Introduction
This is the ninth update of the bibliography on HIV/AIDS in Ethiopia, which has been published annually since 2003. All the eight previous issues included published and unpublished research on HIV/AIDS and related health conditions and issues, including other sexually transmitted infections, tuberculosis, and socioeconomic, behavioral and policy as well as risk behavior, gender-based violence, family planning, and relevant health policy and interventions. This update extends the bibliography to cover references not listed in previous updates, both publications and presentations that appeared in 2011. Following the earlier updates, this issue presents new references under the same eight main headings, as follows: basic biomedical research; epidemiological, behavioral, socio-economic and cultural research; impacts research; treatment, care and clinical research; prevention research; health services and health policy research; health informatics, monitoring, and evaluation research; and HIV/AIDS research on Ethiopians in the Diaspora. Similarly, Section 9 lists of selected websites. The text preceding the reference listing attempts to provide brief summary of the studies in their respective categories. In this update we have tried to highlight the fact that masters theses are also being conducted within the emerging and other universities (other than AAU). As these institutions are increasing in number, dwelling on such a discussion will help in identifying priority issues as well in indicating directions so that unnecessary repetitions and duplications of efforts can be avoided.

We used the same methods as in the previous updates to identify and catalog the references. Thus, all new references appearing in 2011 were searched in major databases, including PubMed/MEDLINE, CINAHL, Social Work Abstracts, Sociological Collection, EconLit and POPLINE using the key words “Ethiopia and HIV. Second, journals that were not indexed by these database systems, such as the Ethiopian Journal of Health Development and the Ethiopian Journal of Health Sciences, were manually reviewed for relevant abstracts. In this update, we have included abstracts from major national and international conferences on public health, including the 1) International Conference on AIDS and Sexually Transmitted Infections in Africa (ICASA 2011) that was conducted in December 2011; 2) the 6th International AIDS Society (IAS) Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2011) that was conducted in Rome, Italy during July 17-20, 2011; and 3) the 13th World Public Health Congress that was conducted in April 2012 in Addis Ababa, Ethiopia. Additional online searches were made on websites of major national and regional HIV/AIDS resource centers, such as http://www.etharc.org, and international organizations (e.g. http://www.unaids.com). Lastly, we again included graduate theses and dissertations prepared in different departments of Addis Ababa, Gondar, Haramaya and Mekelle Universities. Regarding the conferences conducted in Addis Ababa (ICASA 2011 and the 13th World Public Health Congress), it should be noted that all the abstracts on HIV/AIDS, TB and STI from Ethiopia but few from other countries were included.

As mentioned above, this issue has included the abstracts from the World Public Health Congress that was conducted in April 2012. This was made since this year’s issue of the Update was published late in the year and it seems good to cover the abstracts of both the ICASA and the WFPHA Congress, recognizing that both of them were held in Addis Ababa within a short time in December 2011 and April 2012, a once-in-a-lifetime coincidence. In addition, it was also possible, for the first time, to list the theses from three additional universities (Haramaya, Gondar and Mekelle) in this update, in an effort to eventually provide a comprehensive listing of all theses written in Ethiopia. With such inclusions, this year's HIV/AIDS Update thus promises to be particularly important and another step forward in the evolution of this bibliography.

This update includes 498 citations, a 27.4% increase compared to the 2010 update; 84 are articles, 258 conference presentations, 148 master’s theses (74.3% being from AAU), 3 unpublished reports by various agencies and 5 unpublished reports by universities (3 by Haramaya and 2 by Mekelle).
PubMed search terms: Ethiopia AND HIV AND 2011[dp]; Ethiopia AND aids AND 2011[dp] yielded fewer references but added one (in French) to the total to make 82 references for 2011.

Figure 1: Publications cited in PubMed concerning Ethiopia and HIV or AIDS. The increase in presentations in recent years now appears to continue to be followed by an increase in material becoming full-length manuscripts. (see update for 2010, published in EJHD for International AIDS conference abstracts. There are also a number of new journals now listed in PubMed permitting work done in Ethiopia to be published in medical and scientific journals. These include The Ethiopian Journal of Health Science and the East African journals. It is not clear when these journals were first included in PubMed.


Figure 2. In 2009, there was a large increase in the number of publications concerning HIV, AIDS, and/or tuberculosis and Ethiopia. The number of publications concerning schistosomiasis remains rather low, but up to 5 for 2011. The number of papers concerning malaria increased sharply in 2009 and remains at a steady level with 35 publications in 2011.
**Basic Biomedical Research**

There were 24 references in this section which is exactly equal to those in the last year. Of these 24, 20 (83.3%) were conference abstracts presented at ICASA 2011 and the World Public Health Conference, 2 were published articles, and 2 were master’s theses.

