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PRACTICAL INFORMATION AND GUIDANCE FOR INTEGRATION OF MNCH AND HIV PROGRAMS WITHIN A CONTINUUM OF HEALTH AND SOCIAL SERVICES

TECHNICAL BRIEF

AIDSTAR-One
AIDS SUPPORT AND TECHNICAL ASSISTANCE RESOURCES

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SECTION I: INTRODUCTION AND BACKGROUND

With new prevention strategies on the horizon and HIV incidence stabilizing or declining in many parts of the world, the tides are beginning to turn on the HIV epidemic. Between 2002 and 2010, new HIV infections globally declined from 3.1 million to 2.7 million and, in sub-Saharan Africa (SSA), about 16 percent fewer people had new HIV infections in 2010 compared with 2001 (UNAIDS 2010). However, 33.3 million people globally are still estimated to be living with HIV, including 2.5 million children, and approximately 40 percent of all women living with HIV are in SSA (UNAIDS 2010). It is evident that there remain technical gaps to scale up the traditionally vertical programs that work towards achieving the millennium development goals (MDGs) that focus on maternal, newborn and child health (MNCH), HIV and AIDS, and malaria (WHO 2008a).

Ninety percent of children who die under age five live in 42 of the most impoverished countries in SSA and Southeast Asia (Ellis and Allen 2006; Bhutta 2004; Black, Morris and Bryce 2003) and more than 50 million women have home deliveries in the absence of a skilled birth attendant (Kerber et al. 2007). The continued vulnerability of women and children demonstrates that moving away from vertical programs and towards MNCH and HIV integration with the incorporation of both health and social service programs, is an important step to improve outcomes. Well-designed MNCH and HIV integration provides combined interventions from the continuum of health and social services to respond to the needs of women and children through facility and community-based interventions. Such integration offers practical and sustainable solutions that increase coverage and cost effectiveness, and allow for holistic care of families so they may live long and healthy lives (see Box 1).

BOX 1. WHY INTEGRATE MNCH AND HIV WITHIN A CONTINUUM OF HEALTH AND SOCIAL SERVICES?

- Expanding access to HIV and maternal, newborn and child health (MNCH) services will help bridge the gap to reach the MDGs: reduce child mortality by two-thirds, and reduce maternal mortality by three-fourths (Jayakumar 2011).
- Integration can link efforts for the two main causes of death among women of reproductive age in the developing world: HIV and complications surrounding pregnancy and childbirth (WHO & UNICEF 2012).
- Integration can reduce required resources for the health facility, social service organization and the patient, improve cost effectiveness, and improve health and social service delivery efficiency (Alliance 2011).
- Integration can increase access to equitable coverage and meet and address the multiple needs of patients and multiple family members (mothers and children) in one visit. There is a potential for improving retention rates, decreasing stigma, and resolving fragmentation of services (Winestone et al. 2012).

Though definitions vary, PEPFAR defines integration as "the organization, coordination and management of multiple activities and resources to ensure the delivery of more efficient and coherent services in relation to cost, output, impact, and use (acceptability)" (Ryan 2011). Empirical evidence for integration is scarce, however strategies and evidence for program effectiveness have been broadly summarized in a Cochrane Review and a World Health Organization (WHO) report (WHO 2008a; Dudley & Garner 2011). Neither of these provides specific data for

MNCH/HIV integration, however, and implementing partners on the ground have only provided anecdotal and scattered evidence.

At the PEPFAR-supported, AIDSTAR-One field-driven learning meeting ("Meeting the HIV/MNCH Health and Social Support Needs of Mothers and Their Young Children") for United States Government (USG) staff and partners held in Ethiopia in November 2011, participants identified the need to compile evidence and information on MNCH and HIV integration to provide a step-by-step guide for policymakers and program planners interested in family centered, integrated services. This technical brief responds to this need and is intended to foster discussion about integration across the continuum of response. It is divided into two sections. The first summarizes various integration models and strategies, the evidence, and information surrounding the continuum of response, family-centered programs, and policy for MNCH and HIV integration. It also includes guidance for establishing a referral network linking health and social services. The second section provides step-by-step practical guidance for program planners on the design, implementation, and monitoring process.

Integration Models and Strategies

There are two principal models of MNCH/HIV integration programs. The first model integrates HIV services into existing MNCH programs and includes strategies such as integrating antiretroviral therapy (ART) into antenatal care (ANC), early infant diagnosis (EID) into immunization programs, and HIV counseling and testing (HCT) for children and/or caregivers into early childhood development (ECD) programs. This model is represented significantly more widely in the literature. The second model takes the opposite approach, integrating MNCH services into HIV care and treatment programs. This model includes strategies that integrate family planning (FP) services and pediatric nutrition programs into HIV care and treatment programs. Model selection is primarily dictated by which funding stream is the primary donor for the particular technical area (Rollins 2013).

BOX 2. INTEGRATION STRATEGIES

The term integration is used in various forms, including:

- A specific package of services offered for a specific population.
  Example: *Integrated management of childhood illness.*
- Multiple services offered at a single service delivery site (consolidation).
  Example: *A health service delivery site that integrates HIV, MNCH, and social services in a single facility.*
- A package of services that is delivered within a network of facilities in a community via an established referral system (coordination).
  Example: *Clients who enroll in a program at a district hospital are referred to a community-based organization for social support services and to a community volunteer, who carries out home-based visits.*
- The approach for policymaking, planning, and management integration at the national, provincial, or district level.
  Example: *A provincial health team manages the health system through contracting with and oversight from multiple sectors within the province* (WHO 2008).

In addition to the two principal models of integration, there are also a number of integration strategies (see Box 2). The most common strategy in the literature is the "one-stop shop," where multiple services are offered within one facility (consolidation). In some cases one provider offers multiple services in one visit, in others, multiple providers attend to the client

in a single visit. A second strategy consists of creating an integrated model of care within a community where a strong network of referrals and protocols is established. Once clients enter the system, they receive all of the interventions offered (coordination), typically including an array of health and social services. The number and variety of services within this model varies widely. Each model and strategy serves to decrease the visit burden required, establishes bi-directional linkages within the community to improve access to health and social services, and ultimately improves efficiency of the health care delivery system and health and social outcomes of clients (see Box 3).

BOX 3. RATIONALE FOR INTEGRATION OF HEALTH AND SOCIAL SERVICES

Community services can promote health care use by:

- Improving referrals and linkages
- Increasing client demand
- Decreasing loss to follow-up
- Increasing opportunities for male involvement
- Helping reduce socio-cultural barriers
- Identifying at-risk children earlier
- Reducing stigma

The Evidence Base

It is widely thought that integrated programs offer efficient and effective services for women and children, however, there are a lack of rigorous studies that measure and examine these benefits. Moreover, there appear to be very few studies that examine the specific effects of social service integration (Sherr 2012). From the available evidence, it is clear that there is: a) evidence of positive outcomes associated with integration, b) some evidence that integration yields no changes, and c) no evidence that integration is harmful. However, it should be noted that there is concern among the HIV and AIDS community that integration may result in fewer resources for vertical programs (Rollins 2013). Nevertheless, the studies presented in Table 1, which summarizes evidence in the literature, demonstrate that integration of HIV and MNCH services is feasible. Box 4 provides links to AIDSTAR-One case studies with in-depth information on successful MNCH/HIV and social support integration programs and Box 5 provides a practical example of integration of social support services into a pediatric HIV program.

