to Analysing the Systemic Impacts of Social Marketing for HIV Prevention

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Executive Summary

The fight against HIV/AIDS is an exceptionally important component and the single largest disease-specific area supported by the German Financial Cooperation (FC). Nearly one third (EUR 429 million) of the total health portfolio is allocated to HIV, most of which is of preventive nature and uses the instrument of social marketing of condoms. Such preventive health interventions have received extensive scrutiny in recent years, and more light has been shed on the side-effects which arise apart from their primary purpose of, for example, preventing HIV/AIDS through increased condom use. The existence of side-effects of health interventions is also recognised by the German Development Co-operation (GDC) – in policy documents and guidelines alike. In fact, the GDC makes clear a commitment to avoiding health system disruption and to promoting synergies in the field of HIV/AIDS. Yet despite continuing improvement and adjustment, the lack of systematic examination of project side-effects impedes further progress.

This background paper explores how health interventions' side-effects may affect the wider health systems of host countries, focusing on the case of HIV prevention projects that use the social marketing of condoms as an instrument. The enquiry is guided by an analytical framework that focuses on health system functions such as governance, health workforce, or demand generation as critical interfaces between the intervention and the broader country health system. With the health system incorporating "all organizations, people and actions whose primary intent is to promote, restore or maintain health" (WHO, 2007:2), side-effects from health interventions may positively or adversely affect actors, processes, or resources along these interfaces. For our analysis, we draw on examples from previous studies and other health interventions as well as past and current FC-supported projects in the area of HIV prevention.

The paper outlines a three-step procedure to identify and act on side-effects in HIV prevention projects using social marketing. Acknowledging differences across projects and project types, the first step consists of identifying the most critical interfaces between intervention and health system in order to prioritise activities. Social marketing projects arguably interact most strongly with health systems on the levels of service delivery (e.g. provision of health products), demand generation (e.g. demand for condoms and other health products), governance (e.g. mobilisation of new actors in the health system), and logistics and supply management (e.g. establishment of new distribution channels). Each of these interfaces deserves scrutiny as to how the project may generate synergies or interfere with other health system actors, which is the subject of the second step. Reviewing whether and how these side-effects have emerged in the past, a broad range of seized synergies and averted interferences among FC projects unfolds. While the analysis of potential side-effects remains specific to the respective project, these antecedents can support the enquiry. The last step of the procedure is concerned with the articulation of “packages of action” to respond to project-specific challenges, and we present a selection of such measures based on past projects and experiences from other contexts. Despite project heterogeneity, we argue for the applicability of the analytical approach to individual HIV prevention projects using the social marketing of condoms, but also for the transferability to other targeted health interventions such as integrated HIV-tuberculosis or malaria eradication projects.

Aside from project design considerations, we further explore avenues for monitoring and evaluating system-wide side-effects in HIV interventions using social marketing. To facilitate project monitoring, the paper develops a selection of input, process, and output indicators which can serve as early warning indicators for interferences or synergies in these projects. Analogous to project design, their use depends on project specifics and requires the prior identification of critical interfaces and likely side-effects. More elaborate statistical techniques could provide further insights into system-wide outcomes and impacts of targeted interventions. In five steps – from identifying important interfaces and health system outcomes via gathering historical operational programme information to performing statistical analysis and interpreting the results – household and project data can be combined to statistically evaluate system-wide impacts. We illustrate how such a process could be applied to the social marketing of condoms for HIV prevention in order to stimulate programme evaluation research for these and other FC-supported health interventions.

The principal points of this paper are that (1) the side-effects of targeted health programmes can promote or interfere with health system development, (2) these (potential) effects deserve more systematic attention in order to be acted upon, (3) existing frameworks can be a useful guide through this process, (4) indicators are available to track health system effects, and (5) there is scope for cost-effective impact evaluations by drawing on secondary data. These findings and methods can be developed further in order to reinforce the existing awareness of and responsiveness to system-wide side-effects in targeted health interventions within the GDC. Subject to feasibility, desirability, and workload, this paper could feed into project appraisal, monitoring, and evaluation practices. But possible adjustments are not solely of operational nature. We conclude this paper by arguing for an enabling environment in which targeted health programmes are considered holistically in policies and guidelines. This does not only include the further development of aid policies, but also extends to a culture of “systemic thinking” in which judgements about aid effectiveness do not remain confined to primary project outcomes.

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
DHS	Demographic and Health Survey
FC	Financial Cooperation
GDC	German Development Cooperation
GHI	Global Health Initiative
HCT	HIV Counselling and Testing
HIS	Health Information Systems
HIV	Human Immunodeficiency Virus
IEC	Information, Education, and Communication
NGO	Non-governmental Organisation
PEI	Polio Eradication Initiative
PSI	Population Services International
SMA	Social Marketing Agency
SRHR	Sexual and Reproductive Health and Rights
STI	Sexually Transmitted Infection
SWAp	Sector-wide Approach
TB	Tuberculosis
TC	Technical Cooperation
TMA	Total Market Approach
TRaC	Tracking Results Continuously
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WHO MPSCG	World Health Organization Maximizing Positive Synergies Collaborative Group

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1. Introduction

Aside from their primary purpose, health interventions for specific conditions such as HIV/AIDS can affect the health systems in which they operate. This is widely acknowledged among policy makers and analysts, but there is disagreement whether such intended and unintended side-effects are to the benefit or detriment of health systems, and what can and should be done about it (see Box 1 for the genesis of this debate). **This background paper is to discuss such systemic implications in the case of HIV/AIDS prevention projects of the German Financial Cooperation (FC), to highlight how the FC has seized synergies and responded to interferences in the past, and to suggest avenues for further improvement of appraisal, monitoring, and evaluation processes.** HIV/AIDS is an exceptionally important component and the single largest disease-specific area supported by the FC. Germany is involved in the fight against HIV/AIDS through multilateral cooperation by supporting the *Global Fund to Fight AIDS, Tuberculosis and Malaria*, the *World Health Organization (WHO)*, and *UNAIDS* as well as in bilateral cooperation via interventions implemented by the German Technical Cooperation (TC) and Financial Cooperation. As of March 2012, the HIV/AIDS portfolio of the German FC comprised 28 projects with a total volume of EUR 429 million (covering 47 individual project phases and supporting activities, mostly with a preventive approach to combating HIV). This corresponds to 30 per cent of the total FC health sector support (EUR 1.4 billion). **The great majority of these projects make use of social marketing for HIV prevention.** This involves two components: the distribution of condoms (and other health products) through private sector channels and the use of target group-specific behaviour change communication to create demand for condoms.

Box 1: Debates About Vertical and Horizontal Programmes Have Become More Constructive Over Time

Debates about the relationship between targeted health interventions and country health systems are rooted in a traditional divide over horizontal and vertical approaches to healthcare delivery. Back in the 1950s, the *WHO* acknowledged that developing countries may follow an approach to healthcare that includes selective mass campaigns ("vertical" approaches), yet that these needed to be succeeded by more sustainable health system strengthening approaches ("horizontal" approaches; Gonzales, 1965; WHO, 1975). In the 1978 *WHO/UNICEF* declaration in Alma Ata and its immediate aftermath, this divide was reinstated as "primary healthcare" versus "selective primary healthcare" (Newell, 1988). However, as maintained by Anne Mills (2005) – a prominent researcher of health systems – nearly 50 years of debate have not yielded notable advancement in the knowledge about vertical and horizontal approaches. Despite such pessimistic claims, recent progress has been made in the study of global health initiatives such as the *Global Fund to Fight AIDS, Tuberculosis and Malaria* or the *Global Polio Eradication Initiative*, which share certain features such as their characteristic integration into and interaction with country health systems. This has brought health system effects in targeted interventions to the fore again – the "vertical-horizontal" argument has thus increasingly shifted from fundamental debates about the most promising mode of healthcare delivery to more constructive discussions about the merits and perils of targeted health interventions and their system-wide effects.

In this paper, we analyse the side-effects of such targeted health interventions as they may foster as well as interfere with health system development. These **national health systems comprise "all organizations, people and actions whose primary intent is to promote, restore or maintain health"** (i.e. the "comprehensive health system"), according to a widely used definition by the *WHO* (WHO, 2007:2). Government health facilities and staff are only part of such a wider system as it also embraces non-state actors including private and faith-based organisations. This broad understanding of health systems is an important basis for the analysis presented in this paper. On the one hand, **HIV prevention and other targeted health interventions need not solely rely on the public sector** to deliver their services. On the other hand, the **side-effects of targeted interventions**

(detailed in subsequent chapters) **may affect private health providers and their activities as well as government health services.** The private sector approach of the social marketing of condoms therefore resonates well with the broad understanding of health system.

HIV/AIDS programmes have been the dominant area of research on system-wide consequences. Initial critique concerned adverse effects on national health systems due to an excessive disease-specific focus and the use of specialised inputs including dedicated HIV laboratories. International health policy had started to adapt to such lessons, but the status of HIV/AIDS has subsequently changed from an international health emergency to a chronic disease with standardised treatment, which led to a relaxation of concerns about negative interferences with health systems. However, recent studies on the system-wide effects of HIV/AIDS programmes, polio eradication, and other interventions have shown that **standardised approaches to specific health conditions can affect country health systems as well**. These studies mainly concentrate on global health initiatives such as the *Global Fund to Fight AIDS, Tuberculosis and Malaria*. HIV prevention projects implemented by German FC differ significantly from these initiatives in terms of financing volume, scope, and their strong focus on the private sector: A *Global Fund*-financed HIV treatment project implemented through government health facilities relates differently to a health system than HIV prevention through social marketing, which is usually carried out in cooperation with the private sector in order to better utilise health service delivery capacity. As a result, these various interventions affect the comprehensive health system in distinct ways, but they can still be **classified as targeted health programmes and be analysed through a common lens**. The application of this lens to the social marketing of condoms reveals possible effects on the broader health system, including both state and non-state health providers.

It is worth keeping in mind that **FC HIV prevention projects using social marketing are not designed to transform health systems**. The German FC finances these projects among a **broader landscape** of HIV prevention and other health projects as well as health system strengthening interventions (which may be supported by the FC, TC, or other donors). Nevertheless, **interferences and synergies between intervention and health system ought to be expected, and the FC has demonstrated in the past that means exist to address these system-wide effects**. Based on existing evidence, we derive an analytical framework to examine these potential effects and possible responses. We draw on the latest reviews of system-wide effects in health programmes, which cover more than 300 individual studies and evaluations (primarily concerned with HIV/AIDS interventions). This was complemented by 31 analyses and evaluation studies of global polio eradication activities – an area which has received much attention in terms of system-wide health service delivery impacts (Marchal et al., 2011) and in which recent studies have used secondary data to assess health system impacts.¹ We therefore propose that **the existing evidence from targeted health interventions can offer a guideline for the systematic analysis of system-wide side-effects in HIV prevention and other health projects** (see Chapter 2 for details).

The analysis of HIV/AIDS projects of the German FC requires a preliminary assessment whether health system impacts of HIV/AIDS projects are already taken into account by policy makers and practitioners. Chapter 3 thus **compares the present knowledge on system-wide effects, its adoption in German aid policy, and the implementation thereof in HIV/AIDS-related projects**. To this end, we reviewed **sector policies and guidelines** as well as a sample of **the current portfolio and already concluded HIV/AIDS-related projects** of the German FC.² These analyses reveal that there is **awareness about the systemic implications** of targeted health interventions in GDC policy and practice. Some of

¹ Note that polio is but one example among numerous other diseases such as measles or malaria.

² After an initial screening of 223 FC project documents, a sample of 71 appraisal, monitoring, and evaluation reports entered the analysis, covering all types of HIV/AIDS projects financed by the FC.

the latest developments include the “**linking**” of HIV prevention with reproductive health and rights approaches or their **integration** with tuberculosis treatment programmes. Even if the current portfolio of projects cannot yet fully reflect the most recent policy developments, it becomes clear that policy and practice have evolved side-by-side. However, despite the remarkable progress so far, there is scope to **provide more structure to the consideration of health system effects in future HIV/AIDS interventions**. In addition, the analysis in this paper will show that **other measures to respond to anticipated side-effects exist** aside from the linking and integration of HIV prevention with other health programmes.

Drawing on the general framework of Chapter 2, we **offer a procedure for such an analysis with application to the social marketing of condoms** as a preventive HIV intervention. These projects can have **potential side-effects** on the wider health system of recipient countries, for example through the inclusion of the private sector and civil society organisations in political decision-making (a “synergy”) or costly duplication of health service delivery structures (an “interference”). **Solutions to potential interferences and synergies between intervention and health system can be developed**, and a selection – for example supporting the legal recognition of non-state social marketing agents – is outlined in Chapter 4. We also argue for the **transferability of the analytical approach to other health interventions** such as integrated HIV-tuberculosis projects. The analysis presented here could therefore serve as a **simple scheme to appraise and respond** to systemic side-effects alongside existing assessments of primary effects of an intervention during its design stage.

Further scope for advancement rests with the **monitoring and evaluation** of system-wide effects of HIV/AIDS interventions. Whereas many policy advocates in the past have promoted the proliferation of monitoring indicators to track health system effects, little prior work in this regard exists. Drawing on existing practice and guideline documents, we compile a **preliminary list of indicators** (tailored to the social marketing of condoms for HIV prevention) as another **step towards agreed health system indicators** in Chapter 5. Also the lack of agreed methods to evaluate the health system impacts of HIV/AIDS and other targeted interventions has been criticised (WHO MPSCG, 2009). Recent analyses in the field of polio eradication have utilised **secondary data** in order to provide insights into nature, magnitude, and direction of such impacts (e.g. Haenssgen, 2012). We illustrate how such a process could be **applied to condom social marketing for HIV prevention** in order to stimulate programme evaluation research for these and other FC-supported health interventions.

The points raised in this paper – that the side-effects of targeted health programmes can **promote or interfere with health system development**, that these (potential) effects **deserve more systematic attention** in order to be acted upon, that existing **frameworks can be a useful guide through this process**, that **indicators are available** to track health system effects, and that there is **scope for cost-effective impact evaluations** by drawing on secondary data – have implications for the appreciation of health system effects in the GDC. In the concluding Chapter 6, we deliberate how these insights could be developed further.