Of the two published studies concerning basic biomedical research, the article by Abreha et al. appeared to break new ground in Ethiopia. Hepatitis and hepatic carcinoma are high prevalence conditions in Ethiopia and the relationship to hepatitis B virus has been well-documented. The prevalence of hepatitis C virus (HCV) in Ethiopia, but not different HCV genotypes, has also been the subject of a few studies (see, e.g., Alemayehu A et al. in Section 6, Clinical Research). The HCV genotypes respond differently to some of the treatment regimens and some may be more likely to progress in HIV-co-infected individuals who tend to be less able to spontaneously clear HCV infection. Abreha et al., in a cross-sectional survey in a voluntary counseling and testing center, found that genotype 4, a type predominant in the Middle East, was also predominant in this population. No differences in HCV viral load or genotype distribution were found between HIV-infected and uninfected individuals. The authors note that a comprehensive national study might elucidate whether genotype 4 originated in Ethiopia or the Middle East, a region historically and currently, a frequent travel destination for Ethiopians and vice versa. Theses found elsewhere in this year’s bibliography also concern HCV infection in different parts of Ethiopia. Researchers are encouraged to explore other infections related to AIDs and cancer, including those not formally considered to be AIDS-defining malignancies. As anti-retroviral treatment becomes more available, HIV-infected people may survive but become more vulnerable to illness caused by *Helicobacter pylori*, human papilloma virus (cervical, anal, and other cancers), Epstein-Barr virus, and others. Cancers not thought to directly involve infection, such as lung cancer, may also be more common as a result of inflammatory responses to various infectious agents.

**Epidemiological, Behavioral, Socioeconomic and Cultural Research**

With 185 (37.2%) of all the 498 references, this section continues to be the largest; 99 (53.5%) of the references in this section are from ICASA, 57 are from master’s theses (44 of these being from AAU), 17 are from presentations at the 13th World Public Health Congress, 8 are published articles, 3 are from IAS 2011, and 1 is a report of the Central Statistical Agency (CSA).

It is encouraging to see master’s theses of universities other than AAU in the current Update. There were 6 theses from Gondar University and 7 theses from Haramaya University in this section. One point that may be noted is that both references 19 and 21 deal with violence among female night students in Hawassa Town but the research for these studies was carried out at two different universities.

As in previous updates, the most frequently researched issues in the Epidemiological, Behavioral, Socioeconomic and Cultural Research section in 2011 were 1) the prevalence and distribution of HIV, TB and other co-infections, 2) individual and inter-personal risk behaviors associated with HIV infection, 3) socioeconomic, cultural, psychological and structural determinants of risk behavior associated with HIV/AIDS and related infectious diseases, and 4) prevalence and determinants of HIV counseling and testing. In this edition, we highlight those areas where research seems to be intensifying or those promising new research areas which have not been adequately covered in previous updates.

A sizeable number of references in this section are devoted to research about the challenges and successes of expansion of ART services to people living with HIV/AIDS. The references under this thread include studies on strategies and factors that influence the uptake of ART (2, 69, 136, 139), efforts at assessing knowledge, attitudes, and perceptions towards ART (102), determinants of immune response to and failure of ART (33, 156), prevalence and determinants of ART adherence (32, 164, 166), and survival and mortality among those who are on ART (25, 35, 145, 170). As ART services are expanded in the country, the need for these types of studies will continue to grow and we expect research output in this area will grow and provide information to improve care, treatment, and support services.

With increased access to ART and medical care, people with HIV/AIDS are living longer than ever before. In this update, several research reports focused on the challenges and difficult choices facing people with HIV/AIDS. Among the most difficult decisions people living with HIV/AIDS have to make that have been studied include disclosure of HIV status (20, 71), breast feeding (184), sexual life, fertility desires, and contraception (79, 80, 182) and maintaining serodiscordant relationships (133, 150). Research in these topics should be encouraged because it provides the foundation for the expansion of sexual health and supportive psychosocial services for people living with HIV/AIDS and their partners in Ethiopia.