BOX 4. CASE STUDIES FOR MNCH/HIV INTEGRATION

AIDSTAR-One has created two case studies on MNCH/HIV and social support integration, which provide in-depth information on successful integration programs:

- *ProVIC "Champion Communities": Prevention of Mother-to-Child Transmission (PMTCT) of HIV in the Democratic Republic of Congo.* Available at: http://www.aidstar-one.com/focus_areas/pmtct/resources/case_study_series/provic_drc
- *Swinging to New Heights: Linking Resources to Build an Integrated Care Network for Orphans and Vulnerable Children and their Caregivers in Nigeria.* Available at: http://www.aidstar-one.com/focus_areas/ovc/resources/case_study_series/ovc_nigeria_sidhas

TABLE 1. THE EVIDENCE BASE FOR MNCH/HIV INTEGRATION

MODEL	TYPE OF INTEGRATION	THE EVIDENCE BASE
Model 1. HIV into MNCH/ Social Support Services	PMTCT and VCT into ANC	In Zambia, antiretroviral therapy (ART) was integrated into antenatal care (ANC) services at public clinics. ART initiation in the integrated model was compared to a non-integrated model in which clients were referred for ART services. A greater number of pregnant women received ART in the integrated model (52 percent) than in the referral model (38 percent), although integration of ANC and prevention of mother-to-child transmission (PMTCT) had no effect on mean gestational age of initiation of ART or duration of ART use during the pregnancy (Killam et al. 2010).
		In South Africa, integration of CD4 cell counts and strengthened linkages to an ART clinic for ART initiation were provided to HIV-positive pregnant women attending a weekly ANC clinic staffed by health care workers from an ART treatment clinic. Comparisons pre- and post-integration found that integrated services led to faster initiation of treatment (56 days in the non-integrated model and 37 days in the integrated model) and faster CD4 count results once an HIV-positive result was given (50 days versus 29 days). However, in this study approximately 25 percent of medically eligible women were still not initiated (Van Der Merwe et al. 2006).
		Also in South Africa, an additional study evaluating integration of voluntary counseling and testing (VCT) and PMTCT into ANC found that 97 percent of women received VCT at ANC and 91 percent of those who tested HIV-positive were provided with PMTCT (Horwood et al. 2010).
		Also in South Africa, a study compared three models of service provision: integration of VCT and PMTCT into ANC services two days per week, separate services offered in close proximity of each other, and services offered a significant distance from each other. This study found no significant difference in likelihood of initiation or initiation time based upon degree of integration (Stinson et al. 2010).
		In Mozambique, PMTCT was integrated into ANC services at public health clinics with a resultant loss to follow-up decrease from 70 percent at non-integrated sites to 25 percent at integrated sites (Pfeiffer et al. 2010).
		In Rwanda, where PMTCT and VCT were integrated into routine ANC, women were 30 percent more likely to have a CD4 cell count assessment than in the non-integrated model and were also almost twice as likely to receive ART services. However, there was no difference between models in initiating highly active antiretroviral therapy (HAART) for treatment-eligible women or in providing more effective treatment regimens (Tsague et al. 2010).

		In Cote d'Ivoire, HIV counseling and testing (HCT) and PMTCT were integrated into ANC at five health facilities. No comparative data were available after integration, however, 63 percent of pregnant women were offered HCT and among those HIV-positive, 83 percent of women and 78 percent of infants received PMTCT. Quality indicators for health promotion, counseling, and medical history taking also improved after integration (Delvaux et al. 2008).
		A study in India examined the feasibility of traditional birth attendants (TBAs) providing PMTCT services and found that 96 percent of TBAs did not provide ANC and only 12 percent reported ever hearing about HIV and AIDS (Madhivanan et al. 2010).
		In Malawi, integration of PMTCT into ANC led to increased uptake of PMTCT services with women being 2.7 times more likely to receive PMTCT in the integrated model. Infant polymer chain reaction (PCR) testing also increased with a resultant 62 percent decrease in likelihood of HIV-exposed infants (HEI) testing HIV-positive in the integrated model (Van den Akker et al. 2011).
		In Kenya, integration of VCT and PMTCT into ANC led to a significant increase in uptake of VCT from 55 percent to 68 percent when it was offered as an "opt out" strategy in ANC rather than as an "opt-in" approach. A significant increase was also noted in Nevirapine use (57 percent to 70 percent) among women accessing ANC (van't Hoog et al. 2005).
	HCT into ECD	In Zimbabwe, integration of HCT was carried out in 16 early childhood development (ECD) centers, which provide health, nutritional and social support for orphans and other vulnerable children (OVC) and their family/caregivers. Of the 697 children attending the centers, 58.8 percent were tested for HIV and 100 percent of those eligible were placed on treatment through a neighboring health facility (Patel et al. 2012).
	VCT into Nutrition	In Malawi, a study found that 94 percent of children and 61 percent of adults accessed VCT while attending a community-based therapeutic care program to treat severe acute malnutrition. Additionally, 59 percent of HIV-positive children in the integrated program achieved a satisfactory nutritional status (Bahwere et al. 2008).
	VCT, Sexual and Reproductive Health into post-abortion care	In Tanzania, VCT and sexual and reproductive health counseling were offered to women post-abortion and at follow-up. A resultant 58 percent of women consented to HIV testing and 73 percent accepted condoms (Rasch, Yambesi and Massawe 2006).

	VCT into RH	In Ethiopia, approximately 47 percent of community-based reproductive health assistants integrated VCT into routine reproductive health (RH) services after being trained. Provision of integrated services was not associated with serving an increased number of clients (Creanga et al. 2007).
		Also in Ethiopia, clients who received VCT and RH services with the same counselor and in the same room were 1.9 to 7.2 times more likely to agree to HIV test than clients who were offered VCT and RH separately, but at the same site (Bradley et al. 2008).
		In Kenya, at sites where VCT was integrated into routine family planning (FP) services, 66 percent of repeat clients and 57 percent of new clients agreed to HIV testing. It was found that clients were more likely to agree to be tested if the test was offered on site versus a referral for testing (Liambila et al. 2009).
	Care of HIV-Exposed Infants into MNCH	A study in Swaziland found that infants who received integrated HEI services into MNCH services were 20 times more likely to attend a post-natal visit within three days of birth, and 6 times more likely to attend a post-natal visit within four to seven days of birth (Mazia et al. 2009).
		In Kenya, infants receiving cotrimoxazole prophylaxis and HIV testing at a MCH clinic were 1.95 times more likely to attend their 9-month visit and 1.29 times more likely to attend the 12-month visit. They were also 2.24 times more likely to attend all four post-natal visits in the first year of life than in the non-integrated model (Ong'ech et al. 2012).
		In Zambia, barriers to adherence to HIV guidelines within the integrated management of childhood illness (IMCI) algorithm were assessed. Significant barriers identified included inadequate human resources, stigma from caregivers and health facility staff, and insufficient space for privacy (Mugala et al. 2010).
	EID into Immunization	In South Africa, dry blood spot (DBS) testing was carried out at the six-week visit at seven immunization clinics to determine the number of cases averted at co-located PMTCT clinics. At the immunization clinics, there was a 7.5 percent HIV-positive rate among infants. Because immunization clinics are well attended, integration with DBS and strong linkages to care and treatment for HIV-positive infants can improve child mortality rates through early identification (Rollins et al. 2007).

Model 2. MNCH into HIV Services	Family Planning into HIV Care and Treatment	In Uganda, FP services were integrated into routine HIV care and treatment services. FP counseling was provided by clinical staff, group counseling, or by peer counselors. After integration, the overall number of clients receiving FP counseling increased from 59 percent to 92 percent; peer counselors more consistently counseled women than health workers in the same facility (Kirunda et al. 2010).
		A study in Nigeria integrated FP counseling into routine HIV services with referrals to a FP facility on site and demonstrated a significant increase in monthly mean FP service provision (67.6 to 87) (Chabikuli et al. 2009).
		In Kenya, women receiving FP services during routine HIV visits were more likely to use a modern FP method: intermediate result (IR) 58.1 in the integrated model and 44.7 in the non-integrated model. However, there was no associated reduction in the rate of unplanned pregnancies among this group (Kosgei et al. 2011).

BOX 5. PROMISING PRACTICES FOR INTEGRATION: KIDZALIVE, INTEGRATING PEDIATRIC PSYCHOSOCIAL SERVICES INTO AN HIV PROGRAM

Background and purpose: KidzAlive studied the obstacles leading to low HIV testing rates and a general reluctance surrounding disclosure. Barriers identified included caregiver reluctance to bring children for testing, anxiety to disclose, health care worker anxiety and lack of skills to counsel children, lack of tools to communicate with children in an age-appropriate manner, and lack of post-test follow-up and support, including lack of tools.

Methodology: As a result of the above findings, psychosocial and community-based services were integrated into the HIV program. The integrated psychosocial interventions included: 1) caregiver support groups to address key issues of blame, shame, and guilt, 2) a training program for counselors, nurses, and community-based child workers to equip health care workers with skills relating to child counseling, 3) peer-reviewed child-friendly tools (story boards, DVD animations, outcomes based play activities), and 4) for post-test follow-up, the same storyline and characters, tools, and materials were developed to address "patient literacy" needs of the children, adherence, disclosure as well as psychosocial and key wellness topics.

Results: As a result of integrating psychosocial services, there was an increase in health care workers testing children and providing psychosocial follow-up, an increase in HIV-positive caregivers voluntarily bringing "well" children for testing and engaging in a disclosure process, an increase in the number of children on ART who were supported with information about HIV, adherence, and healthy living, and an increase in age-appropriate information available for younger children and wellness activities and information available for infected and affected children (Thomas 2012; Potgieter 2011).