2. System-Wide Effects of Health Interventions: Current State of Knowledge

We aim to develop and apply a guideline for analysing the side-effects of HIV prevention programmes in this paper. Our framework is derived from existing evidence, which is summarised in this chapter. This evidence represents the “current knowledge” of targeted health interventions and covers not only existing frameworks for health system analysis but also reviews of health system impacts and recommended responses.

Table 1: Health System Framework

Health System Function (“Interfaces”)	Areas of Interaction (Examples)
Governance	<ul style="list-style-type: none"> Participation of non-state health actors and their mandates Accountability of health system actors
Financing	<ul style="list-style-type: none"> Sources of health financing Performance of budgeting processes
Planning	<ul style="list-style-type: none"> Priority-setting Resource allocation
Health Information Systems and Monitoring	<ul style="list-style-type: none"> Information technology infrastructure Data collection and analysis
Health Workforce	<ul style="list-style-type: none"> Workload of health workers Health worker availability and turnover Training
Logistics and Supply Management	<ul style="list-style-type: none"> Availability of inputs Performance of distribution channels
Service Delivery	<ul style="list-style-type: none"> Health service portfolio Mechanisms of service provision
Demand Generation	<ul style="list-style-type: none"> Health knowledge Recipients’ ability to use services Purchasing power

Sources: Adapted from Atun et al. (2010) and WHO MPSCG (2009).

Although some targeted health interventions such as social marketing of condoms for HIV prevention may operate in the private sector, this never occurs in isolation from the comprehensive health system. The link between the project and public and other private health providers leads to interactions which can materialise as intended or unintended “side-effects.” **Frameworks** have been proposed to structure the analysis of such interactions, including the recent studies of WHO MPSCG (2009) and Atun and colleagues (2010). We have combined elements of these frameworks to enable an encompassing analysis in later parts of this paper. In accordance with the broad interpretation of country health systems, at least **eight** critical health system functions – or **interfaces** between intervention and system – can be affected by intervening

programmes (see Table 1): the **governance** of the health sector (e.g. participation and mandates of actors), **health financing** (e.g. sources, processes, and uses of national health expenditures), **planning processes** (e.g. prioritisation and resource allocation), **health information systems and monitoring** (e.g. health data collection and analysis), **health workforce** (e.g. availability, workload, and training), **logistics and supply management** (e.g. availability of inputs and performance of distribution channels), **service delivery** (e.g. health service portfolio and vehicles of service provision), and **recipient demand** (e.g. health knowledge, ability to use services, and recipients’ purchasing power).

Interactions along these interfaces can entail both positive (synergies) and negative effects (interferences) onto the wider health system (see Box 2 for a summary and Chapter 4 for an analysis). **Negative health system impacts** are “increasingly recognised” by global and local actors (Marchal et al., 2009). Travis and colleagues (2004) argue that “parallel” or targeted health interventions risk **duplicating, distorting, disrupting, and distracting** health systems. Examples from HIV/AIDS analyses abound and include the overburdening of the state and non-state health workforce with HIV/AIDS-specific tasks or the distortion of national policies through the disease-specific focus and financing volume of HIV/AIDS-related global health initiatives (e.g. *the President’s Emergency Plan for AIDS Relief*, or *PEPFAR*; Biesma et al., 2009). However, meta-analyses also acknowledge that international

actors have undergone a **learning process** that has helped reduce disruptive side-effects of targeted health interventions, for instance through alignment with country health priorities (WHO MPSCG, 2009). At the same time, targeted interventions may also generate **synergies** with country health systems. A review by the WHO (covering 236 individual studies), for instance, cites positive effects from HIV/AIDS-related global health initiatives to include quality improvements in service delivery through the transfer of “international best practice” or improved health worker retention in rural areas through infrastructure investments and more attractive incentive packages (WHO MPSCG, 2009).

Despite a wealth of studies, analysts criticise the **dearth of systematic evidence** on the health system effects of targeted health interventions (e.g. Biesma et al., 2009). Most research and evaluation studies rely on qualitative or anecdotal evidence, which makes it difficult to ascertain the representativeness of their claims. But also quantitative analyses often fail to provide robust results. Our review of 31 studies in the field of polio eradication shows that quantitative evidence typically lacks the analytical depth that is required to link health system outcomes to a specific intervention. For instance, analyses of national routine immunisation coverage trends – used as “disruption” indicators for polio eradication campaigns – fail to account for other confounding effects such as coinciding improvements in education and wealth levels of recipients (see Aylward et al., 1997). Even if these and other determinants of routine immunisation uptake are taken into account, before-and-after analyses still cannot separate systemic impacts of targeted health interventions from other developments in the health system such as decentralisation reforms (see Bonu et al., 2003, 2004). Similarly, national-level analyses have failed to account for locally varying responses to targeted interventions (see Gauri and Khaleghian, 2002). A recent micro-level analysis of the polio eradication initiative in Uttar Pradesh, India, attempted to overcome such methodological problems by substantiating qualitative evidence with the statistical analysis of secondary household survey data (see Box 3). Chapter 5 discusses how this analytical procedure could be transferred to the evaluation of HIV/AIDS projects, using the example of the social marketing of condoms.

The current knowledge contained in the reviews of HIV/AIDS and other targeted health interventions can be summarised in five stylised facts. First, because synergies and interferences coexist and vary among interventions and local contexts, there can be **no clear overarching statement** as to whether

Box 2: GHIs Have Mixed Impacts On Country Health Systems – A Selection of Effects

Governance

- Enhanced the participation of non-governmental, civil society, and faith-based organisations in health service planning and provision
- Helped to build capacity outside state sector and improved community participation in public health governance

Financing

- Inconclusive evidence on the link between GHI funding and changes in domestic public sector health spending
- Disease-specific funding might not be sufficiently aligned with country priorities or burden of disease

Health Information Systems

- Have not improved availability and accuracy of good-quality health information for interventions other than their own
- Contributed to innovation in health information technology

Health Workforce

- Scale-up of disease-specific efforts increased burden on existing health workers and can draw them from private to public sector (and vice versa)
- Contributed to improving health worker retention through incentives (e.g. salary or housing support)

Supply Management Systems

- Occasionally duplicated / displaced supply chains
- Contributed to quality improvements of some commodities

Service Delivery

- Positive as well as negative effects on access and uptake of non-targeted health services
- Positive effects and mitigation of potential negative health system effects of GHIs likely if it is explicitly planned

Source: Adapted from WHO (2009, Panel 2).

targeted interventions undermine or support health systems. Second, rather than being perceived as inevitable, health system outcomes can (and should) be **actively managed**. Third, **institutional learning processes** among international and local actors mitigate negative effects over time. Fourth, it is not always clear whether the introduction of a targeted intervention **causes, or merely reveals, health system weaknesses**. Fifth, and finally, the understanding of system-wide effects of HIV/AIDS and other interventions suffers from a **weak evidence base**.

Box 3: Polio Eradication in Uttar Pradesh (India) Affects Routine Immunisation Service Delivery

India committed to eradicating polio in 1994 through the *Polio Eradication Initiative (PEI)*, which was established as a **vertical health programme**. The initiative has achieved its primary objective of eliminating polio from India in 2011. Besides, the *PEI* aimed at strengthening routine immunisation, which is assessed in the study summarised below.

Drawing on interviews and programme documents, **qualitative analysis** enabled insights into the interactions between polio eradication and routine immunisation. For example, the incorporation of other vaccine-preventable diseases into polio **surveillance systems** allegedly entailed operational improvements in routine immunisation. In addition, **health workers** (nurses) value the monitoring practices introduced by the *PEI*, yet mounting administrative and operational duties also increase their workload. Moreover, **financial flows** suggest highly disproportionate support to polio eradication vis-à-vis routine immunisation. Interviewees also expect **service delivery** to be at least temporarily interrupted during mass polio immunisation campaigns in regions where the *PEI* is particularly intense (such as Uttar Pradesh).

The **service delivery impact** of these interactions was **analysed quantitatively** using household survey data (for a more detailed description of this procedure, see Box 6 in Chapter 5). Statistical analysis revealed that, in **Uttar Pradesh, (especially older) children** who experienced a higher number of mass polio vaccination campaigns **were less likely to attain full routine immunisation** (controlling for other factors that determine immunisation uptake). At the same time, such **negative effects are diminishing over time** and a growing group of young children benefits from the programme. However, the same analysis applied to data from **Bihar** (a neighbouring Northern Indian state with equally high programme intensity) **demonstrates a consistently positive service delivery impact on routine immunisation**, likely rooted in state-level policy differences.

In sum, the *PEI* has been instrumental in eliminating polio from India – the primary objective of the Polio Eradication Initiative. There are, however, **unintended system-wide effects** emanating from the *PEI* that threaten to undermine its primary purpose as they compromise the routine immunisation system in Uttar Pradesh. Within the vertical layout, design space exists to rectify detected problems for on-going polio and future measles immunisation activities in India. Such measures include, amongst others, the redefinition of mandates within implementation support structures (to more accurately reflect the routine immunisation strengthening agenda) and the inclusion of other stakeholders such as health worker representatives in policy deliberations.

Source: Haenssgen (2012).

ed a language of “health system strengthening” – not only to signal awareness but also to express

Analysts have discussed possible responses to system-wide effects. Full **horizontal integration** of a targeted health intervention into a government health system is often not expedient. Integrating the intervention into an ill-functioning health system or overburdening the intervention through adding other health system functions into it can undermine the primary disease-specific objective without any added value to the health system at large. For example, it is maintained that smallpox eradication may have adversely affected country health systems due to repeated, intensive mass immunisation campaigns; yet carrying out eradication in a horizontal approach with a focus on health system strengthening would have compromised the primary purpose of the programme to such an extent as to render it infeasible (Newell, 1988). In a widely recognised paper, Atun and others (2008) have recommended two broad practices to address the shortcomings of targeted health interventions where full integration is not desirable. In order to strengthen country health systems (or at least to avert undermining them), the authors recommend that targeted interventions be **aligned with existing health system functions and partially and / or gradually integrated into them**. Full horizontal integration is therefore not universally desirable, and negative effects of targeted programmes can be averted through specific responses.

Gaps remain in implementing such recommendations. Global actors have adopt-

intentions to avoid interferences and to stimulate synergies between targeted interventions and recipient countries' health systems. However, more often than not, health system strengthening is applied as a catch-all label without operational implications, and donors recognise health system weaknesses only insofar as they have a bearing on the efficient delivery of the targeted intervention (Marchal et al., 2009). The following section reviews the policy and practice of responding to systemic challenges of HIV/AIDS interventions within the GDC. This will demonstrate genuine policy efforts to address health system weaknesses through increasingly integrated HIV/AIDS interventions.

3. Policies and Practice in FC HIV/AIDS Interventions

3.1. Sector Policies and Guidelines

Recognising that health impacts are most sustainable if realised within efficient health systems, the German Ministry of Economic Cooperation and Development determines health **system strengthening** in partner countries as one of the **key areas of the GDC in health**. According to the Ministry's sector policy paper published in 2009, the main aims within this area are to contribute to an improved availability of health staff; appropriate education and training of skilled personnel; the development of sustainable systems of financing (social protection); improved organisation, structure and management of these systems; and the rehabilitation and expansion of infrastructure. To achieve these goals, special emphasis is placed on the effective linkage of donor and partner strategies and interventions. According to the sector policy, **targeted health interventions should be integrated into the wider health system as far as possible**. This is particularly stressed for malaria, tuberculosis, and neglected tropical diseases, which are to be addressed primarily as part of health system strengthening efforts. Concrete guidelines on the handling of targeted projects or a discussion of the degree of integration are, however, not included in the policy document (BMZ, 2009).

The recently published policy paper on *Germany's contribution to a sustainable AIDS control* explicitly extends health system strengthening to the context of HIV/AIDS, highlighting the increasing importance of this topic in GDC. In order to contribute to the international goal of universal access to prevention, treatment, and care, Germany specifically focuses on:

- **Promoting a global policy framework.** Germany cooperates with important international actors like the *Global Fund to Fight AIDS, Tuberculosis and Malaria*, the *WHO*, and *UNAIDS*, and seeks to ensure that the fight against HIV is a priority on the international political agenda. As board member of the *Global Fund* and via the *BACKUP-Initiative*,³ Germany promotes, among others, the direct support of national strategies and processes, mobilisation of national resources, and an improved coordination of *Global Fund* activities with bilateral interventions to support the integration of the targeted health programme into national health systems.
- **Supporting sustainable national HIV strategies.** In the fight against HIV/AIDS, GDC cooperates with governments, civil society, the private sector as well as the target groups. The support of **sector-wide approaches (SWAp)** to promote national efforts to harmonise and align donor funds has gained in importance since the late 1990s. **Bilateral interventions** implemented by German TC and FC address all levels from advising governments and national AIDS committees to implementing activities at the community level. With a diverse set of interventions and instruments, the bilateral interventions intend to promote HIV prevention, link it to other health services, and strengthen health systems (in a broad sense) for improved access to diagnostics, testing, medication, and qualified treatment.
- **Promoting a supporting political and social environment.** GDC promotes the improvement of the political and social environment for example by involving civil society in programme design and implementation, advocating for human rights, and incorporating the topic of HIV/AIDS in other sectors such as education.

³ The German *BACKUP-Initiative* (Building Alliances, Creating Knowledge and Updating Partners) is a programme to support countries in the management of global financing in the health sector.

Overall, the policy paper on HIV **acknowledges the importance of health system strengthening** in the context of HIV/AIDS by stressing that the goal of universal access to prevention, treatment, and care can only be achieved provided that national (i.e. comprehensive) health systems are able to offer qualified, efficient, effective, and accessible services for all. The importance of efficient health systems for a sustainable HIV/AIDS response is particularly pronounced in view of the structures needed to provide care and antiretroviral treatment for people living with HIV/AIDS. The policy paper emphasises the need **to prevent the establishment of parallel structures** and to **integrate HIV-related services into existing services** offered by public, private, faith-based, or civil society health care providers as far as possible. Topics such as sexual and reproductive health and rights (SRHR), family planning, child health, nutrition as well as tuberculosis shall be integrated in HIV/AIDS interventions (BMZ, 2012).