Sexual and physical violence against girls and women are again addressed by several studies. These studies covered such topics as the prevalence of sexual violence and aggression in marital (5, 84) and non-marital situations (12, 19, 21, 51, 91), among girls and women in various settings including schools, prisons, and voluntary counseling and testing clinics. Some studies focused on the relationships between sexual violence and risk for HIV and other sexually transmitted infections (12, 14). The increased interest in this area appears to correlate with the publication of national statistics on the relationship between violence and HIV/AIDS in Ethiopia.

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with the growing awareness of the magnitude of the problem as well as the human rights of women (152). We hope future research in this area would also focus on understanding the psychosocial, cultural, and economic underpinnings of violence against girls and women, interventions to prevent violence before it happens, and support services for victims of violence.

The preponderance of the references listed in the section continue to focus on studies with high school and college students, women attending healthcare facilities, and members of the uniformed services, obviously because these population groups are easily accessible for research. This update contains studies with other vulnerable and hard-to-reach population groups that have received limited attention in the past. For example, we have several references that dealt with sexual risk behaviors, risk perceptions, and HIV/AIDS among pastoralists (94, 95, 173) and risk behaviors, perceptions and/or vulnerability to HIV/AIDS among people with mental and physical disabilities (6, 37, 53). Overall, there is a noticeable increase in the diversity of the population groups studied and the geographical locations covered in this Update, which may be attributed to the expansion of higher education and research institutions throughout the country and the inclusion of theses from Gondar, Haramaya and Mekelle universities. This is a welcome and hopefully continuing trend that presents an opportunity for a more complete picture of the HIV/AIDS epidemic in the country.

We are also encouraged by continued interest in social studies that attempt to explicate the broader social and cultural determinants of the distribution of risk for HIV/AIDS in Ethiopia. Given that HIV/AIDS stigma remains high in Ethiopia, a report on the development of a measure to stigma (36) and studies about the dimensions of stigma (87) and efforts to manage it (165) are important contributions. Several studies attempted to examine the cultural origins and factors affecting the practice of female genital cutting among various population groups (23, 124, 129, 153). Furthermore, other studies looked at the relationship between religious beliefs and HIV/AIDS (112, 181) and community conversations about HIV/AIDS (78, 137). Social research on HIV/AIDS is still lagging behind behavioral epidemiology. Further support to social science approaches to uncover the social determinants of HIV/AIDS in Ethiopia should be encouraged.

**Impacts Research**

There are only 11 studies in this section in the current update, compared to 22 references in the 2010 update. Five references are to master’s theses at AAU, 3 are journal article, 2 are presentations at ICASA 2011 and one is a presentation at the 13th World Public Health Congress. Four of the studies (references 1, 4, 5, 8) deal with psychological impacts of HIV/AIDS, and one study on compassion stress among volunteers, areas that are still poorly understood. Three others address reproductive health related issues, including two studies of adverse effects of gender-based violence on reproductive health (3, 6, 9), including a master’s thesis on women with disabilities. One study each examines household economic (2) impacts of HIV/AIDS and successes and problems of HIV/AIDS in Africa (7). HIV-infected disabled persons are receiving increasing attention by researchers and health planners in various sub-Saharan African countries as part of the current emphasis on this group, which was until recently considered to be a low-risk group. Two studies of the effect of HIV/AIDS on livelihoods and food security indicate that these impacts are severely impacting on households and are far from understood in their complexities (2, 11).

**Health Services and Health Policy Research**

We included 51 studies in this section, 32% fewer than in the 2010 Update. Presentations at the ICASA 2011 conference dominate the references also of this section (52.9%). Seven of the references are abstracts from the 13th World Public Health Congress, 8 are published articles, 6 are MA theses (3 from AAU and one each from Gondar, Haramaya and Mekelle), and 3 others are abstracts from the IAS 2011 Conference.

Ten references pertained to studies of the general health services, comprehensive HIV/AIDS services, and human resource development (4, 15, 21, 23, 24, 27, 33, 39, 40, 49), with more than 2 dozen additional studies of special services. A study in Ethiopia and Malawi revealed a beneficial effect of ART scale-up on the wider health systems (40), indicating that earlier fears of HIV/AIDS programs depleting resources from other areas of the health sector may not be warranted and suggesting that the expansion of HIV/AIDS services may be more cost-effective than earlier estimated. Another 4 studies examined the role of the private sector contributing to the delivery of HIV/AIDS and TB services in Ethiopia (16, 21, 43) and in other developing countries (38).