The Continuum of Response and Linking Health and Social Services

Ensuring access to social services is critical to addressing key social determinants of health, including food insecurity, gender-based violence, access to education, environmental risks, and poverty (OECD 2003). Recent evidence demonstrates the potential of social services, and in particular household economic strengthening and health education, to increase caretaking behaviors for mothers and children (Felton 2011). Cash transfer programs, which consist of direct cash payments to households in order to purchase assets, improve access to credit, protect living standards, and improve likelihood of increasing household wealth have shown real potential to reduce poverty and vulnerability (Arnold, Conway and Greenslade 2011). Households participating in cash transfer programs spend more and consume significantly more food products, and have improved school enrollment (especially for girls) through the ability to pay for school fees and supplies. Additionally, cash transfer programs also have demonstrated positive results in improving access to health care services through assistance with health-associated costs, including transportation to appointments, the cost of the appointment itself, and medication and supplies—potentially resulting in reduced morbidity and mortality (Arnold, Conway and Greenslade 2011; Adato and Basset 2008). Furthermore, cash transfer programs may also play a role in HIV prevention through reducing the circumstances that may place an individual at increased risk for HIV.

HIV may negatively impact early childhood development through the direct physical manifestations that an HIV-positive child may experience in addition to the potential loss or illness of family/caregivers who are meant to help the child develop in a healthy manner. Capitalizing on the infancy period, a time when women and children are more likely to access health services (Bachman 2011), inclusion of ECD programs in an integrated MNCH/HIV network may be highly effective in addressing the multi-dimensional needs of the family. ECD programs are increasingly broadening in scope to address issues surrounding financial and social protection and caregiver support. This has resulted in improved family economic status, pediatric nutritional outcomes, and improved early childhood educational experiences (Shonkoff et al. 2012). As evidenced by the ECD example, community services have the ability to more readily and appropriately address local needs (Rotheram-Borus et al. 2000) and together with the health system provide a wide network of community support that allows for more effective service provision. The continuum of response in the health and social sectors takes advantage of already existing services and infrastructure by linking multi-sectoral actors, such as various government ministries, multi-disciplinary providers from government and non-government organizations, community-based organizations (CBOs) and the private sector (Fullem, Levy and Sharer 2012). A strong network of linkages among organizations creates a continuum of health and social service provision (Rier and Indyk 2006).

BOX 6. INTEGRATING AN ECD INTERVENTION WITH HIV TESTING CARE AND TREATMENT.

In rural Zimbabwe, HIV counseling, testing and treatment was integrated into routine ECD services that were established to provide health and nutrition services along with psychosocial support. All ECD centers were located and linked to an adjacent health facility. As a result:

- Nearly 59 percent of children were tested for HIV
- 18 percent tested positive and initiated antibiotic prophylaxis
- 100 percent of those eligible initiated treatment and received adherence monitoring (Patel et al. 2012).

Despite the growing body of evidence for social service provision, referrals are more often made to higher levels of care (such as a district hospital) than to community-based and social services (MacIntyre and Littrell 2012). Very often, the referral system between care and treatment programs and MNCH programs lack coordination, resulting in weak linkages (Tudor Car et al. 2011; Ginsburg et al. 2007). In the design of an integrated program, it is critical to: 1) identify a network of social services available, 2) create strong bi-directional linkages between health and social service organizations, and 3) continually monitor the quality of linkages to ensure that clients receive services to which they have been referred. A critical component of this process is that health and social service providers receive education regarding their responsibility to make referrals to ensure integrated service provision. Social workers available to bridge the gap between the health and social sectors for clients has led to promising results (Thurman et al. 2010) and should be further explored as a national and local response to meet MNCH/HIV integration needs.

World Health Organization (WHO) guidance for creating a referral network within an integrated system of care, calls for a formalized system of referrals in which all organizations within the network agree on referral procedures. When establishing the referral network, all health and social organizations should meet to establish a formal relationship to clarify which services will be offered by each organization, identify a referral point-person at each organization, and establish formal referral protocols. Best practices also include identifying a lead organization to coordinate and track referrals within the network, and using case managers (including people living with HIV) to ensure that clients receive all of the appropriate social services and are following through with their referrals (Thurman et al. 2010; WHO 2008b). Additional best practices include maintaining an up-to-date contact list of all services within the network, creating a system to record, track, and monitor referral completion, and creating a standardized referral form used throughout the network, which includes key client information and allows for a feedback loop of communication among organizations (WHO 2008b; Stuart and Harkins 2005). Providers should also be trained to clearly explain to clients why the referral is being made, and provide written and oral instructions on how to complete the referral. Any obstacles to the client completing the referral should be identified and addressed (Ricca and Negroustoueva 2009; WHO 2008b).

Ensuring that Integrated Programs are Family-Centered

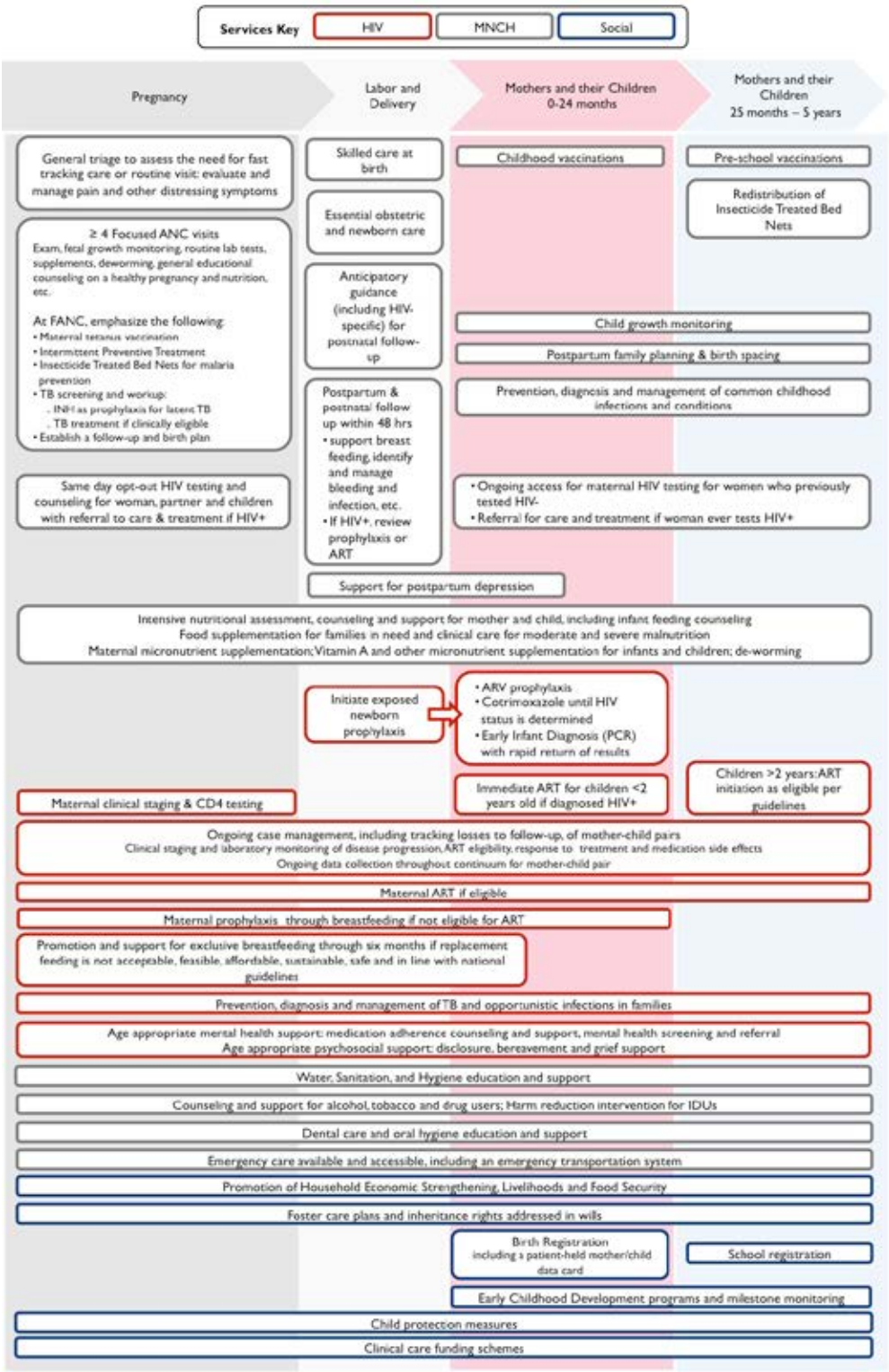
Family-centered approaches can bolster integrated program strategies. According to Belsey (2005), focusing on HIV from the family perspective is important because: a) HIV typically occurs in the context of family, sexual relationships, and the pregnancy process, b) care for HIV-positive individuals in the family typically is a shared responsibility, c) stigma and discrimination are experienced both as an individual and also as a family, and d) HIV and AIDS can significantly alter the structure, function, and well-being of a family. Parents also have the capacity to significantly impact the health status of individual family members by modeling self-care at home, providing adequate nutrition and a healthy environment, and by being the gatekeepers to health and social services (Leeper et al. 2010).