Concerning the linkage of HIV services to other health services, GDC has emphatically promoted the **linking of HIV/AIDS and SRHR**. In the past, the vast resources and numerous interventions targeted to halt the dramatic spread of HIV failed to recognise overlaps between HIV/AIDS and SRHR in terms of target groups, type of intervention, objectives, and other areas. Within the resulting parallel structures for HIV/AIDS and SRHR, gains in efficiency and effectiveness that can result, for instance, from promoting condom use for dual protection against unintended pregnancy and sexually transmitted infections (STIs), were not exhausted. In line with international efforts to promote joint policies for SRHR and HIV/AIDS, GDC is **committed to maximizing synergies** that arise for example in the area of condom promotion and by integrating HIV testing and treatment into SRHR services and, conversely, information on SRHR into HIV/AIDS interventions (BMZ, 2008; BMZ, n.d.).

Further means to strengthen health systems proposed by the Ministry of Economic Cooperation and Development are programme-based approaches like SWAs and financing mechanisms like **basket funds**. Their potential to **link different programme areas** and to **promote the development of coordinated concepts** in the area of human resources, procurement and distribution systems, infrastructure, and service delivery are appreciated as very beneficial to the health system (BMZ, 2008).

Overall, at the policy level, there is not only **awareness** for the topic of targeted health interventions and their interactions with country health systems, but also a **clear commitment to avoid health system disruption and to increase synergies** in the field of HIV/AIDS. It seems, however, that targeted interventions have traditionally been seen rather one-sided as vertical approaches with a focus on their possible negative effects on health systems. Their **potential positive effects on the health system receive less attention**. Furthermore, monitoring and evaluation of potential side-effects of targeted health interventions is not considered in the sector policies and guidelines. In the following section, we discuss to which extent these political guidelines are implemented in design and reporting of FC projects in the field of HIV.

3.2. Practice in Designing, Monitoring, and Evaluating HIV/AIDS Projects

In order to determine the implementation status of the policy guidelines described above, we reviewed a sample of projects from the current portfolio of HIV and HIV-related projects and from evaluated projects implemented by German FC, focusing primarily on HIV projects using social marketing as the main mode of HIV prevention in the German FC. This review covered 71 project appraisal, monitoring, and ex-post evaluation reports. It is important to note, however, that the aforementioned policies and guidelines build partially on lessons from the *current* portfolio of projects, and most recent policy developments may therefore not yet feature in these projects. Nevertheless,

we are able to identify a number of patterns that allow assessments on the degree of health system awareness in FC-financed HIV projects.

As already stated, social marketing is the main instrument applied in HIV prevention projects of the German FC. In response to insufficient service delivery capacity in the public sector, social marketing activities are typically carried out by a private actor. Usually, non-governmental organisations (so-called social marketing agencies, or SMAs) are contracted as intermediaries. These actors use commercial marketing methods to increase the availability of and demand for condoms and other (e.g. reproductive) health products. In order to do so, they firstly build local (typically private) distribution systems to market subsidised products; and secondly, they advertise the products and organise or carry out information and behaviour change communication as complementary market-building activities.

Analysing FC HIV prevention projects using social marketing in more detail, we find that they were somewhat detached from existing government health systems in their initial design (from the mid-1990s onwards). Although the projects were aligned to national strategies and formally executed by the Ministry of Health, institutional integration of the projects was very limited. The reliance on non-state health providers such as NGOs and alternative procurement and distribution channels for condom social marketing led to the establishment of parallel structures and to neglecting the effects on country health systems.

National institutions are still only marginally involved in project design today and usually do not provide financial support to social marketing projects. Consequently, both institutional as well as financial sustainability are jeopardised. However, the design of social marketing projects has **evolved considerably** in the last decade to include a wider range of health topics over and above HIV/AIDS, and they have increasingly been linked to other interventions. In accordance with policy guidelines, the **greatest progress** has been made with regard to **linking HIV/AIDS and SRHR**. Most on-going projects focus on both SRHR and HIV prevention by selling subsidized contraceptives such as birth control pills as well as condoms and by offering family planning services, thereby seizing synergies that result from similar target groups and distribution channels, among others. Several of these projects have further integrated additional health issues, for instance waterborne diseases by marketing subsidised chlorine and oral rehydration salts combined with hygiene education. Moreover, the information and education campaigns often include the topic of other STIs and tuberculosis (TB) as common co-infections of HIV. German FC has further adopted a **more systemic perspective** within in project design by promoting the so-called total market approach (TMA). This means that the projects have evolved in three generations from (1) narrowly focusing on the sale and advertisement of the social marketing brands in the 1990s to (2) concentrating more on increasing general demand via education and behaviour change campaigns starting in the early 2000s to (3) taking into account the total market, i.e. the development of free, commercial, and socially marketed condoms in more recent years. Great progress has been made in this respect. However, due to challenges in the implementation of the TMA that result, among others, from the lack of data on commercial and free condoms, part of this potential has occasionally remained untapped. For the most part, subsidised condoms are essential in partner countries given an underdeveloped commercial market and the target group's inadequate ability to pay. Yet, although recognised as an issue, the sale of socially marketed condoms and the availability of free condoms as well as of commercial condoms often seems to be insufficiently coordinated. In sum, we conclude that HIV has in many cases been linked to SRHR in **social market-**

ing approaches and combined with other targeted interventions and that existing projects are increasingly integrated into and aligned with certain health system functions such as service delivery.

In addition to the social marketing of condoms and other family planning products, the German FC also supports clinical services in the area of HIV prevention. Whereas **HIV counselling and testing (HCT)** is rather common, a few projects also involve diagnosis and treatment of other STIs. In 2010, the first project integrating **TB test-**

Box 4: The FC Uses Various Instruments to Prevent HIV/AIDS in South Africa

In South Africa, FC supports mobile HCT including home visits. The implementing NGO provides counselling on HIV, STIs, and TB; HIV testing including CD4 cell count to determine the progress of the disease for HIV-positive persons; TB testing if a HIV-positive person shows symptoms of TB; and referral to national health facilities for long-term support. Furthermore, the NGO offers male circumcision in a pilot region. Advertisement and education campaigns promote behaviour change related to HIV and TB. The HCT activity is supplemented by a “peer educators” component to train young adults from disadvantaged backgrounds in behaviour change communication, who in turn can function as multipliers by educating others.

ing as well as **male circumcision** into HCT was launched in South Africa (see Box 4). Compared to HIV prevention projects that exclusively involve social marketing of health products, the provision of clinical services usually involves stronger interfaces with the public health system. For instance, clients tested positive for HIV are usually referred to public health facilities in order to receive further medical examinations or treatment, which raises the “demand” for downstream health services. The projects may differ with regard to the degree of integration into public health systems, depending on whether the services are carried out in NGO-managed sites, public facilities, via mobile units, or home visits.

The FC has increasingly supported **SWAps** since the 1990s. These are typically a means to integrate and coordinate multiple health programmes and activities within a **joint financing basket**, often supported by high-level policy consultations. Donor contributions frequently enter either as “pooled” funds for joint use in all components of a SWAp or as “discrete” funds earmarked for a specific activity, for example the provision of contraceptives. SWAps have a great potential to strengthen health systems through improving aid effectiveness and promoting donor harmonisation, but also have weaknesses of their own (see Chapter 4).

As regards **monitoring and evaluation**, project documentation reveals a **growing awareness** of and sensitivity for system-wide effects of FC projects. Commonly, the health sector of the respective country is analysed relatively systematically throughout project documentation. Key issues and weaknesses of the health system and its development as well as the disease burden are monitored. However, the link to the projects is not always explicitly made. Furthermore, with the exception of several SWAps, health system effects are neither embedded in the target system nor monitored consistently during project implementation. In appraisal as well as in monitoring and evaluation reports, **no uniform and accepted approach to capture health system effects can be identified**.

Overall, we find that the German FC has made **great progress regarding the consideration of health system effects** in design of HIV projects as well as in monitoring and evaluation in the last years. This tendency is particularly apparent in the addressing of a greater variety of health issues (especially SRHR) and the efforts towards taking into account the total market when marketing subsidized condoms; the linkage of different HIV services; and the increasing support of SWAps. Emphasis is placed on the alignment with national strategies and on the coordination with other actors in the sector in order to avert duplications and supplement each other. In particular the complementarities of FC

projects and interventions carried out by the German TC, which often address specific system issues, are thoroughly analysed. Notwithstanding the developments in policies and their implementation in the current project portfolio (and the challenges involved in comparing them), our review suggests that there remains **room for improvement** because many projects maintain their character as “targeted” interventions despite increasing integration and linkage. However, the underlying decision-making process regarding the design of a certain project and for example the degree of its integration into the health system is often not fully comprehensible to the observer. This may be due to a **lack of specific guidelines** as to how to consider health system effects in the design of FC interventions. Mostly, the focus is on how to adapt to existing health system weaknesses without fully considering both benefits and risks that result from the project design. For instance, in the social marketing of condoms for HIV prevention, the use of private distribution channels is usually founded in the weakness of public channels. Potential positive or negative side-effects that result from the strengthening of private channels, however, receive less attention. In general, although system-wide effects are increasingly mentioned and analysed in project documentation, a systematic approach to address, monitor, and evaluate these effects is yet to be developed. In the following chapter, we propose a systematic procedure to improve the consideration of health system effects in German FC projects.

4. Analysing and Responding to Health System Effects in HIV/AIDS Projects

Using the health system framework introduced in Chapter 2 as a tool for assessing systemic effects and for designing programmatic responses, we now demonstrate how the encouraging progress in HIV/AIDS policy and practice can be further nurtured. The framework helps to develop a detailed and explicit perspective on health system effects and to arrive at original and specific solutions for previously concealed programme challenges. In line with the preceding discussion, we focus on the instrument of condom social marketing, although the framework can also be applied to integrated HIV-TB interventions, for example. We will follow three analytical steps: (1) **identifying interfaces between intervention and health system**, (2) **analysing potential synergies and interferences** with the health system along the main interfaces, and (3) **developing packages of remedial and supportive action**. Incorporated for example in feasibility studies, similar procedures could aid the preparation of similar HIV prevention projects and other targeted health programmes more generally.

Step 1: Identifying interfaces between health intervention and health system

Despite their variety and complexity, a number of common elements enable us to **identify critical interfaces** between social marketing interventions for HIV prevention and country health systems.

Projects using social marketing tend to reflect varying degrees of integration into health systems, depending on the respective interface. Despite their heterogeneity, commonalities among social marketing-based interventions exist and are illustrated in the “Integration” column in Table 2. **Interaction with the wider health system takes place in spite of limited inter-linkage with public or private actors.** Such interaction arises for example through **overlaps and complementarities in resource use, activities, and responsibilities between the project and the wider health system**. In social marketing, this is especially the case in governance, service delivery, logistics and supply management,

Table 2: Typical Social Marketing Interfaces With Country Health Systems

Degree of Integration Into the Comprehensive Health System	Interface	Possible Interaction Between Intervention and Health System
 Limited institutional integration of SMAs, but participation in AIDS councils and community-based activities	Governance	New actors become active in health system 
 Relatively small financing volumes, often off-budget	Financing	Continued financial contributions from public sector and donors 
 Existing health system planners often do not participate in social marketing planning and regulation	Planning	Some planning tasks (e.g. for supply management) can be carried out in public or private sector 
 Research, monitoring, and evaluation processes take mainly place in private sector, commissioned by SMA, but may cover total market	HIS and Monitoring	Although SMAs carry out health knowledge and market surveys, they often remain project specific 
 Only small fraction of human resources for social marketing requires medical training	Health Work-force	Some overlap with public sector health tasks such as health education 
 Distribution systems often separate from public health system, but may use existing commercial channels	Logistics & Supply Management	Establishment of supply and distribution structures, could serve public health system functions 
 New service delivery vehicles and educational activities, often integrating other services and/or TMA	Service Delivery	Provision of family planning and health products that are more or less available from public and private sector 
 Typically including broader sexual and reproductive health education	Demand Generation	SMA health education and services affect recipients' engagement with public health services 

and demand generation (see “Interaction” column in Table 2). As SMAs are active in the provision of health products, **service delivery** is an important point of interaction. For example, condoms (and

occasionally other products such as chlorine tablets) are often supplied by SMAs alongside private sector firms and sometimes public sector facilities. In addition, through the engagement with recipient groups and communities, social marketing activities add to public sector service provision and may not only affect the demand for contraceptives and family planning products, but also the demand for health services more generally. Due to their outreach, these activities can also reach formerly neglected target groups such as youths, prostitutes, or men who have sex with men. **Demand generation** is therefore another important interface. The **governance** interface draws its importance from the presence of additional actors aside from the public sector in the delivery of health services, education, and products (e.g. SMAs). Finally, to provide services in social marketing projects, the establishment of a functioning and extensive **distribution** network is one of the core activities. Often, these networks are privately operated, but also alternative approaches such as community-led distribution systems exist (e.g. in Mali). Though not negligible, the remaining interfaces of planning, financing, health workforce, and monitoring are of lower significance in social marketing activities. For instance, workers employed by SMAs are typically recruited from outside the health sector, creating little overlap and interference with the public and private health sector workforce.

Table 3: Polio Interfaces With Indian Country Health System

Degree of Integration Into Comprehensive Health System	Interface	Possible Interaction Between Intervention and Health System
	Governance	Top-down programme design
	Financing	High financing volumes involved compared to other health services
	Planning	Resource allocation concerns; explicit goal to strengthen routine immunisation
	HIS and Monitoring	Professionally managed surveillance system, capable of performing health system functions
	Health Workforce	Health workers engaged 15 to 100 days per year with polio eradication
	Logistics & Supply Management	Polio eradication provides but also uses equipment and inputs along cold chain
	Service Delivery	Competition with resources for routine health service delivery
	Demand Generation	Intensive mobilisation activities including repeated house-to-house information and high political visibility

The social marketing of condoms may seem a special case for analysis. Other interventions could penetrate state and non-state health providers differently, so the way in which they interact with country health systems likely vary. However, other targeted interventions can be analysed through this framework equally well, and Table 3 exemplifies this with the case of polio eradication in India. This intervention is rather strongly integrated especially into the *public* Indian health system, and the extensive machinery to execute mass immunisation campaigns interacts especially with the financing, workforce, service

delivery, and demand generation functions of the wider health system. This first analytical step therefore highlights the **heterogeneity of interfaces and interactions across project types** and reveals that initially **unobserved interfaces may prove critical** in realising synergies or interferences with the health system.