References 3, 5, 7, 8, 14, 34, and 35 pertain to the commencement, retention and attrition of ART. One study each examined the impact of the revised CD4 threshold on starting ART (3), the outcome of pre-ART services (5) and efficacy and safety of deferred initiation of HAART in HIV/TB co-infected patients (15). Two studies assessed retention/attrition in ART (7, 8). A survey of 55 health facilities (30 hospitals and 25 health centers) revealed retention rates varying from 51% to 85% after 24 months on ART. Results indicated that the organization of health care is associated with retention rates in different facilities, although further studies are needed on facility- and community-based characteristics to inform treatment and patient retention programs (7).

Only five studies deal with high-risk populations, including three studies of the care and support of orphans and other vulnerable groups (28, 42, 44), one focusing on...
reproductive health services utilization by pastoral youth (30) and a pilot project of confidential clinics for female sex workers (6). These latter two studies address issues not covered in earlier Updates. Further health services research on these and other high-risk groups (refugees, prisoners, men who have sex with men, and users of illicit drugs) are urgently needed to provide them with HIV/AIDS services and reduce HIV transmission levels, especially in urban areas.

Continuing increases and remaining barriers in access and utilization of counseling, testing and other HIV/AIDS services were reported by eight publications (9, 12, 16, 22, 32, 37, 39, 40), They include scaling up male partner HIV testing at maternity wards (23), and the integration of provider-initiated CT at family planning clinics (31), and development of community health manpower (45, 49), all issues critical in the scale-up of HIV/AIDS services. Also encouraging is the finding that HIV testing increased access to prevention of mother-to-child transmission (PMTCT), which has been hampered by low coverage in Ethiopia. Scaling up of point-of-care (POC) HIV testing is another cost-effective approach as it improves access to preventive of PMTCT (47). POC reflects a recent paradigm shift worldwide in HIV prevention from uninfected to infected individuals that will integrate prevention to clinical care settings, promoting greater attention of health care providers to give focused attention to PLWHA. Accessibility and utilization of reproductive health services by sensory impaired, women, however, particularly blind and deaf persons, remains problematic in Ethiopia due to low awareness in the population of their sexual and reproductive needs (44). The common neglect of these and other handicapped persons in developing countries requires further studies and urgent attention of health planners and managers.

Three studies addressed health policy issues related to decentralization of comprehensive HIV/AIDS services to the community level (24), strengthening of health systems to support diabetes and possibly other non-communicable diseases in Ethiopia (32). The Brazilian HIV/AIDS policy emphasizing South-South collaboration is a shining example of the potential contribution of pharmaceutical firms in developing countries to control efforts that can inform the rapidly developing biomedical industries in Ethiopia and other African countries (37).

Lastly, two of the studies dealing with previously neglected but urgent issues, point to the need to utilize HIV/AIDS research results to guide public health practice in prevention, treatment, care and support programs (46) and examine changes in water treatment practices by PLWHA exposed to diarrhea prevention programs (1), following the guidelines of a 2010 WHO report on this topic. The former study constitutes a strong reminder that the extensive literature on HIV/AIDS in Ethiopia needs to be carefully examined for information that reveals past successes and failures, as well as neglected areas of research that can guide current research efforts and interventions (46).

Prevention Research
There are 91 references in this section, a 30.6% increase from those of the 2010 Update. Almost similar numbers of references are to the ICASA 2011 Conference abstracts (22), masters theses from AAU (21), and the 13th World Public Health Congress (18 each). Seven of the masters theses were from Gondar University and there were 2 unpublished research reports from Mekelle University.

With 17 entries (2, 4, 5, 6, 7, 12, 16, 17, 30, 32, 39, 44, 65, 70, 81, 84, 85), HIV counseling and testing represents the largest group of studies. Most studies examined approaches to the study and implementation of prevention measures not discussed in earlier updates. They include the acceptability of home-based counseling and testing (4, 85), counselor perceptions and client satisfaction in VCT (12), the effectiveness of community conversation in increasing the uptake and improving KAP in rural areas (32, 81) and its potential to promote structural changes beyond HIV (29), efficacy of Gada cultural practices among Oromo VCT clients (6), two methodologies to measure perceived risk and vulnerability among female VCT clients (16) and knowledge of health extension workers after HIV counseling and testing training (30), and an evaluation of the readiness of ANC clients for VCT (65). Four studies addressed issues of provider-initiated HIV testing and counseling (39, 42, 84, 86). The increase in home- and community-based VCT studies represents a strong response to world-wide efforts to bring prevention services closer to HIV-infected people.