When designed accordingly, integration may attend to the needs of multiple family members during a single visit, thus increasing access to services for the entire family. A common example of family-centered care in the integrated model is provision of post-natal care for the mother and a newborn check-up for the baby during the same visit. They also act as index cases for the rest of the family. This may have very real and life-saving implications. New infections may be recognized earlier, individuals may receive treatment earlier, and they may also be more likely to receive important preventive health services (DeGennaro and Zeitz 2007; Bachman 2011).

Figure 1, which illustrates an integrated care pathway from pregnancy through early childhood, identifies the needs of mother, baby, and child throughout the critical time period from prenatal to preschool when the mother and baby are more likely to access the health care system. This particular pathway focuses on the specific subpopulations of HIV-positive pregnant women and their HIV-exposed and -positive children. The natural pairing of mother and baby offers numerous opportunities for smart integration, is comprehensive in scope, and includes health and social care milestones and interventions. Clinic and community support program planners may use this table to identify potential programmatic areas for integration to improve service provision of family-centered care.

FIGURE 1. INTEGRATED CARE PATHWAY FROM PREGNANCY THROUGH EARLY CHILDHOOD (PEPFAR 2011B)

This continuum of care maps a comprehensive list of services that are required to meet the HIV, maternal, newborn and child health, and social support needs of mothers and their children from pregnancy through five years of age. These services are identified in the respective columns for the time periods for which they are required, some spanning across more than one or all four time periods.



Client and Provider Perspectives

There are numerous potential advantages and disadvantages of integration at each level of the health system and varying perceptions among clients and providers, which are outlined in Table 2 below.

TABLE 2. CLIENT AND PROVIDER PERSPECTIVES ON MNCH AND HIV INTEGRATION

	POTENTIAL ADVANTAGES	POTENTIAL DISADVANTAGES
CLIENT PERSPECTIVES		
Stigma	Clients are less stigmatized as they are no longer identified as HIV-positive by attending separate services that result in unintended disclosure (Winestone et al. 2012).	Clients have expressed that in the integrated model, the fact that their appointments may take longer than their HIV-negative counterparts may lead them to be identified as HIV-positive (Winestone et al. 2012).
Resources	When integrated services are offered in a single location, there may be less required overall time and cost for the client in terms of transportation, payment for separate services, and time spent away from work and family (Alliance 2011). There may be a net decrease in wait time since the client only has to wait for one appointment versus several different appointments (Winestone et al. 2012).	Where the integrated programs consist of multiple services within a community that are linked together, there may be a higher cost and time burden for the client, who must pay to travel to receive the multiple services and also potentially pay for each service (Gove, Negussie and Pendse 2011).
Client Satisfaction/ Quality	A study in Kenya found that 96 percent of women who received integrated HIV and antenatal services were either "satisfied" or "very satisfied." Of these, 79 percent of HIV-positive women were "very satisfied" with their visit, but only 54 percent of HIV-positive women who did not receive integrated services at a control site were "very satisfied" (Vo et al. 2010). Winestone and colleagues (2012) found that perceived quality of care by the client has positive results. Some noted an increase in quality due to the integrated nature of services, which coordinate treatment and avoid duplication or assumptions that the client is receiving the service elsewhere.	People living with HIV and some HIV service providers expressed concern that integration may result in improved overall services, but at the expense of the quality of HIV services, and may also result in decreased HIV service availability (Rollins 2013).
PROVIDER PERSPECTIVES		
Retention/ Access	Increased opportunities to identify and bring into care HIV-exposed infants (HEI) at the time of the mother's visit (Winestone et al. 2012; Bachman 2011) and clients in general are less likely to become lost to follow-up in the single-site integration strategy (Alliance 2011).	Clients, particularly pregnant clients, often do not follow through on referrals to a separate site with integrated programs with multiple services within a community. This results in high rates of loss to follow-up and delays in treatment (Gove et al. 2011).

Quality	Improved communication, confidence, and trust in the client/provider relationship, and potential for improved adherence due to routine follow-up (Winestone et al. 2012).	Potential decrease in the quality of care due to a staff person who has not been adequately trained in integrated services or due to the increased workload on already stressed human resources (Rollins 2011).
Job Satisfaction	Individual professional fulfillment is high in the integrated model due to additional training opportunities and knowledge and the ability to provide specialized services to clients (Winestone et al. 2012).	Increased workload is a key concern as well as increased documentation requirements, unless documentation is streamlined. Providers also report concern with overwhelming a client during a single visit with information and services (Winestone et al. 2012).

There is less evidence available on social service provider perspectives on integration. However, a program in Zimbabwe that used case managers to improve community linkages for HIV-positive clients in an integrated program found that a primary concern among case managers was a lack of available social support services to which they could link clients and lack of a strong referral network when services were available. This highlights the importance of strong linkages with integrated programs. Other disadvantages included a lack of available resources to carry out their work and a high client burden. Clients receiving case management in the integrated system reported high levels of satisfaction with improved reports of psychosocial well-being and improved adherence to treatment (Thurman et al. 2010).

Enabling Policies and Policy Gaps

There are specific policies that may enable integration programs, but it is widely thought that the absence of a clear definition of integration itself hinders efforts. Furthermore, the fact that MNCH includes a number of programs increases difficulty when determining the scope of the program.

Political commitment to integration is essential and enabling policies can be examined on multiple levels. At the global level, donors that promote integration through funding may follow the example of the Global Fund, which supports the scale-up of integrated programs and calls for using HIV programs as mechanisms to promote MNCH services (WHO and UNICEF 2012). Also helpful on the global level is the development of generic integration guidelines that can be adapted to specific country needs to put them into action. WHO has developed generic IMCI and HIV integrated guidelines that have been field tested among various cadres (Qazi and Muhe 2005). While global efforts on generic guidelines are a positive step toward a culture of integration, any efforts including policy and practice must be owned by the country itself and must also reflect local realities and priorities (Ryan 2011; Rollins 2013). A lack of policy guidance for integration at the national level has far-reaching effects in terms of human resource capacity for health and social services, availability of a standardized monitoring and evaluation (M&E) system that captures integrated services, available financing, and management capacity (Bunkers and Hickman 2012; Shoeb and Yamey 2012; Smit et al. 2012).

Addressing integration in academia may serve to bolster efforts at the country level. Currently, academic programs often do not provide instruction on PMTCT or information surrounding the importance and availability of social services, which are key elements of integrated programs. National governments should approach academic institutions to do curricula reviews to ensure that medical and nursing students are receiving adequate information on integrated service delivery prior to entering the workplace (Rutenburg et al. 2002).

National departments of health should also provide standardized training and mentoring to health care workers on the importance of facilitating linkages and maintaining active referrals to social service providers (Chima 2010). Advocacy for availability of social workers within countries and formation of national social work professional organizations will increase visibility of this important profession. Additionally, national guidance for linking the health and social sectors will improve the continuum of response, further enabling integrated service provision.

Monitoring and Evaluation

Another major challenge to integration is integrating M&E systems (Ryan 2011). In order to respond to individual reporting requirements, parallel M&E systems may exist in cases where there are various donors and/or implementing partners within a single program. Additionally, because integration is a relatively new concept, there is a lack of integrated M&E indicators at the national level for reporting on these programs. Potentially, integration of programs can occur without a platform to monitor them (Shoeb and Yamey 2012). But a lack of validated tools to measure the degree and quality of integration programs further increases the difficulty in determining where and the extent to which integration is occurring at the service delivery level. M&E of integration programs must be led at the national level to ensure that data from the site level is aggregated at the regional and national levels to assess the functionality and quality of the integrated system (Nash et al. 2009). To address this gap, Nash and colleagues suggest creation of a site census module within an integrated M&E system, which provides information on health and social service facilities to inform what data should be reported on integrated services. In addition, national governments should also invest in a database that allows for reporting on integrated services within and between facilities and regions.