Step 2: Analysing potential synergies and interferences

The second step consists of analysing project-specific impacts onto the comprehensive health system along the identified interfaces. Table 4 presents an overview of **positive (synergies) and negative effects (interferences) in social marketing activities**. While most of these effects have featured explicitly or implicitly in appraisal, monitoring, and evaluation reports of FC projects, some are derived from different health interventions or have yet to be translated from policy and research into practice. A selection thereof will be explained below. Box 5 at the end of this section presents specific project examples from the FC.

Table 4: Effects of Social Marketing on Country Health Systems

Synergies	Interferences
Governance	
<ul style="list-style-type: none"> • Health system pluralisation • Improved inter-sectoral and international cooperation 	<ul style="list-style-type: none"> • Insufficient institutional integration leading to lacking sustainability of activities
Financing	
<ul style="list-style-type: none"> • Reducing burden on health system due to averted HIV infections • Mobilising donor / national funding • Reduced out-of-pocket expenditures for households 	<ul style="list-style-type: none"> • Increased parallel, unaligned, and off-budget donor support
Planning	
<ul style="list-style-type: none"> • Strengthening programme management capacity outside the public sector 	<ul style="list-style-type: none"> • Inefficient resource allocation due to insufficient coordination between public sector and SMAs
Health Information Systems and Monitoring	
<ul style="list-style-type: none"> • Strengthening national research and monitoring capacity 	<ul style="list-style-type: none"> • Duplication of project-specific accompanying research, market analyses, and evaluations
Health Workforce	
<ul style="list-style-type: none"> • Strengthening public and private human resource base 	<ul style="list-style-type: none"> • Replication of marketing and information, education, and communication (IEC) activities
Logistics & Supply Management	
<ul style="list-style-type: none"> • Improved access through expansion of supply networks • Improved supply and quality of inputs and products 	<ul style="list-style-type: none"> • Duplication of efforts through separate marketers (SMAs) for different health products • Duplication of national health supply chains
Service Delivery	
<ul style="list-style-type: none"> • Augmentation of public health service “portfolio” • Quality standard improvements of service delivery processes / products 	<ul style="list-style-type: none"> • Crowding out of private sector • Duplication of implementation structures and activities
Demand Generation	
<ul style="list-style-type: none"> • Empowerment of disadvantaged groups (e.g. women, youths) leading to higher demand for health services • Condom market development (e.g. reducing social stigma of condoms) 	<ul style="list-style-type: none"> • Reducing demand for non-targeted health services and products • Spillovers from programmatic errors (e.g. insufficient funding) can affect generic condom demand

A main health system concern in the social marketing of condoms is the **crowding out** of the private sector from **service delivery** if private firms cannot compete on a level playing field with the subsidised condoms of SMAs. Projects often anticipate this hazard (e.g. as an assumption within a logframe) and evaluation reports have detected such problems in earlier social marketing interventions (e.g. in India, where subsidised condoms outcompeted commercial products). Less frequently noted is the **duplication of implementation structures** for the health services provided by different NGOs.⁴ Lacking coordination of donors is a major factor underlying this effect. For example, the social marketing of rehydration solutions and condoms in Chad was carried out separately by the World Bank and the FC, respectively. The duplication of accounting structures, marketing teams, and vehicle fleets led to inefficiencies and high marketing costs (before these two structures were eventually combined under one organisation). Yet

⁴ Occasionally, duplication of service delivery structures is a necessary component in the division of labour among health sector actors.

there are also potential synergies to be realised within the service delivery interface. For instance, the increasingly common practice of **service integration** (such as family planning and reproductive health, see Step 3 below) **promises to broaden a programme's health impact and to relieve overburdened public sector service provision.**

In terms of **governance**, HIV prevention projects using social marketing can promote the **pluralisation** of the health system because of their potential to incorporate the private sector and civil society organisations in political decision-making and health service provision. Numerous project reports acknowledge this benefit, often indicated by a positive “participatory development / good governance” rating. Less frequently recognised is the **political inclusion of marginalised groups** through social marketing activities, which may occur on various levels from national policy-making to front-line project implementation. Improved participation could also help articulate needs and responsibilities in local communities and strengthen the accountability as well as the legitimacy of health programmes. Yet such effects may also be undermined if the institutional integration of social marketing agencies and other actors is insufficient, which can result in **unsustainable** and **potentially obsolete health system strengthening efforts.**

As a last example, by lifting taboos and stigma from the use of contraceptives and other family planning activities such as counselling, social marketing projects can **generate demand** for condoms other than their own and for reproductive health services more broadly. The anticipation of a **higher general demand for condoms** is especially pronounced in policy papers and likely materialises in projects that follow total market approaches and generic rather than product-specific education. For instance, the regional social marketing project in the Caribbean (*CARICOM*) aims at raising the sales of FC-financed *and other* condom brands, and has arguably contributed to improving the condom use in the region. Furthermore, the broader promotion of sexual and reproductive health can lead households to **request more services** (aside from condoms) **from public and private sector facilities.** An example is the incorporation of sexual and reproductive rights into social marketing activities in the *PROMACO* project in Burkina Faso. The project aimed at preventing unwanted pregnancies while maintaining individuals' decision-making discretion (which was also included in the project's target system), thereby strengthening women's reproductive rights. Such an empowerment of women in turn offers potential to articulate their sexual and reproductive health needs, which may materialise in a higher utilisation of public and private health services.

Conversely, marketing and education activities could also **undermine recipient demand** for health services. Targeted health interventions elsewhere (e.g. polio eradication) have highlighted hazards of (1) **misleading recipients** into underestimating other health conditions due to the political salience of the targeted disease, under-provision of other services, and too narrow a focus within education campaigns; and (2) **raising false expectations** that other public or private health services will be provided in the same mode as the socially marketed services and products.⁵ For instance, intensive communication activities to advocate for polio immunisation in India (including house-to-house visits) led some parents to believe that no other vaccines are needed for their children to be fully immunised.

Box 5: FC-Supported Projects Have Repeatedly Seized Synergies and Responded to Interferences

⁵ A third conceivable effect is the creation of opposition among households as a result of top-down and coercive health programme implementation. In the present case, this may pertain to the family planning component of the social marketing efforts, albeit this is rather unlikely in the context of marketing-based approaches.

Cases Involving Synergies	Cases Involving Interferences
Caribbean: Integrating Markets and Service Delivery (Financing, Service Delivery, Demand Generation) HIV/AIDS prevention across the Caribbean states has been regarded a good practice example of the total market approach. This is especially visible in Jamaica and Eastern-Caribbean states , where – due to the maturity of the private condom markets – the project does not involve the sale of a social marketing condom brand . Instead, commercial brands and actors are supported through generic education, building commercial links between potential retailers and existing distributors, and comprehensive condom market research. Synergies are also seized at other stages of the service delivery chain. For example, high-risk groups such as prostitutes are employed in the packaging of condoms in the Dominican Republic . By generating formal employment, such measures can reduce the dependency on hazardous sex work as income-generating activity. Similarly, downstream activities such as HIV and STI testing have been integrated into or coordinated with the HIV prevention programme in the Caribbean , helping individuals to learn about their status and seek medical treatment accordingly.	Chad: Integrating Separate Implementation Structures (Logistics and Supply Management, Service Delivery) Support from the FC for condom social marketing for HIV prevention began in Chad in 1995 and has continued over three project phases. The FC supported a local social marketing agency (Masocot) in the distribution of the “Prudence” condom brand. At the same time, the World Bank engaged in the social marketing of oral rehydration solutions called “Orasel,” a parallel project that maintained its own vehicle fleet, accounting systems, and sales teams. Acknowledging the costly inefficiencies resulting from the duplication of social marketing activities , the third project phase proposed to integrate both implementation structures within the social marketing agent Masocot. This increased the product portfolio of the existing social marketing agent, diversified its funding sources, and resulted in the reduction of comparatively high overhead costs. As the project extended over multiple phases, the FC demonstrated its capacity to identify and remedy interferences between the project and other actors within the national health system.
Niger: Community-Based Distribution (Governance, Demand Generation, Service Delivery) A notable element of the reproductive health and HIV prevention project in Niger is the community-based distribution approach through locally recruited “femmes relais” (female community workers) . The social marketing agent ANIMAS SUTURA provides training for the femmes relais in areas such as distribution and sales, HIV/AIDS, hygiene and water treatment, or referral of medical emergencies to health centres. The femmes relais distribute contraceptives in remote areas, thereby creating local ownership in the social marketing practices and participation of local communities in matters pertaining to health policy implementation. After first positive experiences, the pilot was extended and expansion of the femme relais’ product portfolio to water treatment tablets, oral rehydration solutions, and micro-nutrient food supplements has been considered.	Zambia: The Hazard of Distorted Preferences (Demand Generation) As part of the HIV project in Zambia, the FC supported the introduction of a scented condom to broaden the product range of the SMA. From the outset it was anticipated that the FC engagement was only temporary. Major difficulties in securing follow-up funding for this condom brand arose at the end of the project. After short-term support from UNFPA and PSI, funding eventually dried up completely, threatening the existence of the brand. The uncertainty of funding has created frequent condom price fluctuations and stock outs in the retail market . This led to interferences at the “demand generation” interface with negative implications for consumers’ acceptance of condoms as a whole . The ex-post evaluation of the project has identified the potential undermining of consumer confidence through such programmatic errors as a lesson for future projects.
India: SMA Sets Up Training and Research Institute (HIS and Monitoring, Health Workforce) The project “Social Marketing II” in India is executed through the agencies Population Services International (PSI) and Parivar Seva Sanstha (PSS), involving typical social marketing mechanisms such as IEC and the distribution of subsidised contraceptives. Yet a particularly remarkable activity is the establishment of the “Management Institute of Population and Development” in Jaipur (Rajasthan) through PSS (www.mipd.in) . This institute is engaged in postgraduate management education and distance learning, consultancy, and contractual research activities. Through the establishment of such institutions, management, research, and service delivery capacity in the health sector can potentially be increased far beyond the individual HIV prevention project.	India: Responding to Private Sector Crowding-Out (Service Delivery, Demand Generation) The sales of socially marketed, subsidised condoms increased notably during the first phase of the Indian “Social Marketing” project. Yet as these condoms were distributed through the same retail channels as commercial condoms, they crowded out their commercial peers and the total number of condoms sold in the market remained stable or even slightly declined. The FC learned from this early case of private sector crowding out: negative effects could be largely avoided in Phase II due to project design adjustments such as improved targeting at rural and peri-urban regions, better differentiation from commercial products, and a stronger emphasis on demand generation. Hence, demand growth especially among target groups could be observed during the second project phase.
Main Observations	
<ul style="list-style-type: none"> ▪ Synergies and interferences can be observed along different interfaces even within the same project ▪ FC-supported projects have been able to respond to interferences where these have been identified ▪ The systematic examination of interactions between projects and health systems promises further improvements 	

Although not all such effects may actually materialise within one project, this short illustration highlights that HIV prevention through social marketing can have **manifold consequences** for country health systems. In addition, the breadth of possible effects makes clear that system-wide challenges and opportunities can persist even if social marketing for HIV prevention is increasingly integrated with other programmes such as TB treatment or family planning. Other programme types may also yield different (yet equally mixed) effects. For example, where public health facilities are utilised for HIV testing and male circumcision, process improvements as well as distractions of health personnel may follow. Therefore, targeted health interventions are **not intrinsically detrimental** to recipient countries' health systems, but the articulation of anticipated effects is the cornerstone for corrective action, described in the following step.

Step 3: Developing packages of remedial and supportive action across anticipated effects

The literature review in Chapter 2 has emphasised that health system interruptions and synergies are possible but manageable consequences of a targeted health intervention (albeit this also depends on the presence of other health programmes that are implemented alongside the targeted intervention in question). This does not mean that projects based on the social marketing of condoms should be converted into "health system strengthening" interventions, but there are **opportunities to shape health system impacts** through specific adjustments during the project design and follow-up phases. Drawing on FC project reports and the health system framework above, five broad areas of intervention emerge. These areas relate to **stakeholder coordination**, the **regulatory environment**, **service integration** (horizontal, upstream, and downstream), actions **directed at the implementers**, and **distribution-chain-related** measures (see Appendix 1 for a complete list).

For example, **stakeholder coordination** comprises activities to **improve the communication and alignment between politically active and yet dormant actors in high-level policy forums and AIDS councils**. In a South African social marketing project, necessary partner country efforts to achieve this inclusion are supported by a complementary programme module of the German TC to establish decentralised AIDS councils. More generally, FC-financed health programmes can reinforce broader "**participatory development**" efforts of the recipient country. Examples of this are the FC support to an SMA in Chad (helping it to attain legal recognition and charitable status), and community-based social marketing through locally recruited female workers in Niger. Such elements can help **promote and institutionalise the participation** of community-based actors and organisations, better **coordinate and augment health services**, and **mitigate the duplication of tasks** in health service delivery.

Another approach to coordinate stakeholders is the integration of social marketing and other HIV prevention projects within a **joint financing basket** (which is often associated with a SWAp). Such instruments have been proposed to harmonise donor and national financial contributions, thereby limiting parallel, unaligned, and off-budget donor support. Besides, stakeholder coordination within a SWAp may relax disproportionate support to HIV/AIDS and potentially ensuing distortions in recipient demand (e.g. lower demand for non-HIV/AIDS health services). Such instruments have indeed realised efficiency gains through improved coordination, for instance in Tanzania. At the same time, positive effects from a basket fund **may not address every relevant interface** (e.g. separate implementation structures for social marketing can easily persist) and a basket fund may also bring about **new challenges**. For example, a recent review of SWAps has noted "centralising tendencies of SWAps" in some instances such as Uganda and Tanzania (these SWAps are linked to joint financing arrangements such as basket funds; Land and Hauck, 2003). Thus, **no single remedy (or alternative**

mode of intervention) can be a universal solution to systemic challenges, but packages of action may address multiple challenges that exist simultaneously.