Eleven references are to studies of PMTCT (8, 9, 41, 43, 45, 62, 64, 71, 83, 86, 90). Three reviews of Ministry of Health records reveal that although considerable progress in the quality and coverage of PMTCT services has been made, coverage remains low due to numerous factors related to program administration and coordination between stakeholders, weak integration of PMTCT services at the local level and lack of testing and treatment centers in many rural areas (8, 9, 71). Other studies identified lack of male partner involvement (41), low medication adherence and deficient infant follow-up (64), cultural barriers, low socioeconomic status and fear of stigma and discrimination (62) as additional factors. These patterns suggest that further health system research from both the provider and the consumer perspectives are warranted.

Approaches and methods not presented or inadequately covered in earlier studies of health education and health promotion were examined by most of the 12 studies identified in this issue (15. 16, 19, 20, 26, 27, 34, 55, 61, 62).
Two theory-based studies evaluated the effectiveness of an audio intervention for illiterate females in a rural community (15) and functionality of the health belief model among preparatory students (34), and an educational game was found to be useful for teaching STIs to high school students (26). Endeshaw addressed the challenge of introducing sustainable healthy behavior in culturally diverse communities (27), an issue about which little is known. The potential role of model household behavioral and participatory training (68), religiosity and motivation for preventive behavior (20), as well as the participation of community leaders and elders in HIV/AIDS and poverty interventions (87) also requires further studies to validate the initially encouraging results in different social and religious settings.

Several other inadequately researched themes in HIV prevention may reduce HIV and increase HIV/AIDS services further. They include the strengthening of couples’ relationships, (18), gender mainstreaming in HIV/AIDS programs (38), which was reported from other African countries to facilitate the development of gender-specific and thus more effective interventions, perception and effect of male circumcision (21, 36, 47), the role of gender orientation on men’s attitudes toward domestic violence (37), efforts to involve males in HIV prevention programs (59), and HIV prevention needs and practices of waitresses (40), commercial farm workers (33), daily laborers (79) government workers (74) and civil service workers (69, 80), and risk behavior and health services needs of disabled persons (24, 51). The use of antiretroviral prophylaxis (63), evaluation of the recently implemented health extension program 66), as well as benefits of urban gardening (1) and the role of vitamin A deficiency in HIV infection, although covered in earlier Updates, also require additional research.

Treatment, Care, and Clinical Research

With 114 references, this section contains the second largest number of the references (22.8%) in this update. Two-fifth of the references in the section (40.4%) are from masters theses of universities (31 from AAU, 10 from Haramaya and 5 from Gondar). The next highest is from published articles (32.5% of all the references in this section). There are 14 references from abstracts of ICASA, 2011, 12 from the 13th World Congress on Public Health, and 5 abstracts are from the IAS 2011.

This section again presents a large number of studies addressing a wide range of issues in the areas of AIDS and TB treatment, patient care, and clinical research. The various stages of the ART accessibility, patient selection, treatment, treatment outcome, and adherence sequence were studied. Barriers to ART and late presentation were examined by four studies, which associated delays in reporting to lack of awareness, stigma, perceived side effects, and non-disclosure, among others (1, 17, 19, 68). Disclosure and non-disclosure of HIV/AIDS status are far from understood, showing differences in the motivation to disclose among males and females (32, 43) and low rates of disclosure to children, apparently for cultural reasons, contrary to the trend of increasing disclosure to children worldwide (24). Fear of stigmatization and discrimination by health workers against PLWHA seeking ART was borne out by a study in Jimma Zone (41).

Several clinical studies reported on the hematological profile of patients receiving ART (11), the immune inflammatory syndrome in HIV/TB cases on ART (12), other immunological and virological responses to treatment immune restoration disease and changes in CD4 counts in AIDS patients (70), clearance of nevirapine-resistant virus in infants under treatment (80), X-ray evaluation of respiratory symptoms in HIV-positive patients (18) and treatment-induced liver injury (109). A MSc thesis reported on the use of traditional medicine for the treatment of HIV infections, AIDS and various opportunistic infections (7), an issue addressed by various earlier studies. Five studies reported on the effect of food supplements in TB patients (85) and of Vitamin A deficiency, food insecurity and nutritional status in patients on ART (21, 73, 97, 98). Further studies may identify treatment-enhancing foods treatment-delaying traditional remedies for infectious. There is also a need to examine the potential for collaboration between traditional healers and modern health providers to promote patients referrals to ART centers, especially in rural areas with low health services coverage.