Strengthening Human Resources for Health and Social Services

With integration, there may be increased demands on health facility staff to provide a greater number of services during a single visit while still maintaining the same client load. This may be problematic considering the contributing factors to the human resources for health crisis, including lack of feedback and incentives, decreased motivation and poor staff morale, an inadequate number of human resources due to a high disease burden, emigration of health care workers, poor quality of health care worker training, poor and unequal remuneration, and lack of access to up-to-date clinical information and guidelines (WHO 2008a; Rollins 2013). Integration may indeed require a change in tasks, which may be initially challenging for staff. It is evident that any integration program must be designed and implemented in a manner that minimizes stress and provides the most supportive environment possible (Rollins 2013).

Staff must be supported through: 1) adequate training to ensure that they have the skill set necessary to carry out integrated activities, 2) support staff available wherever possible to carry out tasks that could be devolved to others, 3) routine motivation to retain and continually engage staff in their work, 4) job aids and on-site support when questions arise, especially at the beginning of the integration process, 5) supportive supervision to foster mentorship and identify issues early on, and 6) ongoing recruitment and incentive strategies to bring new health care and social service professionals into the workforce. Strategies such as task shifting may be required to meet the increased demands that integration requires, and expectations for staff carrying out integration must be realistic and widely recognized as achievable. Finally, because integration often calls for staff to practice outside of their usual scope of work (such as prescription of treatment, dispensing of medicines), human resource policies that acknowledge this reality should be created to provide legal protection and support.

When integration is carried out holistically, and responds to the larger social service needs of the family, there is an increased reliance on the social service sector. While most African government departments (health, police) have integrated social work professionals, availability of trained social workers to respond to local needs is low due to a lack of material and financial resources, poor remuneration, poor working conditions, and a lack of professional recognition (Chitereka 2009). As a result, programs offering social services are often over-burdened and under-staffed. This phenomenon creates an over-reliance on volunteers to carry out social service work, sometimes without pay or other incentives, resulting in sustainability issues for the social service program.

Additionally, in some countries the largest provider of social services is the nongovernmental organization (NGO)/civil society sector. Referrals to and from these facilities can be challenging because they may be dependent on donor funds, have varying degrees of sustainability, and may not be linked into the formal health facility network.

Funding Considerations

A central issue when considering funding of integration programs are donors' often siloed approaches to funding programs. This typically results in vertical programs implemented at the service delivery level. Short funding cycles in which programs are expected to demonstrate results within a quick timeframe further decrease a program's ability to do the long-term planning that is required with integration (Rollins 2013). An additional challenge is that significant sums from donors have been allocated for HIV and AIDS programs, whereas funding for MNCH has experienced a general decline (Shoeb and Yamey 2012). To overcome these challenges, advocacy and education about integration for donors as well as for national governments will increase funding mechanisms at the country level to improve integrated funding opportunities (WHO 2008a).

In cases where integration occurs between two different service delivery programs, adequate planning and budgeting is essential. The referral and linkages system that is established between programs will have cost requirements that should be budgeted for at the district level. Furthermore, the potential need to share costs between the two programs may exist for training, supervision, and mentoring needs. When donor funds are disease-specific, coordination may also require an estimate of the cost of each activity involved in the integrated program during the design process (Gove, Negussie and Pendse 2011).

In some cases, donors such as Global Fund and WHO are encouraging integration of programs. WHO has also provided guidance for program planners preparing proposals for integrated programs (see additional resources in Annex 3). Although it is expected that donor funding will gradually be replaced by national funding (Rollins 2013), for the time being, funding available through PEPFAR, the President's Malaria Initiative, Population and Reproductive Health, and MNCH programs may be accessed to pay for integrated efforts, given that an integrated program fits within legislative and policy guidelines (Ryan 2011; PEPFAR 2011a).

MNCH programs can significantly improve access to care for HIV-positive women and children, but structural factors that impact quality of care should be addressed at the regional, national, and international levels. Advocacy for policies and programs that improve human resources for health and social services, access to health and social services, and resource allocation will significantly contribute to the health of women and children and improve access to effective integrated service delivery.

SECTION II: PRACTICAL GUIDANCE FOR INTEGRATION

This section provides practical guidance for program planners interested in carrying out integrated MNCH/HIV programs. Whenever possible, the national level health system should provide an enabling environment to support smart integration (see Box 7) efforts at the district and site levels (Rollins 2013). Figure 2 outlines the strategic framework of the integrated MNCH/HIV approach for each level of the system. When considering an integrated package of services, program planners should use the lifecycle approach to consider the multiple MNCH and social service needs of women and children to identify the strategic program areas for integration. (Figure 1 provides more in-depth information on the needs of women and children during the lifecycle). Once the essential package of services and the integration model and strategy has been identified, key activities at each health system level should be considered prior to implementing the integrated service.

BOX 7. SMART INTEGRATION

There is no single effective model of integration. In order for smart integration to occur, the integrated program must be individually tailored to meet the needs of the local context. Prior to designing an integrated program, the following elements should be considered:

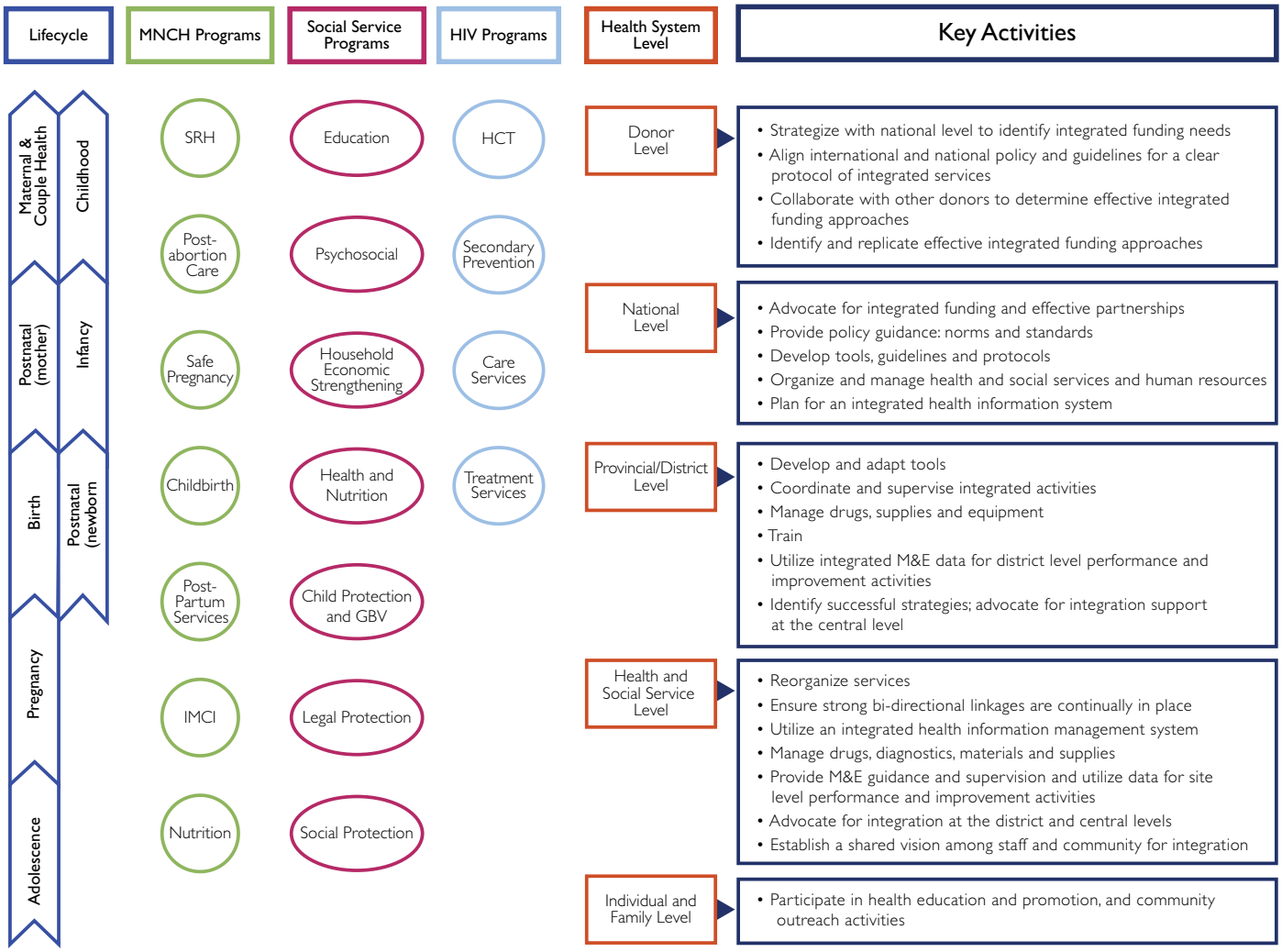
- Community needs
- Available health and social sector resources
- Service capacity gaps
- Local epidemiology