Further responses to system-wide effects can be drawn from the area of **service integration**. **Horizontal service integration** comprises activities to go beyond the promotion of an SMA's specific condom brand, which can be realised through **widening an agencies' product portfolio** or through a **total market approach**. For example, sustainability concerns in Namibia encouraged the marketing of additional health products through the social marketing structures (besides finding private sector sponsors and contracting out activities from the Ministry of Health to the SMA). Whereas in Namibia these additional products were contraceptives other than condoms, in other cases they have been chlorine tablets (Guinea) or insecticide-treated bed nets and clean delivery packs for births (Tanzania). This form of horizontal service integration does not only **address the problem of insufficient sustainability**, but the potentially **more efficient distribution** of other products may also increase population access to the health products through **lower prices** and **wider accessibility** (i.e. fostering service delivery and demand synergies) and broader access also may **circumvent too narrow an understanding of sexual and reproductive health** (i.e. avoiding demand-side interference).

Total market approaches (TMAs) aim at **building a condom market** as a whole and are explicitly targeted at **preventing the crowding out** of the private sector or at lowering market entry barriers that originate from subsidised condom distribution (i.e. avoiding service delivery interferences). TMAs also have the potential to further **build the market for unsubsidised contraceptives** due to their focus on the total (rather than a niche) condom market, which can be a follow-up strategy after initial market-building through subsidised condoms. However, total market approaches **alone may not respond to other system-wide challenges and synergies** unless they are combined with complementary activities. For example, a TMA may develop the demand for condoms, but **may forego potential** to raise demand for other health products. Through combining a total market approach with the broadening of the SMA's product portfolio (to include other health and family planning services), some of these weaknesses have been overcome particularly well in Tanzania and in the Caribbean.

Other (seldom adopted) forms of service integration are upstream and downstream integration. Social marketing approaches are credited with their ability to target groups with a high risk of reproductive health conditions and focus on reducing the risk of STIs among them. **Upstream integration** relates to the social determinants of these health conditions and comprises activities to **remove individuals from the risk groups to which they belong**. While such measures are typically not part of social marketing projects, they could be included through, for example, identifying prostitutes as a high risk group for HIV/AIDS transmission and subsequently targeting employment programmes to help these prostitutes find work in the formal sector. A first step in this direction can be seen in the Dominican Republic, where prostitutes are engaged in the packaging of condoms at the SMA. **Downstream integration** of social marketing enables the recipients of education and behaviour change campaigns to **act on generated demand** for sexual and reproductive health. To do so, voucher schemes have been introduced in the past, for example by combining prevention (social marketing) and treatment (vouchers for diagnosing and treating STIs) in Uganda. Also health insurance or health facility revitalisation is plausible as a broad-based approach. Not all of these activities need to fall within the scope of social marketing, but they may be closely **coordinated components of a (donor-funded) sector programme that supports both state and non-state health providers**.

Clearly, HIV prevention through social marketing is not capable of reforming health systems. In addition, project managers cannot take up all conceivable remedial and supportive activities that can be derived from the analytical framework. However, the framework allows articulation and accommodation of potential interferences and synergies resulting from their project. Possible responses may then enter the project in its **design phase**, in a **follow-up phase**, or as **accompanying activity** within a larger programme (for example GDC-supported health system strengthening programmes). Recent developments such as total market approaches; the integration of HIV interventions with TB, family planning, and sexual and reproductive rights; or joint financing agreements have proved useful in addressing some of the challenges. Yet as there is **no universal response** to health system interactions, programme stakeholders should tailor their remedial action to project-specific side-effects. Despite the absence of a one-size-fits-all solution to health system effects of targeted interventions, the health system framework helps identify effects and remedies, and pragmatism is required to select the optimal course of action.

5. How Health System Impacts can be Monitored and Evaluated

Not many studies and reports provide advice on how to assess the aforementioned health system effects in the monitoring or evaluation of HIV/AIDS or other targeted health programmes. In this section, we provide guidance for programme and evaluation managers in this respect.

To **monitor the implementation** of the project and its system-wide effects, programme managers could theoretically draw from a wide range of input, process, output, outcome, or impact indicators. Having identified the main interfaces between intervention and country health system, programme managers should primarily rely on input, process, and output indicators along principal interfaces. Outcome and impact indicators provide at best a crude guide to particularly severe health system distortions, which makes them unlikely to produce timely and specific conclusions. Table 5 presents an illustrative overview for social marketing across all eight interfaces and a more generic list can be found in Appendix 2.

A wide range of data sources exists to monitor system-wide effects of HIV/AIDS interventions. This includes, for example, the use of existing indicators in national health management information systems, but also the accompanying research of SMAs can be augmented, or dedicated health facility surveys could be commissioned to generate new indicators on system-wide effects per target group and region (which, in turn, may also be used for other health interventions in the same context).

Existing indicators for **HIV prevention projects using social marketing** tend to include project-specific (rather than system-wide) indicators such as correct knowledge about condom use (often already tracked through accompanying research of social marketing agencies such as TRaC-studies or based on indicators included in national household survey data sets). Yet, it is possible to extend the scope of social marketing indicators to systemic effects. For example, with respect to the potential **strengthening of logistics and distribution systems, price levels of and access to health products** supplied through the newly created channels can indicate more or less efficient supply chain management. Also **demand effects** could be monitored in social marketing projects with extensive education and behaviour change campaigns. Besides, if the **knowledge of related health behaviour** (e.g. immunisation or hygiene) improves alongside the **knowledge about HIV/AIDS and condom use**, adverse effects on recipient demand may be less likely. Table 5 provides further indicators along the various interfaces.

The analysis in Chapter 4 suggests that monitoring indicators are specific to different projects and project types. For example, the health workforce is not a critical interface in social marketing, but it may be so in other interventions such as HIV testing and counselling, or in non-HIV projects such as polio eradication (see Table 6 for an example). **Different interventions therefore require different indicators.** Building on the previous example, if the health workforce proves to be a crucial interface for a project using public health facilities, indicators can be selected accordingly. National facility surveys may then be devised to incorporate variables on the work time spent on disease-specific and general health services, or on the self-perceived workload and job satisfaction of health workers. As process indicators, these data can serve as an early warning system for resource allocation problems in the health sector. Indicators such as worker and patient satisfaction have already been included in a number of SWAp indicator matrices (e.g. in Nepal). On the programme level, such monitoring practices have yet to be introduced. However, **caution is required** when selecting monitoring indicators from the list below because their movements may be caused by factors other than the targeted health interventions: Out-of-pocket expenditures of households, for example, may change with rising

costs of healthcare as well as with proved access to public and private health facilities. In this context, Appendix 2 suggests that it can be helpful to articulate the causal chains that underlie indicator movements.

Table 5: Illustrative List of Interface Monitoring Indicators for Social Marketing

Interface	Indicators	Remarks
Governance	<ul style="list-style-type: none"> • Legal recognition of SMA and other NGOs • Social marketing adopted as a concept in national AIDS strategy 	Qualitative indicators to assess institutionalisation of health system pluralisation
	<ul style="list-style-type: none"> • Government contributes financially to SMA 	Qualitative ownership indicator
Financing	<ul style="list-style-type: none"> • Out-of-pocket expenditure of people living with/without HIV/AIDS and other diseases 	Quantitative indicator to assess households' financial ability to access health services
Planning	<ul style="list-style-type: none"> • Number of management staff of SMA recruited and trained from non-health sectors 	Indicates development of planning capacity with possible spill-overs to health sector
	<ul style="list-style-type: none"> • SMAs report data on frequency and region of activity and sales to national institution / Ministry / AIDS council 	Qualitative indicator to assess degree of cooperation to enable efficient planning and resource allocation between private and public sector
HIS and Monitoring	<ul style="list-style-type: none"> • Existence of monitoring frame covering multiple diseases and health conditions within HMIS, harmonised across donors, government, private sector, and civil society 	Qualitative indicator for strengthening of health management information systems
Health Work-force	<ul style="list-style-type: none"> • Number of community volunteers / mobilisers trained by HIV/AIDS implementer (SMA) and ratio to public community health workers 	Quantitative indicator to assess whether workforce strengthening (training) through SMA complements public sector workforce
Service Delivery	<ul style="list-style-type: none"> • Quality assurance mechanisms for products and processes (e.g. existence of quality standards for condoms and other contraceptives, accreditation, standardised procurement processes) 	Qualitative indicator to assess knowledge transfer and improvements in inputs, processes, products, and/or services
	<ul style="list-style-type: none"> • Existing transfer between different levels of the health care system (e.g. referral from testing to secondary care institution) 	Indicating downstream process improvements
	<ul style="list-style-type: none"> • Relative development of private sector vs. free or subsidised condom sector (total sales, market shares, units sold), and regional distribution of free condoms 	Quantitative indicator to assess crowding out of private sector
Logistics and Supply Management	<ul style="list-style-type: none"> • Number of products and product categories supplied per distribution channel (among NGOs in social marketing of health products) 	Integration and potential strengthening of distribution systems could be observed as the number of products supplied per channel increases
	<ul style="list-style-type: none"> • Availability and prices of common essential drugs and supplies 	If health products (or substitutes) are supplied by SMA, lower prices and higher availability can indicate improved logistics
Demand Generation	<ul style="list-style-type: none"> • Per cent of population with correct knowledge of targeted vs. non-targeted health services (e.g. development HIV/AIDS knowledge vs. knowledge about immunisation) 	Quantitative indicator to address imbalances and distortions in health knowledge
	<ul style="list-style-type: none"> • Number of participants of education activities that seek services in health facilities (e.g. testing) 	Quantitative indicator of HIV and non-HIV service demand generation among recipients of IEC campaigns
	<ul style="list-style-type: none"> • Coverage of different (including generic) health topics in education and behaviour change campaigns of SMA 	Qualitative indicator to assess presence of broad-based approach to health education

Sources: Derived from Baker et al. (2007), Banteyerga et al. (2010), Bennett et al. (2006), Coulibaly et al. (2008), De et al. (2009), Haenssgen (2012), Potter et al. (2008), Rudner (2012), WHO (2010).

Table 6: Illustrative List of Interface Monitoring Indicators for Polio Eradication

Interface	Indicators	Explanation
Governance	<ul style="list-style-type: none"> Number of stakeholder representatives involved in polio policy-making and programme design 	Quantitative indicator to assess health system pluralisation and accountability
Financing	<ul style="list-style-type: none"> Polio vs. routine immunisation expenditures Ratio of polio expenditure vs. maternal / child health and total health expenditures 	Quantitative indicators to assess balance of health priorities within and beyond polio target group
Planning	<ul style="list-style-type: none"> Number of different definitions of “routine immunisation strengthening” among implementing organisations 	Lower number of definition indicates improved harmonisation and coherence in programme implementation
HIS and Monitoring	<ul style="list-style-type: none"> Number of vaccine-preventable diseases per monitoring system 	Quantitative indicator for integration and redundancies in health information systems
Health Work-force	<ul style="list-style-type: none"> Per cent of health workers satisfied with working conditions / workload Days per year working on polio eradication vs. general/routine services Number of polio community mobilisers vs. government-trained community mobilisers 	<p>Quantitative “early warning” indicator for overburdening of health workers</p> <p>Quantitative indicator for imbalances and potential absorption of health workers by polio eradication programme</p> <p>Quantitative indicator for augmentation of health services where tasks overlap</p>
Service Delivery	<ul style="list-style-type: none"> Incidence and immunisation coverage of polio vs. other vaccine-preventable diseases (and take-up of ante-natal care) 	Quantitative indicator as crude guide for dramatic service delivery impact where tasks are carried out by same staff
Logistics and Supply Management	<ul style="list-style-type: none"> Per cent of polio and routine immunisation sessions not held due to logistics issues 	Quantitative indicator assesses realised or forgone potential to strengthen supply systems including cold chain
Demand Generation	<ul style="list-style-type: none"> Per cent of mothers believing that oral polio vaccine is only vaccine needed to attain full immunisation Knowledge of need to vaccinate against polio vs. knowledge of MCH 	Quantitative indicators to address imbalances and distortions in health knowledge

Sources: Derived from Baker et al. (2007), Banteyerga et al. (2010), Bennett et al. (2006), Coulibaly et al. (2008), De et al. (2009), Haenssgen (2012), Potter et al. (2008), Rudner (2012), WHO (2010).

In contrast to interface monitoring, (quantitative) **impact evaluation** of health system effects requires statistical analysis. Lessons from polio eradication have shown that, after interfaces between intervention and health system have been identified, **the contribution of the health interventions to system-wide outcomes** such as immunisation uptake **can be isolated with the use of secondary data**. Even though such evaluations for HIV/AIDS interventions are yet scarce, national household survey datasets have gradually included HIV/AIDS modules besides specific HIV/AIDS surveys (WHO 2010). The use of such analyses thus seems **feasible and promises additional insights** into the actual magnitude and direction of interactions (as long as interaction processes along interfaces are well understood). The following five steps provide an overview about the activities involved in this procedure, drawing on an analysis of polio eradication activities in India (Box 6):

- 1) **Identify principal health system interfaces.** Through the identification of interfaces, links between the HIV/AIDS intervention and the health system can be established. This is the basis for selecting appropriate outcome or impact indicators. For example, the preceding analysis of social marketing activities (Chapter 4) has highlighted the importance of governance, service delivery, logistics and supply management, and demand generation.
- 2) **Select health system outcome or impact indicators emanating from the HIV/AIDS intervention.** The proposed outcome or impact indicators have to reflect the performance of a health system component which is linked but not specific to the HIV/AIDS intervention. System-wide outcome

indicators in the case of social marketing include health knowledge, while impacts can be represented by indicators such as morbidity (note that outcome assessments are more straightforward than impact assessments due to an increasing number of confounding factors). The selected indicators must be present in a secondary data set such as Demographic and Health Surveys (DHS). Ideally, such survey data sets are available for multiple points in time.

- 3) **Review alternative determinants of the selected outcome measure as control variables.** Albeit it may be affected by the HIV/AIDS intervention, the selected outcome indicator (e.g. health knowledge) is not specific to it. Therefore, changes in the outcome may be brought about by changes in other factors than social marketing activities and these other factors need to be controlled for. The evaluator has to identify these broader determinants of the selected outcome. In the social marketing example, such determinants include education and wealth of the knowledge bearer. These other determinants should be present in the survey data set at hand. At the same time, it is important to assess the presence of other interventions such as education or media campaigns that affect the health system outcome but are not captured in the secondary data. Evaluators need to be aware about such potential confounding factors and interpret their findings cautiously.