Design

The principles of smart integration should be applied and the programmatic environments for MNCH, social services and HIV fully understood prior to implementing the MNCH/HIV integrated program. In the design of the integrated program, the following steps should be followed:

1. *At the global level, develop a country action plan and identify a coordinating body that will promote integration and coordinate and oversee efforts to create an enabling environment for integrated service delivery.* An enabling environment at the national level will establish the scope of MNCH/HIV integration and guidelines and standards for practice, monitoring, and reporting.
2. *At the global level, establish responsibilities for integration at each level of the system.* Delineation of roles and responsibilities at all levels of the health system will establish a framework for integration and provide a means of communication, supervision, and support for the district and service delivery levels (Rollins 2011) (See Figure 1 for a list of suggested responsibilities at each level of the system). In addition, the following responsibilities should be considered:
   - National: Integration programs at the national level should be government owned through a national coordinating agency, which provides leadership. The national agency should also have branches at the district level to further support integration activities at the community and facility levels. A clear pathway of communication with donor agencies from the national level concerning integration activities should also be established. In order to support the larger goals of integration, activities for health and social service system strengthening should be carried out to increase sustainability of the program. Increased human and resource requirements should be considered and planned for (WHO 2008a).

FIGURE 2. STRATEGIC FRAMEWORK OF THE INTEGRATED APPROACH



*Social service category adapted from OVC PEPFAR Guidance; table adapted from WHO 2008a

– District: Planning integration activities at the district level provides coordination and oversight to intra-district activities (WHO 2008a). The district level can also be the conduit for information and data from the community and service delivery levels to the national level.

– Within a single health facility: Facilities should routinely communicate with district level coordinators to plan intra-district activities and ensure adequate support and oversight. Establishment of clear roles and responsibilities for staff, provision of routine training, and follow-up supportive supervision is required for staff (WHO 2008a).

– Within a social service organization: CBOs/NGOs should routinely communicate with district level coordinators to plan intra-district activities and to identify and correct gaps in social service availability within the district. They should provide ongoing recruitment as needed, with ongoing training and follow-up supportive supervision for staff.

3. *Identify an essential package of integrated services.* Identification of program areas for integration should be based upon the local context, data, resources available, and information gathered. Careful attention to the social service needs in addition to health needs of the local population is a critical component of meeting MNCH needs of clients. Using the integrated care pathway illustrated in Table 2 would help to determine which MNCH and HIV program components are most feasible for integration and have the highest opportunity to improve outcomes and meet the needs of the population (Jayakumar 2011).
4. *Design an integration model that most appropriately fits local needs and available resources* (Rollins 2013). After identifying the MNCH, social service and HIV programs that will be integrated, determine the appropriate integration model. This should be the model that will have the greatest impact and that is most feasible given the local context.
5. *Elect an integration strategy.* Select a strategy with the highest potential for efficacy and opportunity to positively impact health and social outcomes based upon the local context and client needs.
   - Coordination (joint planning) involves the identification of resources within a community that pertain to the integrated program and the creation of a strong network of referrals and linkages between health and social services to build an integrated model of care at the community level.
   - Collaboration (increased cooperation) may occur as health and social resources are shared among facilities and organizations to provide an integrated program. Resources may include infrastructure, materials, and staff.
   - Consolidation (implementation of some or all activities by another program) involves carrying out the integrated program within one setting. In this strategy it should also be determined if the integration will occur during the same appointment or different appointments, if all services will be offered in one room, if one health provider delivers all of the services, or if the services will be offered in one facility but by different providers (Rollins 2011).
6. *Identify existing protocols for separate services and create integrated protocols.* Determine where there is overlap in the protocols to identify and avoid duplication and areas for more efficient service delivery.
7. *Implement any required infrastructure changes required to carry out integrated activities.* Identify the space and materials that are required, including considerations to maintain privacy.
8. *Recognize staff training needs for the integrated services.* Training needs will vary based upon the unique needs of the integrated program and may include training for new clinical information or newly offered social services, M&E, laboratory, supply chain management, and bi-directional referrals and linkages.
9. *Develop updated job descriptions for any staff roles that may change.* Ensure that any new roles for staff are still in the scope of work under which they are legally allowed to practice.
10. *Create a supportive supervision checklist for service provision.* All staff with supervisory responsibilities should come to a consensus on the specific performance requirements that should be met. Identification of supportive supervision responsibilities and standards will provide quality assurance and identify further training and mentoring needs as the integrated program is implemented.
11. *Identify additional social or other supplemental services within the community.* In cases where the integrated services are offered at one site and do not meet all client needs, related social and

supplemental services within the community that enhance the level of care should be identified and strong bi-directional linkages created.

12. *Build strategies to increase demand and uptake of services for clients.* Create new and use existing communication mechanisms within the community to increase demand and uptake of services.
13. *Determine how the M&E system will capture and report data from the program.* Identify any national guidance available for reporting on integrated programs and determine if integration of data capturing will be more effective or if records should be maintained and reported separately. Identify any new indicators that should be captured, such as social service indicators, and how the data will be used. For quality purposes, for example, determine which data will be used internally only and which data are reportable to the national health management information system (HMIS) and to the donor, if applicable. Identify an indicator to assess the quality of the integrated program and mechanisms to routinely monitor data quality (Rollins 2013). M&E staff should be trained on any additional or adapted data capturing that will be required.
14. *Identify any new laboratory service needs as a result of the integrated program.* Laboratory service needs may include new testing supplies or reagents, equipment, training for lab staff, and data capturing and reporting.
15. *Integrate any new supply chain needs with the existing supply chain management system.* Identify existing gaps in the supply chain prior to integration and decide how they can be addressed. This will determine how the supply chain management system will be scaled up to adequately support the integrated program. Identify staff who will be responsible for routine supply management tasks and any additional training that will be required.

Implementation

After designing the program and starting to implement it, moving from vertical to horizontal implementation is not necessarily an isolated event, but rather something that occurs gradually over time. Program planners should identify creative strategies to gradually build capacity for the integrated program while still offering vertical services until fully functional integrated services can be effectively provided (Rollins 2011). Local staff should be able to practice autonomously and to make adaptations to the integrated program as appropriate with an established hierarchy of communication at the site and district levels to assist in overcoming challenges when further guidance is needed (Rollins 2013). Once integrated service provision is available, consider the following action items for implementation:

1. *Provide continuous training opportunities to increase the number of qualified staff to carry out integrated services.* Offer follow-up mentoring to ensure that information is correctly understood and effectively implemented during service delivery.
2. *Routinely carry out supportive supervision using the checklist.* Identify opportunities for ongoing mentoring based upon the supportive supervision checklist.
3. *Provide and ensure availability of updated job aids for the integrated program.* These should be available throughout service delivery areas to assist staff with integrated service provision and remind them to provide integrated services.
4. *Employ motivational strategies for staff.* Provision of integrated services may offer additional challenges to staff; identify motivators such as ongoing training opportunities and incentives or awards to keep staff engaged to follow the protocols for the integrated program and to continually provide high quality care.
5. *Ensure that the established bi-directional referral system is successful.* Monitor referrals to ensure

that patients are completing them. Consider creating a forum within the community to identify and solve issues surrounding loss to follow-up and other ongoing problems within the referral system.

6. *Continually monitor and advocate for availability of social service programs within the community.* Ensure that clients are referred for social services and that strong bi-directional linkages remain in place.
7. *Guarantee ongoing functionality and quality of laboratory services* (Rutenberg 2002). Laboratory services should be fully functional prior to implementation. Carry out routine supervisory check-ins to ensure that any new laboratory equipment is correctly used, and that new data collection and reporting responsibilities are successfully performed.
8. *Confirm ongoing functionality and quality of supply chain management* (Rutenberg 2002). Routinely monitor to ensure that adequate supplies are available for the newly integrated services.
9. *Document and share lessons learned from implementation of HIV/MNCH integration.* Inform the global community on implementation of integration experiences and build the evidence base for integration.

Monitoring and Reporting

Challenges to maintaining an integrated M&E system include four principal factors: a) service delivery systems that traditionally report separate indicators for vertical programs, b) a lack of indicators that measure the characteristics and quality of integrated activities, c) human resources who have not been trained to implement an integrated M&E system, and d) weak national health information systems to provide guidance for M&E of integrated health programs (Chukwujekwu et al. 2010). To overcome these gaps and ensure a fully functional M&E system is in place:

1. *Advocate at the national level for an integrated M&E system including provision of national indicators that reflect integrated service delivery.* This will provide guidance at the district and site levels for data collection, monitoring, and reporting. Additionally, it will help to capture data surrounding effectiveness of integrated service program delivery to inform broader global integration efforts.
2. *Link program areas within and between sites for reporting purposes in place of siloed reporting.* Identify opportunities within and between sites where data collection and reporting can be linked to avoid duplicative reporting on specific indicators within sites.
3. *Routinely monitor data collection and reporting records.* Ensure that integrated data collection records are correctly designed and used.
4. *Conduct routine data quality audits.* Ensure that data is reported accurately and routinely.
5. *Carry out quality improvement practices.* Quality improvement measurements can help monitor correct following of integrated protocols and also can identify gaps in the integrated services delivery system where there are opportunities for further improvement.
6. *Identify any additional M&E training needs.* Training needs may be identified through data quality audits, quality improvement activities, and speaking with staff.
7. *Use the data for community, district, and national planning purposes.* This will further inform integration efforts and increase collaboration, particularly at the community and district levels, as well as improve the performance of the health system as a whole.
8. *Document and share promising integrated M&E practices.* Documentation of promising integrated M&E practices will benefit broader MNCH/HIV integration efforts globally to support integrated programs.

CONCLUSIONS

The maternal, newborn, and early childhood health needs of those living with HIV are numerous. Real solutions must be found to not only reduce the number of new infections, but also to improve access and efficiency of services. While the evidence base for MNCH/HIV integration is scarce, there is evidence that indicates that when integration is carefully designed and implemented, it can lead to improved access to care and improved health and social outcomes. Integration is a management strategy to improve efficiency and quality and to maximize resources and opportunities for women and children to access health and social services. It may require organizational changes, process modifications, and new technologies to link or integrate MNCH, HIV and social services. In order for MNCH/HIV integration to be fully successful at the ground level, policymakers at the national and international levels should identify opportunities to increase the likelihood of success for these models by providing horizontal funding opportunities and technical guidance to communities and programs.

Program planners should avoid uniform models of integration and instead carry out a carefully designed integrated program based upon the local context, epidemiologic profile, service capacity, and gaps, as well as the needs of the local populace. Using the integrated care pathway can further assist program planners to identify maternal, newborn, and early childhood needs during each phase of the MNCH lifecycle and to determine which MNCH/HIV and social service programs will be most effective in the integrated model. Creation of strong bi-directional linkages within the continuum of response will also ensure that clients receive appropriate services within the integrated system. Finally, careful documentation of lessons learned from the integration process will serve to advocate and inform MNCH/HIV integration efforts at the global level.

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ANNEX 1. CHECKLIST FOR IMPLEMENTATION OF MNCH/HIV INTEGRATION AT THE PROGRAM LEVEL

- ☐ Review of national policy surrounding MNCH/HIV integration, including availability of norms, standards, and protocols, guidance for M&E, and reporting for integrated programs.
- ☐ Identify any relevant MNCH/HIV integration tools for use at the program level that are nationally available. If there are none available, identify tools globally that may be of assistance.
- ☐ Identify and speak with other programs at the community, district, or national levels that are carrying out integration to inform the design process of the integrated program.
- ☐ Use a variety of sources, including local data, a service mapping exercise, and the integrated care pathway to identify potential areas for integration.
- ☐ Meet with other related local health and social service organizations within the community and determine the most appropriate model and strategy for integration.
- ☐ Create a strong system of bi-directional referrals and linkages for a coordinated integrated strategy. For a consolidated integrated strategy, ensure that a bi-directional referral system is in place for social services located outside of the integrated program.
- ☐ Identify any new equipment and materials, drugs, and infrastructure changes required.
- ☐ Identify any changes in staffing requirements and responsibilities for the integrated program. If staff responsibilities will change, determine if staff members are legally protected to work within their new scope of practice.
- ☐ Identify any new training needs for all staff. Consider how integration may impact each cadre of worker and provide the training required to carry out the integrated program for each.
- ☐ Identify any changes required for data collection and reporting. Make necessary changes to data collection tools; provide baseline and ongoing training to staff collecting and reporting data. Carry out periodic data quality audits, and use data for decision making.
- ☐ Sketch a plan to gradually transition from the current program to the integrated program.
- ☐ Create and use a supportive supervision checklist to routinely monitor integrated services, including client service provision, laboratory, pharmacy, referrals, and other services affected by integration. Identify gaps and provide follow-up training and mentoring for staff along with job aids.
- ☐ Document and share lessons learned from MNCH/HIV integration with the other programs, policymakers, and the global community.

ANNEX 2. SUMMARY OF PROMISING PROGRAM APPROACHES FOR MNCH/HIV INTEGRATION

QUALITY OF ANTENATAL AND DELIVERY CARE BEFORE AND AFTER THE IMPLEMENTATION OF A PREVENTION OF MOTHER-TO-CHILD HIV TRANSMISSION PROGRAMME IN CÔTE D'IVOIRE.

Background: PMTCT is a high priority in Côte d'Ivoire, where women and children represent greater than 50 percent of the HIV-positive population. Maternal mortality is high (600 per 100,000 live births) and quality of antenatal services is poor. A national program launched in 2000 in five public health facilities integrated VCT and PMTCT into routine antenatal services and strengthened overall services for pregnant women.

Methodology: Prior to integration, the five health facilities were renovated to ensure adequate space for integrated service provision, including space for group health education, rooms for private HIV testing, and a laboratory. Additionally, the facilities were supplied with the required equipment and medicine for HIV testing and treatment. Staff received a three-day theoretical training that included PMTCT and MTCT prevention strategies, counseling techniques for individuals and groups, care of newborns and HIV-positive women, as well as psychosocial support. After the programs were integrated, a six-week on-site training program, which included mentoring and feedback for PMTCT, was provided, followed by periodic supportive supervision visits.

Results: Prior to integration, no women were receiving VCT or PMTCT. Within one year of the program, an average of 63 percent of women initiating care at the facilities were offered VCT at the five sites. Eighty-five percent of women who tested HIV positive, and 78 percent of their infants received PMCT services. Women attending group education sessions increased from 20 percent to 42 percent after integration, and clinical indicators improved significantly, including routine blood pressure checks, fetal heart rate checks, and assessment of fetal position. Hand washing and monitoring of laboring women remained sub-standard after integration.

Considerations: On-site training and intensive supervision and mentoring alongside improved infrastructure are important motivators for staff to carry out integrated services.

Source: Delvaux et al. 2008.

FEASIBILITY AND EFFECTIVENESS OF INTEGRATING PROVIDER-INITIATED TESTING AND COUNSELING WITHIN FAMILY PLANNING SERVICES IN KENYA.

Background: In Kenya, with an estimated HIV prevalence rate of 7.4 percent, only approximately one-third of Kenyans have ever been tested for HIV. The majority of women in Kenya use Depo-Provera or oral contraceptive pills and as a result must routinely attend family planning clinics. HIV testing and counseling guidelines in Kenya support provider-initiated testing and counseling, resulting in opportunities to integrate VCT into FP services, reaching a significant number of women in Kenya.

Methodology: The study compared two models of integration. The first model offered VCT on-site at the time of the visit while the second model provided counseling to clients and subsequently referred them to a VCT site for testing after they agreed to be tested. Staff received technical update trainings on contraception, sexually transmitted infections, HIV, and a number of other topics. The training was nine days for the providers carrying out VCT on-site and five days for providers who referred clients to a VCT center. District health teams were also trained on procurement and supply chain procedures required for the integrated services. Data collection records were adapted to capture data from the integrated program.

Results: Integration of HIV counseling into FP services increased the required time for each appointment by two to three minutes in each model of the study and testing required an additional seven minutes after initial counseling. Providers who did HIV testing on-site were more likely to offer VCT than providers who only offered referrals to VCT. Two-thirds (66 percent) of repeat clients and 57 percent of new clients agreed to receive HIV testing, and more clients agreed to be tested in the referral model.