- 4) **Gather historical operational programme information.** In order to ascertain whether outcomes such as health knowledge are affected by the HIV/AIDS programme, operational programme data has to be collected. These data comprises historical information on the introduction, type, and intensity / frequency of programme activities as well as their geographical extent as it varied over time. Depending on the unit of analysis, this data will then be linked to individuals, households, or districts in the secondary data set. Social marketing agencies may, for instance, report the inception of their education and behaviour change campaigns per district.

Box 6: Through Statistical Analysis, Systemic Impacts of Polio Eradication can be Detected in Five Steps

- 1) **Identify principal health system interfaces.** In the case of the Indian polio eradication programme, important interfaces are governance, financing, health workforce, and service delivery.
- 2) **Select health system outcome and impact indicators emanating from polio eradication.** The *PEI* competes with the general health system for resources among the health workforce and in service delivery. This competition has potential health system implications, which materialise as outcomes in terms of children's routine vaccination status (*other than polio*), or as the number of antenatal visits of pregnant women. The nationally representative Indian District Level Household and Facility survey include these indicators, and the last two rounds (2002-4 and 2007-8) were used.
- 3) **Review alternative determinants of selected outcome measure as control variables.** Other determinants of childhood vaccination comprise, amongst others, child age and sex, household wealth, education of the mother, or the location of the household in a rural or urban location. Most of these determinants can be approximated through data from the Indian District Level Household and Facility Surveys.
- 4) **Gather historical operational programme information.** In the Indian context, a dataset comprising the monthly incidence of mass polio immunisation campaigns *by district* over the period from 1998 to 2008 was established. Subsequently, this information was combined with the birth date and district of *each individual child* in the data set in order to estimate the number of polio mass campaigns to which the child has been exposed when it was surveyed.
- 5) **Perform statistical analysis and interpret results.** The Indian polio eradication programme was introduced nationwide, so there is no variation in its *presence* across India. Yet because of differences in its *intensity* across and within Indian states, the health outcomes of individuals can be compared who only differ in their varying exposure to the programme. The results emanating from such an analysis then allow insights into whether individuals with a higher contact to the programme are more or less likely to achieve the health outcome in question. In this case, a higher exposure to mass polio immunisation campaigns was linked to lower routine immunisation attainment. Similar analyses can also be carried out for women who had been exposed to the polio programme during their pregnancy, since this is but another manifestation of interactions at the health workforce and service delivery interfaces.

Source: Haensgen (2012).

- 5) **Perform statistical analysis and interpret results.** Depending on the design of the HIV/AIDS intervention and the available data, different analytical strategies may be possible. For example, the roll-out of the intervention could have been gradual, meaning that some regions have adopted the same intervention at different points in time. This may permit the use of a quasi-experimental “difference-in-difference” research design in which the developments of the outcome in question are compared between early and late programme adopters. If the programme roll-out was nationwide, such a procedure is not possible. Instead, before-and-after comparisons can be employed in such cases (e.g. Bonu et al., 2003), at the expense that the interpretation of the statistical outcomes is somewhat impeded. However, even in cases where there is no variation in *presence* of the programme, there may be differences in its *intensity* across the country (as is the case in the example in Box 6). With district-wide social marketing data on education and behaviour change activities over time, evaluators can compare households’ health knowledge in districts with and without these activities (controlling for other factors such as formal education and wealth of the household).

The same procedure also applies to other HIV/AIDS interventions and broader health programmes. For all these cases, the **use of secondary data allows programme evaluators to assess impacts at comparatively low costs**. At the same time, this limits the analysis to countries for which national household and facility data is available to a sufficient extent and quality.

6. Conclusion

This paper was motivated by recent findings about the side-effects of international health interventions. This problem area is relevant for the extensive HIV/AIDS activities supported by the GDC. The following main points emerged from this analysis.

Despite the persistent lack of research, there is a growing understanding that the impact of **targeted health programmes can go well beyond their primary stated purpose and may promote as well as interfere with health system development in host countries**. Targeted responses may stimulate synergies, and where interferences are likely, they are manageable. **Partial / gradual integration into and alignment with country health systems** are generic starting points for addressing such side-effects.

International health actors have begun incorporating these insights into health policy and practice, and the GDC is no exception. Health sector and HIV/AIDS policy documents have evolved over time through assigning **increasing priority to avoiding health system disruptions. Practice reflects this**, with FC projects having undergone notable developments in design (e.g. selective integration and “linking”), reporting (e.g. awareness of interactions with health systems), and coordination with accompanying measures (e.g. technical assistance). Despite this case of continuing improvement and adjustment, the lack of systematic examination of project side-effects impedes further progress.

Opportunities exist for further supporting the present progress towards health system awareness and responsiveness. Interferences could be mitigated and synergies fostered if programme design processes adopt an **analysis of eight critical health system functions⁶** and their interaction with the intervention in question. To aid this process, we proposed a **three-step procedure** consisting of (1) identifying forms of interaction between health intervention and the country health system along these critical health system functions, (2) analysing likely synergies and interferences with the health system along the main interfaces, and (3) developing packages of remedial and supportive action across anticipated effects in light of the wider health intervention landscape in the recipient country. Monitoring and evaluation of these effects can (and should) be improved, too. Relying primarily on inputs, processes, and outputs, programme monitoring can **use indicators** such as health worker and patient satisfaction or relative developments in outputs (targeted vs. non-targeted services) **as early warning systems for systemic impacts**. More elaborate statistical techniques could provide further insights into system-wide outcomes and impacts of targeted interventions.

The work we present here could be developed further in order to **promote the awareness of and responsiveness to system-wide side-effects in** targeted health interventions. Potential uses of this work are in project appraisal and monitoring, but also evaluation practices could benefit. The **project appraisal stage** has so far lacked instruments to systematically assess system-wide effects. Insights from this paper could feed into existing project appraisal procedures (e.g. feasibility studies) to include the three analytical steps outlined earlier. This may take the form of a **checklist** for project designers (Box 7 summarises the steps involved in conducting such assessments). Individuals endowed with project appraisal tasks could then **utilise the health system framework** and its eight interfaces to identify important effects and design responses accordingly. To ensure consistent monitoring of the identified effects, it is useful to **select appropriate indicators** during project appraisal.

⁶ Recall that these eight functions are governance, health financing, planning, health information systems and monitoring, health workforce, logistics and supply management, service delivery, and recipient demand.

The **experiences of social marketing** contained in this paper can be used as a basis for other project types (see below for caveats involved in institutionalising such changes).

Box 7: Health System Assessments can be Operationalized

Step 1: Identify Interfaces

- Characterise the HIV/AIDS intervention in terms of its overlaps with and integration into health system functions
- Select interfaces with strongest interactions

Step 2: Assess Potential Health System Effects

- For each critical interface, analyse how interactions between actors and resources can affect the performance of the health system at large
- Augment identified effects with lessons from past practice

Step 3: Develop Programmatic Responses

- Ascertain existing programme-level activities (e.g. technical cooperation) that are linked to the intervention and which are already directed at system-wide effects
- Based on choices to align and partially link the intervention with the country health system, consider individual responses to the remaining negative and positive effects
- Synthesise programmatic responses in order to detect redundant, inconsistent, and narrowly focused activities
- Select package of action that provides best compromise between primary effects and health system impacts
- Select appropriate indicators for monitoring of health system effects throughout project implementation

Project monitoring could also benefit from the methods and indicators proposed here. Possible **indicators for interface monitoring** in social marketing have been suggested in Chapter 5 (the more generic list in Appendix 2 extends to projects with other characteristics). **TRaC- and other studies** commissioned by social marketing agencies can be adapted to monitor for example systemic changes in recipient demand for health services (provided sufficient funding for such adjustments). Alternatively, **contractual agreements** between implementing agencies and (lead) donors could help generate some of the underlying data if it is not readily available from other sources. Through such forms of close co-operation between donor and implementing agency, **evaluation practice** benefits, too (e.g. by making operational project data available for statistical impact evaluation). The evaluation of system-wide side-effects in targeted interventions can be further promoted if systematic

impact evaluation approaches such as the proposed five-step procedure are more widely practiced, and if evaluator guidelines are amended by assessments of the intervention's intended and unintended side-effects. These and other active adjustments to evaluation practice potentially contribute to **revealing system-wide effects for already concluded projects** whose reporting could not yet adapt to the developments in the GDC's sector policy and practice.

The FC has demonstrated **continuing efforts to accommodate health system effects in the design, monitoring, and evaluation of HIV prevention projects** using social marketing. Past momentum in narrowing the remaining gap between policy and practice will likely be maintained, and the insights from this paper are hoped to expedite this process. The institutionalisation of process adjustments in project design, monitoring, and evaluation, however, requires a thorough assessment of **feasibility, desirability, and workload**, involving policy makers as well as project managers and other stakeholders. Overall, costs and benefits of such a process are subject to the **trade-offs** between delivery of primary services of the health intervention and optimising its side-effects.

More generally, this paper advocates for an enabling environment in which **targeted health programmes** are **considered holistically in policies and guidelines**. Checklists aside, **adjustments of target systems** in health programme modules to include system-wide effects may be a long-term option in this direction. In addition, while system-wide effects of targeted interventions have featured prominently in policies in terms of programme design, their **monitoring and evaluation** have yet to become components of GDC policy. Such developments, if pursued, necessitate complementary responses in terms of programme appraisal and evaluation capacity. Finally, a **pragmatic approach to targeted health programmes** is imperative if their potential is to be realised. Horizontal approaches

emphasising integration over interaction help build health systems, but their ability to achieve disease-specific targets is fairly limited. It appears more beneficial to consider horizontal and targeted health interventions as **complements, rather than as substitutes**. Similarly, SWAps and associated joint financing baskets may support alignment across vertical programmes and health systems, but they are certainly no universal means for overcoming challenges and seizing synergies of targeted approaches.

Breaking ground for all these changes requires a **culture of “systemic thinking”**. Awareness about the system-wide effects of targeted interventions may be instilled through recurrent presentations and discussion sessions on this subject to **foster knowledge exchange among implementers**. **“Do no harm” (or equivalent) paradigms** – known in the area of conflict-sensitive interventions – could be a further step in this direction, with programme designs being selected so as to minimise the adverse side-effects of targeted interventions. In short, the systemic side-effects in targeted interventions are fertile ground for further discussion and analysis in the German Financial Cooperation.

References

- Atun, R. A., Bennett, S., & Duran, A. (2008). *When do vertical (stand-alone) programmes have a place in health systems?*. Copenhagen: WHO.
- Atun, R., de Jongh, T., Secci, F., Ohiri, K., & Adeyi, O. (2010). A systematic review of the evidence on integration of targeted health interventions into health systems. *Health Policy and Planning*, 25(1), 1-14.
- Aylward, R. B., Bilous, J., Tangermann, R. H., Sanders, R., Maher, C. et al. (1997). Strengthening routine immunization service in the Western Pacific through the eradication of poliomyelitis. *The Journal of Infectious Diseases*, 175(Suppl. 1), S268-S271.
- Baker, M., McFarland, D., Gonzales, M., Diaz, M. J., & Molyneux, D. H. (2007). The impact of integrating the elimination programme for lymphatic filariasis into primary health care in the Dominican Republic. *International Journal of Health Planning and Management*, 22(4), 337-352.
- Banteyerga, H., Kidanu, A., Hotchkiss, D., De, S., Tharaney, M. et al. (2010). *The system-wide effects of the scale-up of HIV/AIDS, tuberculosis, and malaria services in Ethiopia*. Bethesda, MD: Health Systems 20/20 Project, Abt Associates Inc.
- Bennett, S., Boerma, J. T., & Brugha, R. (2006). Scaling up HIV/AIDS evaluation. *The Lancet*, 367(9504), 79-82.
- Biesma, R., Brugha, R., Harmer, A., Walsh, A., Spicer, N., & Walt, G. (2009). The effects of global health initiatives on country health systems: a review of the evidence from HIV/AIDS control. *Health Policy and Planning*, 24(4), 239-252.
- BMZ [Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung]. (2008). *Sexuelle und Reproduktive Gesundheit und Rechte, Bevölkerungsdynamik* [BMZ Spezial 148]. Bonn: BMZ
- BMZ. (2009). *Sektorkonzept „Gesundheit in der deutschen Entwicklungspolitik“* [BMZ Konzepte 183]. Bonn: BMZ.
- BMZ. (2012). *Deutschlands Beitrag zur nachhaltigen Eindämmung von HIV* [BMZ-Strategiepapier 5|2012]. Bonn: BMZ.
- BMZ. (n.d.). *Promoting linkages and synergies for sexual and reproductive health and rights and HIV/AIDS: key issues and opportunities* [Policy Brief]. Bonn: BMZ.
- Bonus, S., Rani, M., & Baker, T. D. (2003). The impact of the national polio immunization campaign on levels and equity in immunization coverage: evidence from rural North India. *Social Science & Medicine*, 57(10), 1807-1819.
- Bonus, S., Rani, M., & Razum, O. (2004). Global public health mandates in a diverse world: the polio eradication initiative and the expanded programme on immunization in sub-Saharan Africa and South Asia. *Health Policy*, 70(3), 327-345.
- Coulibaly, Y., Cavalli, A., Dormael, D. van, Polman, K., & Kegels, G. (2008). Programme activities: a major burden for district health systems?. *Tropical Medicine and International Health*, 13(12), 1430-1432.
- De, S., Wang, W., & Wright, J. (2009). *What happens to HIV/AIDS funds at the country level? A Comparative analysis of before and after the donor influx in Kenya, Malawi, Rwanda, Tanzania and Zambia*. Bethesda, MD: Health Systems 20/20 Project, Abt Associates Inc.
- Gauri, V., & Khaleghian, P. (2002). *Immunization in developing countries: its political and organizational determinants* [World Bank Policy Research Working Paper No. 2769]. Washington, D.C.: World Bank.