Considerations: Minimal changes were required to infrastructure when VCT was provided on-site due to use of the rapid test, which does not require a separate laboratory, and no changes were required in the referral model. Whereas providers are more likely to offer VCT if they provide it on-site, clients may prefer a referral so they have additional time to consider if they would like to follow through with the testing, speak with their partner, or be tested by a different provider whom they do not see on a routine basis.

Source: Liambila et al. 2009.

PROVISION OF SERVICES AND CARE FOR HIV-EXPOSED INFANTS: A COMPARISON OF MATERNAL AND CHILD HEALTH (MCH) CLINICS AND HIV COMPREHENSIVE CARE CLINIC MODELS.

Background: HIV-exposed infants have significantly less access to ARV prophylaxis than their mothers. In Kenya, a study was conducted to determine if integration of services for HEI could be effectively carried out within an MCH clinic. The MCH clinic was compared to a control HIV clinic to determine effectiveness of the intervention.

Methodology: Staff members were trained at an MCH clinic located within a district hospital to do early infant diagnosis through PCR testing, HIV antibody testing, and Co-trimoxazole (CTX) prescription. At the time of each visit, the mother and infant were given a date for a follow-up visit, per Kenya national guidelines.

Results: Mothers and infants were significantly less likely to become lost to follow-up in the integrated model of services, with 54 percent of infants attending all follow-up visits in the integrated model, compared to 19 percent at the control site. There was no significant different in PCR testing or CTX prophylaxis between the integrated and control site. There was also no difference in client satisfaction.

Considerations: This study suggests that the integrated model of service delivery decreased stigmatization of clients and was more user-friendly, as evidenced by increased attendance by mother and infant. Because even in the integrated model, 46 percent of infants were lost to follow-up, additional strategies must be used to maintain HEI in care, however, including defaulter tracing systems, programs to involve the partner, and peer support programs for women.

Source: Ong'ech et al. 2009.

STRATEGIES USED BY FACILITIES IN UGANDA TO INTEGRATE FAMILY PLANNING INTO HIV CARE: WHAT WORKS AND DOESN'T?

Background: In Uganda, the USAID-funded Health Care Improvement Project sought to integrate FP services into routine HIV care and treatment services. FP was identified as an opportunity for integration due to the high need and a large service gap that was noted.

Methodology: At program outset, they gathered baseline data and established integrated program objectives and indicators. Providers were then trained on FP service provision and provided with WHO tools for FP counseling. On-site technical assistance and mentoring was provided following the training. They also provided job aids and monthly coaching to identify and address any on-going issues. Sites were elected to use peer counselors to provide FP education to clients or job aids to assist staff in FP service provision.

Results: Six months after the training, the clients who received family planning counseling rose from 52 percent to 92 percent, a level maintained throughout the 12-month study period. Additionally, peer counseling was found to be an effective approach, increasing FP counseling by 46 percent. Job aids were also found to be highly effective, increasing FP services by 38 percent.

Considerations: Quality improvement interventions post-implementation of the integration program significantly improved the degree to which services were integrated. To carry out further integration activities, the study identified that support for training, quality monitoring, drugs and supplies, monitoring referral networks, and quality improvement activities are necessary.

Source: Kirunda et al. 2010.

FACILITATING HIV TESTING, CARE AND TREATMENT FOR ORPHANS AND VULNERABLE CHILDREN AGED FIVE AND YOUNGER THROUGH COMMUNITY-BASED EARLY CHILDHOOD DEVELOPMENT PLAY CENTERS IN RURAL ZIMBABWE.

Background: In rural Zimbabwe, an informal needs assessment of OVC identified that among children under 5, there was limited access to HCT, psychosocial services social protection, early learning support, birth registration, and immunizations. Together with the Ministry of Health and Child Welfare, the Organization of Public Health designed an intervention consisting of 16 different play centers that integrated HCT and psychosocial services to meet the health and social welfare needs of OVC under age 5.

Methodology: The play centers were designed based upon feedback from focus group discussions surrounding psychosocial support needs and rapid assessments of available OVC services. For each play center, local stakeholders identified centrally located community centers that were also near health centers. Community volunteers were identified and trained to staff the play centers. Community sensitization meetings informed caregivers of the services offered. Nurses from the nearby health center routinely checked the health status of children at the play centers, including growth monitoring, immunizations, and HIV exposure and status.

Results: Out of the 697 children enrolled in the play centers, 59 percent were tested for HIV and of these 100 percent received opportunistic infection and ART services.

Considerations: Standardized registers used within each play center were successful in tracking children who were at risk of becoming lost to follow-up. These children and their caregiver received a supportive home visit once the risk was identified. Family strengthening through education on nutrition, child health protection, family planning, PMTCT, adherence, and immunizations was thought to be highly successful and a fundamental component to the high HIV testing rates among OVC.

Source: Patel et al. 2012.

ANNEX 3. RESOURCES FOR MNCH/HIV INTEGRATION

1. **Cochrane HIV/AIDS Group and USAID. 2011. *Systematic Review of Integration of Maternal Neonatal and Child Health and Nutrition, Family Planning and HIV.***

   A review of MNCH/HIV integration studies and an analysis of promoting and inhibiting factors for integration. http://www.ghtechproject.com/files/MNCHN-HIV FINAL 12 12 11.pdf

2. **Briggs, C.J. and P. Garner. The Cochrane Collaboration. 2007. *Strategies for Integrating Primary Health Services in Low-and Middle-Income Countries at the Point of Delivery.***

   A review of the existing literature on effectiveness of integration of TB, HIV/AIDS and reproductive health programs. http://apps.who.int/rhl/reviews/CD003318.pdf

3. **The President's Emergency Plan for AIDS Relief (PEPFAR). 2011. *PEPFAR Guidance on Integrating Prevention of Mother to Child Transmission of HIV, Maternal, Neonatal and Child Health and Pediatric Services.***

   This guidance highlights an essential package of integrated MNCH/HIV services and provides guidance for implementation of integrated service delivery. http://www.pepfar.gov/reports/guidance/pmtct/158785.htm

4. **Sherr, Lorraine. 2012. *Literature Review on Program Strategies and Models of Continuity of HIV/ Maternal, Newborn, and Child Health Care for HIV-Positive Mothers and Their HIV-Positive/-Exposed Children*. Arlington, VA: USAID's AIDS Support and Technical Assistance Resources, AIDSTAR-One, Task Order 1.**

   This literature review assesses the existing evidence base on integrated models for HIV-positive women and their HIV-positive/-exposed infants.
   http://www.aidstar-one.com/sites/default/files/AIDSTAR-One_LitReview_HIV-MNCH_Integration.pdf

5. **Stone-Jimenez, Maryanne, Bisola Ojikutu, Mulamba Diese, and Cassandra Blazer. 2011. *Technical Brief: Integrating Prevention of Mother-to-Child Transmission of HIV Interventions with Maternal, Newborn, and Child Health Services*. Arlington, VA: USAID's AIDS Support and Technical Assistance Resources, AIDSTAR-One, Task Order 1.**

   This technical brief reviews clinical and programmatic considerations, as well as challenges, of reorienting health systems to include PMTCT interventions within the full continuum of existing health services.
   http://www.aidstar-one.com/focus_areas/pmtct/resources/technical_briefs/integrating_pmtct_mnch_services

6. **WHO [World Health Organization]. 2011. *WHO Technical Guidance Note: Strengthening Inclusion of Reproductive Health and Maternal, Newborn, and Child Health in Proposals to the Global Fund and Other Partners*. Geneva: WHO.**

   A list of MNCH indicators for HIV, tuberculosis and malaria programs for use when considering integrated indicators. http://tip.populationaction.org/files/2012/08/WHO_RH_MNCHGuidance_July2011.pdf

7. **WHO. 2004. *Integrated Management of Adolescent and Adult Illness: Interim Guidelines for First-Level Health Workers at Health Centre and District Outpatient Clinic*. Geneva: WHO.**

   This integrated package provides technical support for chronic HIV care and treatment, acute care, and palliative care. These guidelines include updated pediatric sections. http://www.who.int/hiv/pub/imai/en/IMAIAcuteCareRev2.pdf

8. **WHO. 2012. *WHO Policy on Collaborative TB/HIV Activities: Guidelines for National Programmes and Other Stakeholders*. Geneva: WHO.**

   Guidance for strengthening integrated service provision of HIV and tuberculosis. http://www.who.int/tb/publications/2012/tb_hiv_policy_9789241503006/en/index.html