- Gonzales, C. L. (1965). *Mass campaigns and general health services*. Geneva: World Health Organisation.
- Haenssgen, M. (2012). *Analysing the impact of the Polio Eradication Initiative on routine immunisation in Uttar Pradesh, India* (Unpublished M.Phil. thesis). University of Oxford, Oxford.
- Land, T., & Hauck, V. (2003). *Building coherence between sector reforms and decentralisation: do SWAps provide the missing link?* [ecdpm discussion paper no. 49]. Maastricht: European Centre for Development Policy Management.
- Marchal, B., Cavalli, A., & Kegels, G. (2009). Global health actors claim to support health system strengthening: Is this reality or rhetoric?. *PLoS Medicine*, 6(4), e1000059.
- Marchal, B., Dormael, M. van, Pirard, M., Cavalli, A., Kegels, G., & Polman, K. (2011). Neglected tropical diseases (NTD) control in health systems: the interface between programmes and general health services. *Acta Tropica*, 120(Suppl. 1), S177-S185.
- Mills, A. (2005). Mass campaigns versus general health services: What have we learnt in 40 years about vertical versus horizontal approaches?. *Bulletin of the World Health Organization*, 83(4), 315-316.
- Newell, K. W. (1988). Selective primary health care: the counter revolution. *Social Science & Medicine*, 26(9), 903-906.
- Potter, D., Goldenberg, R. L., Chao, A., Sinkala, M., Degoot, A. et al. (2008). Do targeted HIV/AIDS programs improve overall care for pregnant women?. *Journal of Acquired Immune Deficiency Syndrome*, 47(1), 79-85.
- Rudner, N. (2012). *Wirkungsmessung in Gesundheitsvorhaben* [unpublished draft].
- Travis, P., Bennett, S., Haines, A., Pang, T., Bhutta, Z. et al. (2004). Overcoming health-systems constraints to achieve the Millennium Development Goals. *The Lancet*, 364(9437), 900-906.
- WHO [World Health Organization]. (1975). *Alternative approaches to meeting basic health needs in developing countries: a joint UNICEF/WHO study*. Geneva: WHO.
- WHO. (2007). *Strengthening health systems to improve health outcomes: WHO's framework for action*. Geneva: WHO.
- WHO. (2010). *Monitoring and evaluation of health system strengthening: an operational framework*. Geneva: WHO.
- WHO MPSCG [WHO Maximizing Positive Synergies Collaborative Group]. (2009). An assessment of interactions between global health initiatives and country health systems. *The Lancet*, 373(9681), 2137-2169.

Appendix 1: Responses to Health System Effects in Social Marketing

Chapter 4 presented selected responses to system-wide effects of HIV prevention projects that use the social marketing of condoms, hinting at further areas of action. Appendix Table A1 below provides a more comprehensive overview, based on past practice in FC-supported social marketing-based projects and derived from evaluation reports and studies of other health interventions. Note that the list below is not exhaustive. Likewise, that fact that one response addresses multiple interfaces and a variety of health system effects does not make it intrinsically more appropriate than an alternative, more focused response (i.e. the table below does not indicate benefits and costs of various actions). Therefore, thorough and project-specific assessments remain imperative.

Appendix Table A1: Illustrative List of Responses to Health System Effects in Social Marketing

Area of Action	Action	Response to Synergy or Interference	Expected Result
Service Integration (Horizontal, Upstream, Downstream)	Design follow-up as well as upstream integration of activities through e.g. employment programmes, re-integration, drug therapies	Financing (syn.)	Further reduce burden on health system due to averted HIV infections
		Demand generation (int.)	Avoid demand constraints for other health services and products as a result of accessible service provision and access to target groups
	Enable clients to act on demand through insurance and voucher schemes as well as health infrastructure improvements	Financing (syn.)	Reduce out-of-pocket expenditures for households
		Service delivery (syn.)	Augment public health service “portfolio” and achieve greater efficiency and access
		Demand generation (syn.)	Raise demand for health services
	Integrate sexual and reproductive rights into a holistic approach to IEC (including appropriate communication)	Demand generation (syn.)	Raise demand for health services as women become more empowered
		Demand generation (syn.)	Develop a market for condoms
	Apply a comprehensive prevention, diagnosis, treatment, and rehabilitation (orphans) approach	Financing (syn.)	Further reduce burden on health system due to averted HIV infections
		Service delivery (int.)	Avoid duplication of implementation structures and activities
	Further engage in the integration of other FP and RH activities in social marketing portfolio , including birth spacing, female circumcision, diarrhoea, education (necessitates minimally effective operations of SMA to take up other tasks), for example through health days	Governance (int.)	Foster institutional sustainability
		Financing (syn.)	Reduce out-of-pocket expenditures for households
		Financing (syn.)	Further reduce burden on health system due to averted HIV infections
		Service delivery (syn.)	Augment public health service “portfolio” and achieve greater efficiency and access
		Demand generation (int.)	Avoid demand constraints for other health services and products as a result of accessible service provision and access to target groups
		Financing (syn.)	Mobilise donor and national funding during and after project
Pursue total market approach to build market as a whole including generic education and behaviour change campaigns (condom market integration)	Service delivery (int.)	Avoid disruption caused by crowding out of private sector	
	Demand generation (syn.)	Develop a market for condoms	

Area of Action	Action	Response to Synergy or Interference	Expected Result
Regulatory Environment	Press for legal recognition of NGOs and publication and registration of local NGOs to raise visibility regarding portfolio, potential, and performance (so that other donors / products can join in)	Governance (syn.) Governance (int.) Planning (int.) Logistics and supply management (int.) Demand generation (int.)	Foster health system pluralisation and accountability through engagement of non-state actors Foster institutional sustainability Avoid inefficiencies in resource allocation that stem from insufficient coordination between public sector and SMAs Prevent duplication of efforts through separate marketers (SMAs) for different health products, funded by different donors Ensure that programmatic errors (e.g. lacking financial sustainability) of SMA do not adversely affect generic condom demand
	Advocate for incorporation and participation of social marketing and non-state actors in health sector policy	Governance (int.) Governance (syn.) Planning (int.)	Foster institutional sustainability Foster health system pluralisation and accountability through engagement of non-state actors Avoid inefficiencies in resource allocation that stem from insufficient coordination between public sector and SMAs
	Support the inclusion of SMAs, NGOs, private sector in regulatory sector framework	Governance (syn.) Planning (syn.) Planning (int.)	Foster health system pluralisation and accountability through engagement of non-state actors Strengthen programme management capacity outside of public sector Avoid inefficiencies in resource allocation that stem from insufficient coordination between public sector and SMAs
		Health workforce (syn.)	Strengthen public and private human resources through training of managers, marketers, and mobilisers (including task-shifting)
		Service delivery (syn.)	Augment public health service "portfolio" and achieve greater efficiency and access
		Demand generation (int.)	Ensure that programmatic errors (e.g. lacking financial sustainability) do not adversely affect generic condom demand
		Health workforce (int.) Logistics and supply management (syn.) Logistics and supply management (syn.) Demand generation (syn.) Demand generation (int.)	Counteract replication of marketing and IEC tasks Expand supply networks for health products and thus increased access Improve supply and quality of inputs and products Raise demand for health services Avoid demand constraints for other health services and products as a result of communication strategies that are only available for / overemphasising HIV/AIDS and family planning
	Use established SM networks (e.g. distribution through "kiosks", local community mobilisers, or health centres) for other health products (e.g. rehydration solutions, clean delivery packs, first aid kits) as long as overburdening is avoided	Logistics and supply management (syn.) Logistics and supply management (syn.) Service delivery (int.)	Expand of supply networks for health products and thus increased access Improve supply and quality of inputs and products Avoid duplication of implementation structures and activities
Distribution-Chain-Related Measures	Consider strengthening and use of public health sector supply chains	Logistics and supply management (int.)	Prevent duplication of national health supply chains

Area of Action	Action	Response to Synergy or Interference	Expected Result
Stakeholder Coordination	Incorporate private and NGO sector in policy dialogue , including community stakeholders (participatory approach) , aided by the targeting approach of SM projects and mechanisms to help local and marginalised groups articulate their stance	Governance (syn.) Governance (int.) Planning (int.) Health workforce (int.) Service delivery (syn.)	Foster health system pluralisation and accountability through engagement of non-state actors Foster institutional sustainability Avoid inefficiencies in resource allocation that stem from insufficient coordination between public sector and SMAs Circumvent replication of marketing and IEC tasks (if also health workforce targeted) Augment public health service “portfolio” and achieve greater efficiency and access
	Increase government financial participation in social marketing activities	Financing (int.) Demand generation (int.)	Mitigate increased parallel, unaligned, and off-budget donor support Ensure that programmatic errors (e.g. lacking financial sustainability) do not adversely affect generic condom demand (due to improved ownership)
	Set up roundtable with donors and government	Financing (syn.) Financing (int.)	Mobilise donor and national funding during and after project Mitigate increased parallel, unaligned, and off-budget donor support
	Strengthen regional health organisations including regional health fund, monitoring and evaluation systems, planning and budgeting	Governance (syn.)	Improve cooperation across sectors and borders
	Introduce joint financing basket to align donor and country preferences	Financing (int.) Demand generation (int.)	Mitigate increased parallel, unaligned, and off-budget donor support Avoid demand constraints for other health services and products as a result of prioritisation of HIV over other conditions
	Promote HIV mainstreaming approaches	Governance (syn.)	Improve cooperation across sectors and borders
	Support SMAs in their initiatives, e.g. to establish training and research institutes	HIS and Monitoring (syn.)	Strengthen national research and monitoring capacity
	Use economies of scale and scope in distribution through mergers/alliances/cooperation between multiple local NGOs	HIS and Monitoring (int.) Health workforce (int.) Logistics and supply management (int.)	Avoid duplication of project-specific accompanying research, market analyses, and evaluations (joint monitoring of e.g. retail market) Avoid replication of marketing and IEC tasks Prevent duplication of national health supply chains
	Transfer international “ best practice ” knowledge to public sector regulators and private sector implementers (including quality standards and accreditation of suppliers and retailers)	Planning (syn.) Logistics and supply management (syn.) Service delivery (syn.)	Build implementation capacity outside government sector Improve supply and quality of inputs and products Improve quality standards in implementation processes and service delivery
	Knowledge transfer to build local structures among SMA and private sector	Governance (int.) Planning (syn.) Health workforce (syn.)	Foster institutional sustainability Strengthen programme management capacity outside of public sector Strengthen public and private human resources through training of managers, marketers, and mobilisers
Implementer-directed Action	Utilise accompanying research of SMA for health system monitoring	HIS and Monitoring (syn.)	Strengthen national research and monitoring capacity

Appendix 2: Health System Monitoring Indicators

Chapter 5 addressed the selection of indicators for interface monitoring in targeted interventions with applications to HIV prevention and polio eradication. Given the diversity of HIV/AIDS programmes supported by the German FC, Appendix Table A2 provides a more generic list of possible indicators as a starting point for the further development of agreed monitoring and impact assessment indicators. The selection of these indicators during the project appraisal stage could directly follow from the analysis presented in Chapter 4. After the initial examination of programme interaction with the country health system, stronger and weaker interfaces can be delineated and potential positive and negative effects identified. Interface monitoring indicators in turn address the most pressing of these effects. This enables project management to trace the effectiveness of responses to anticipated system-wide effects where corrective action is feasible, and the wider health system impact of the project otherwise.

However, not all of these indicators are easy to interpret as they are simultaneously determined by multiple factors. Establishing causal chains to predict indicator movements can facilitate interpretation. For example, movements in out-of-pocket expenditures of households may indicate higher demand for health services, which would correspond to a positive effect on demand generation (e.g. if IEC campaigns include preventive health education). Conversely, higher out-of-pocket expenditures may also be a result of higher costs of healthcare at same demand levels, which could be a negative service delivery impact (e.g. if routine processes are disrupted or inputs diverted). While different causal chains serve as explanation for such indicator movements, the specific intervention design and health system context typically allow ruling out one or another of the competing explanations. The most likely explanation then signals the system-wide effects of the health intervention (e.g. IEC stimulated higher demand as the costs of healthcare are unaffected).

Appendix Table A2: List of Generic Interface Monitoring Indicators

Interface	Indicators	Explanation
Governance	<ul style="list-style-type: none"> • Per cent of ODA contributions provided as programme-based approach (PBA) • Total number and per cent of jointly conducted donor missions and country evaluations • Number of donors in a specific sector or sub sector • Number of stakeholder representatives involved in polio policy-making and programme design 	Indicators for donor harmonisation and associated avoidance of redundancies
		Quantitative indicator to assess health system pluralisation and accountability
Financing	<ul style="list-style-type: none"> • Relative and absolute changes in spending patterns for HIV/AIDS compared to national health spending • Distribution of financing sources of HIV/AIDS vs. other national health programmes and general healthcare 	Quantitative indicators to assess balance of health priorities within and beyond polio target group
	<ul style="list-style-type: none"> • Out-of-pocket expenditure of people living with/without HIV/AIDS and other diseases • Use of public systems for financial administration 	Quantitative indicator to assess households' financial ability to access health services
	<ul style="list-style-type: none"> • Number of parallel project implementation units 	Extent to which national systems are being utilised and developed through the intervention
Planning	<ul style="list-style-type: none"> • Resource allocation between communities with and without project (number and distribution of hospital beds / 1,000 people; number and distribution of health facilities / 10,000 people; percentage of population with access to basic health, nutrition, family planning services) 	To assess institutional antecedents for coordination effort and duplication of activities
		To assess crowding-out or -in of non-targeted health services

Appendix Table A2: List of Generic Interface Monitoring Indicators

HIS and Monitoring	<ul style="list-style-type: none"> • Per cent of jointly conducted country evaluations • Monitoring frame covering multiple diseases and health conditions within HMIS, harmonised across donors, government, private sector, and civil society 	Quantitative and qualitative indicators to assess harmonisation of data generation and monitoring
Health Work-force	<ul style="list-style-type: none"> • Per cent of time or days per year working on HIV/AIDS, targeted health programmes, and general/routine services • Per cent of health workers satisfied with working conditions / workload / financial rewards in communities with and without project • Number of community volunteers / mobilisers trained by HIV/AIDS implementer (SMA) and ratio to public community health workers 	Quantitative indicator for imbalances and potential absorption of health workers by polio eradication programme Quantitative “early warning” indicator for overburdening of health workers Quantitative indicator to assess whether work-force strengthening (training) through SMA complements public sector workforce
	<ul style="list-style-type: none"> • Per cent of patients satisfied with provided services or facilities in communities with and without project • Availability of services and equipment in health facilities in communities with and without project 	Quantitative indicators to assess spillovers on health service availability and quality
	<ul style="list-style-type: none"> • Quality assurance mechanisms for products and processes (share of certified counsellors, share of accredited testing institutions, existence of quality standards for condoms and other contraceptives) • Efficient transfer between different levels of the health care system (e.g. referral from testing to secondary care institution) • Proportion of clients of HIV services who receive family planning services by target groups (e.g. HIV-positives, HIV-negatives, youth) 	Qualitative indicator to assess knowledge transfer and improvements in inputs, processes, products, and/or services Qualitative and quantitative indicators to assess service integration around the intervention (here: downstream)
Logistics and Supply Management	<ul style="list-style-type: none"> • Use of government procurement systems 	Extent to which national systems are being utilised and developed through the intervention
	<ul style="list-style-type: none"> • Availability and prices of common essential drugs and supplies in communities with and without project 	If health products (or substitutes) are supplied by implementer, lower prices and higher availability can indicate improved logistics
Demand Generation	<ul style="list-style-type: none"> • Number of outpatient visits / year / 1,000 people in communities with and without project • Reputation of health facilities in communities with and without project 	Quantitative indicators to assess spillovers on utilisation of existing health services
	<ul style="list-style-type: none"> • Per cent of population with correct knowledge of targeted vs. non-targeted health services (e.g. development HIV/AIDS knowledge vs. knowledge about immunisation) 	Quantitative indicator to address imbalances and distortions in health knowledge
	<ul style="list-style-type: none"> • Per cent of population covered by social security mechanisms 	To assess provision of health services and products that enable project recipients to act on demand
	<ul style="list-style-type: none"> • Ratio of demanded targeted vs. non-targeted services (e.g. HIV testing vs. antenatal care, assisted deliveries, Caesarean sections, immunisation coverage) 	To assess crowding-out or -in of demand for non-targeted health services

Sources: Derived from Baker et al. (2007), Banteyerga et al. (2010), Bennett et al. (2006), Coulibaly et al. (2008), De et al. (2009), Haenssgen (2012), Potter et al. (2008), Rudner (2012), WHO (2010).

Appendix 3: List of Reviewed Documents and Studies

KfW Projects			
No.	Country	BMZ- No.	Title
1	Bangladesh	200366237	Gesundheits-, Ernährungs- und Bevölkerungsprogramm HNPSP
2	Benin	200967042	Familienplanung und HIV-Prävention III
3	Burkina Faso	199666207	PROMACO II, Familienplanung u. HIV-Prävention, Phase II
4	Burkina Faso	200165126	PROMACO III, Social Marketing zur HIV-Prävention/Familienplanung, Phase III
5	Burkina Faso	200566117	Programm zur HIV/AIDS-Prävention und Förderung der reproduktiven Gesundheit
6	Burundi	201066919	Sektorprogramm Gesundheit Phase III
7	Cameroon	199965641	Social Marketing zur HIV-Prävention I
8	Cameroon	200666172	Gesundheitsprogramm
9	CARICOM (Caribbean Community)	200365403	HIV-AIDS-Prävention in der Karibik
10	CARICOM (Caribbean Community)	200666404	HIV/AIDS-Prävention und Förderung der reproduktiven Gesundheit in der Karibik II
11	CEMAC (Economic and Monetary Community of Central Africa)	200866228	HIV-AIDS-Prävention in Zentralafrika II
12	Chad	199466475	Familienplanung/HIV-Prävention Phase I
13	Chad	199666165	Familienplanung/HIV-Prävention Phase II
14	Chad	200065250	Familienplanung/HIV-Prävention Phase III
15	China	200365957	Gesundheitsprogramm westliche Provinzen
16	China	200665760	HIV/AIDS-Prävention in Grenzregionen
17	Côte d'Ivoire	199966417	Familienplanung und HIV-Prävention II
18	Côte d'Ivoire	200465955	HIV- Aids Prävention III
19	ECOWAS (Economic Community of West African States)	200566307	Reproduktive Gesundheit und HIV/AIDS-Prävention in der ECOWAS-Region
20	Guinea	200865501	Förderung der Reproduktiven- und Familiengesundheit in Guinea III
21	India	200166306	Bevölkerungsprogramm (Social Marketing) II
22	Kenya	201065853	Programm Entwicklung des Gesundheitssektors-Unterstützung der Gesundheitsfinanzierung
23	Kyrgyzstan	200766519	HIV - Aids - Bekämpfung II
24	Kyrgyzstan	200770354	HIV - Aids - Bekämpfung II (Begleitmaßnahme)
25	Malawi	200566521	Unterstützung der Sektorstrategie Gesundheit
26	Mali	200366773	HIV/AIDS-Prävention und reproduktive Gesundheit in Mali
27	Namibia	199665894	Familienplanung/HIV-Prävention
28	Nepal	201065440	SWAp - Gesundheit
29	Niger	200866756	Familienplanung + HIV/AIDS-Prävention III
30	Pakistan	200566380	HIV/AIDS: Blutbankensicherheit
31	Senegal	200265033	Soziale Vermarktung von Kontrazeptiva
32	South Africa	200266064	HIV-Prävention durch freiwilliges Beraten und Testen I
33	South Africa	200666065	Programm zur Unterstützung von Aidswaisen
34	South Africa	201065994	HIV/Aids Prävention
35	Tanzania	200065813	Gesundheitsreform Basked Fund I
36	Tanzania	200765081	Ko-Finanzierung Social Marketing von Kondomen und Kontrazeptiva II
37	Tanzania	200765545	Soziale Sicherung für Arme zur Verbesserung der Müttergesundheit und der HIV-Prävention
38	Tanzania	200765560	KV Programm zur Unterstützung des Gesundheitssektors II
39	Uganda	199865098	AIDS-Prävention II
40	Uzbekistan	200066530	Programm zur Förderung der reproduktiven Gesundheit
41	Vietnam	200366492	Sektorprogramm Gesundheit und Familienplanung/HIV/AIDS IV
42	Yemen	200765230	KV Verbesserung der reproduktiven Gesundheit II
43	Yemen	201166941	Reproduktive Gesundheit - Krisenprogramm I

Policy Documents		
No.	Type	Reference
1	Policy Paper	BMZ (2008). <i>Sexuelle und Reproduktive Gesundheit und Rechte, Bevölkerungsdynamik</i> [BMZ Spezial 148]. Bonn: BMZ.
2	Policy Paper	BMZ (2009). <i>Sektorkonzept „Gesundheit in der deutschen Entwicklungspolitik“</i> [BMZ Konzepte 183]. Bonn: BMZ.
3	Policy Paper	BMZ (2012). <i>Deutschlands Beitrag zur nachhaltigen Eindämmung von HIV</i> [BMZ-Strategiepapier 5 2012]. Bonn: BMZ.
4	Policy Brief	BMZ (n.d.). <i>HIV-Prävention in der deutschen Entwicklungszusammenarbeit</i> [unpublished paper].
5	Policy Brief	BMZ (n.d.). <i>Promoting linkages and synergies for sexual and reproductive health and rights and HIV/AIDS: key issues and opportunities</i> [Policy Brief]. Eschborn: GTZ.
6	Guideline	BMZ (n.d.). <i>Verknüpfung von SRG-R und HIV & AIDS in Gesundheitssystemen im Rahmen der deutschen EZ</i> [unpublished paper].
7	Policy Brief	Bodal, H. (2011). <i>Krankheitsspezifische Programme als Antreiber zur Stärkung von Gesundheitssystemen</i> [GIZ unpublished draft].
8	Guideline	KfW (2005). <i>Zur Berücksichtigung der Nachhaltigkeit durch die KfW in Schlussprüfungen von Gesundheitsprojekten</i> [unpublished paper].
9	Guideline	KfW (2010). <i>Social Marketing und Social Franchising-Ansätze im Bereich Sexuelle und Reproduktive Gesundheit/ HIV-Prävention – Arbeitshilfe für Programm Manager</i> [unpublished paper].
10	Guideline	Rudner, N. (2012). <i>Wirkungsmessung in Gesundheitsvorhaben</i> [unpublished draft].
Polio Studies		
1	AIIMS-IPEN [All India Institute of Medical Sciences – IndiaCLEN Program Evaluation Network]. (1998). <i>Pulse polio immunization program evaluation 1997-98</i> . New Delhi: AIIMS-IPEN.	
2	AIIMS-IPEN. (1999). <i>Pulse polio immunization program evaluation 1998-99</i> . New Delhi: AIIMS-IPEN.	
3	AIIMS-IPEN. (2000). <i>Intensive pulse polio immunization program evaluation 1999-2000</i> . New Delhi: AIIMS-IPEN.	
4	Aylward, R. B., Bilous, J., Tangermann, R. H., Sanders, R., Maher, C. et al. (1997). Strengthening routine immunization service in the Western Pacific through the eradication of poliomyelitis. <i>The Journal of Infectious Diseases</i> , 175(Suppl. 1), S268-S271.	
5	Bonus, S., Rani, M., & Baker, T. D. (2003). The impact of the national polio immunization campaign on levels and equity in immunization coverage: evidence from rural North India. <i>Social Science & Medicine</i> , 57(10), 1807-1819.	
6	Bonus, S., Rani, M., & Razum, O. (2004). Global public health mandates in a diverse world: the polio eradication initiative and the expanded programme on immunization in sub-Saharan Africa and South Asia. <i>Health Policy</i> , 70(3), 327-345.	
7	Gauri, V., & Khaleghian, P. (2002). <i>Immunization in developing countries: its political and organizational determinants</i> [World Bank Policy Research Working Paper No. 2769]. Washington, D.C.: World Bank.	
8	Goodman, T., Dalmiya, N., de Benoist, B., & Schultrink, W. (2000). Polio as a platform: using national immunization days to deliver vitamin A supplements. <i>Bulletin of the World Health Organization</i> , 78(3), 305-314.	
9	Gounder, C. (1998). The progress of the Polio Eradication Initiative: what prospects for eradicating measles?. <i>Health Policy and Planning</i> , 13(3), 212-233.	
10	Grassly, N., LaForce, M., Modlin, J., Murthy, N., Rohde, J. et al. (2009). <i>Independent evaluation of major barriers to interrupting poliovirus transmission in India</i> . Geneva: WHO.	
11	Haensgen, M. (2012). <i>Analysing the impact of the Polio Eradication Initiative on routine immunisation in Uttar Pradesh, India</i> (Unpublished M.Phil. thesis). University of Oxford, Oxford.	
12	Hafeez, A., Shefner-Rogers, C., Borel, P., Perveen, R., & Tangcharoensathien, V. (2009). <i>Independent evaluation of major barriers to interrupting poliovirus transmission in Pakistan</i> . Geneva: WHO.	
13	IPEN [IndiaCLEN Program Evaluation Network]. (2007). <i>Social determinants of the polio eradication program 2006-2007</i> . New Delhi: IPEN.	
14	Jeffery, P., & Jeffery, R. (2011). Underserved and overdosed? Muslims and the Pulse Polio Initiative in rural north India. <i>Contemporary South Asia</i> , 19(2), 117-135.	
15	Kapil, U. (2005). Changing scenario of child health due to pulse polio immunisation campaigns. <i>Indian Journal of Community Medicine</i> , 30(3), 96.	
16	Levin, A., Ram, S., & Kaddar, M. (2002). The impact of the Global Polio Eradication Initiative on the financing of routine immunization: case studies in Bangladesh, Côte d'Ivoire, and Morocco. <i>Bulletin of the World Health Organization</i> , 80(10), 822-828.	
17	Loevinsohn, B., Aylward, B., Steinglass, R., Ogden, E., Goodman, T. et al. (2002). Impact of Targeted Programs on Health Systems: A Case Study of the Polio Eradication Initiative. <i>American Journal of Public Health</i> , 92(1), 19-23.	

18	MacAulay, C., & Varma, M. P. (2001). <i>The Global Polio Laboratory Network: a model for good laboratory practice</i> . Bethesda, M.D.: Quality Assurance Project.
19	Mansour, E., Aylward, R. B., & Cummings, F. (1997). Integrated disease control initiatives: polio eradication and neonatal tetanus elimination in Egypt. <i>The Journal of Infectious Diseases</i> , 175(Suppl. 1), S277-S280.
20	Møgedal, S., & Stenson, B. (2000). <i>Disease eradication: friend or foe to the health system?</i> . Geneva: WHO.
21	Mohammed, A. J., Datta, K.K., Jamjoon, G., Magoba-Nyanzi, J., Hall, R. et al. (2009). <i>Report on barriers to polio eradication in Nigeria</i> . Geneva: WHO.
22	NRHM [National Rural Health Mission]. (2009). <i>Reproductive and Child Health Programme phase II: 6th joint review mission</i> . Delhi: Government of India.
23	Razum, O., Liyanage, J., & Nayar, K. R. (2001). Difficulties in polio eradication. <i>The Lancet</i> , 357(9254), 476.
24	Saxena, S. (2009). <i>Health policy discourses in developing countries: the case of Poliomyelitis Eradication Initiative in India</i> (Unpublished M.Phil. thesis). University of Oxford, Oxford.
25	Tangermann, R. H., Costales, M., & Flavier, J. (1997). Poliomyelitis eradication and its impact on primary health care in the Philippines. <i>The Journal of Infectious Diseases</i> , 175(Suppl. 1), S272-S276.
26	Toole, M., Simmonds, S., Coghlan, B., & Mojadidi, N. (2009). <i>Report on the independent evaluation of the major barriers to interrupting poliovirus transmission in Afghanistan</i> . Geneva: WHO.
27	Taylor, C. E., Cutts, F., & Taylor, M. E. (1997). Ethical dilemmas in current planning for polio eradication. <i>American Journal of Public Health</i> , 87(6), 922-925.
28	WHO. (2000). <i>Meeting on the impact of targeted programmes on health systems: a case study of the Polio Eradication Initiative</i> . Geneva: WHO.
29	WHO. (2004). <i>Universal Immunization Programme review</i> . New Delhi: WHO Country Office for India.
30	WHO. (2004). <i>Universal Immunization Programme review: Uttar Pradesh</i> . New Delhi: WHO Country Office for India.
31	Yadav, K., Rai, S. K., Vidushi, A. A., & Pandav, C. S. (2009). Intensified pulse polio immunization: time spent and cost incurred at a primary health centre. <i>The National Medical Journal of India</i> , 22(1), 13-17.