Fifteen studies examined outcomes of ART (2, 5, 14, 29, 33, 37, 40, 56, 61, 75, 76, 79, 95, 96, 99), including 2 studies of patients receiving ART and/or TB treatment (40, 45). This section included 4 studies of infants (80) and children (14, 61, 76). Particularly encouraging is the finding that mortality in infants of breast-feeding mothers in Ethiopia, Uganda and India receiving extended-dose regimens of nevirapine was half that of children receiving only a single dose (79). One study reported on the prevalence of HIV among fistula patients and factors in the outcome of fistula repair (69).

Although the quality of clinical care has improved in recent years in Ethiopia, its effect on treatment outcome has not been received much attention by researchers. An earlier study by Y.Kifle Alemayehu (Int. J. Qual. Health Care, 2009) found some deficiencies in the processes and outcomes of care in a referral hospital. In 10 public health facilities in Jimma Zone, T. Geremew et al. (45) found that 66% of TB patients received inadequate care. Both studies identified non-compliance with national treatment guidelines as significant impediments to quality care.

Treatment adherence also remains a major challenge in improving the efficacy of treatment and received again considerable attention by researchers (19, 49, 60, 66, 74,
87, 94, 100, 105, 111). A new study of the role of peer counselors (PLWHA) in facilitating patients’ adherence to ART in urban and rural health facilities in Ethiopia and Uganda (49) corroborated earlier encouraging reports of beneficial influence. Peer counselors facilitated adherence, acted as role models, raised awareness, represented a bridge to the health care system and conveyed to patients a positive outlook on life. But lack of a clear definition of their role and function in the health system and inadequate financial and organizational support impedes their engagement, and the sensitive issue of disclosure without causing or increasing stigmatization also needs to be addressed.

In regard to the widespread concern that people on ART may resume high-sexual behavior, the finding that high levels of risky sexual practices was found to persist among patients on ART in Addis Ababa public hospitals (35) contrasts with studies in Southern Africa showing a decline of such practices in patients receiving treatment. These variable results call for further study to elicit underlying factors toward the development of interventions aimed at behavioral change.

There is additional evidence that case management, an understudied area, may improve adherence. Of the two references to studies of case management (53, 66), the one by Marseille et al. (66) provides new information on micro-costing that may increase adherence to ART. It revealed that unit costs were inversely related to patient volume and service volume-to-staff ratio, indicating that appropriate staffing patterns may increase program efficiency.

One study discussed the adaptation of the new WHO guidelines for ART initiation (54) and studies examined CD4 counts in the staging of patients and factors in CD4 count fluctuations (20, 22). Particularly encouraging results were obtained by a study of the recently introduced point of care CD4 testing system, showing that consistent results could be obtained in a health center setting and arguing for the adoption of CD4 machines (91). Nevertheless, although this study recommended the use of the PIMA point-of-care analyzer, reports of its poorer performance in primary health care clinics in rural South Africa by D.B. Glencross et al. (J. Int. AIDS Soc. 2012) warrants further studies in similar settings in Ethiopia, where the system is most likely to be used.

The need for more comprehensive and effective care and support for PLWHA is great in Ethiopia, as in most other endemic countries. Care and support of AIDS patients and orphans and other vulnerable children was addressed by 7 studies (25, 26, 31, 58, 72, 106, 109). The delivery of comprehensive care for vulnerable children involving school/community partnership programs (25) and behavioral counseling for post-traumatic stress disorder in orphans (58) and abused children (72) are 2 urgently needed services for the rapidly growing population of vulnerable children and AIDS orphans. The reliability and validity of a hospital anxiety and depression scale was tested for measuring standardized mental health parameters (8) and another study reported on a pilot integration of mental health services in ART (106).

The development of tools that can generate more objective and comparable information on the mental health of AIDS patients and the integration of mental health services are urgently needed and require further studies in different social, cultural and age/sex groups.

The remaining references are to studies of TB case finding and laboratory diagnosis (13, 17, 33, 34, 62), risk factors of TB/HIV co-infections (89, 101), hepatitis B, HCV and HTLV-1 co-infections (51, 52, 81), treatment outcome of amphotericin B in visceral leishmaniasis in a high-risk HIV population (84), fertility intentions by females and/or couples on ART (107, 114), and the incidence and predictors of pregnancy among patients receiving pre-ART and ART (113).

Health Informatics, Monitoring and Evaluation Research
There are 19 references in this section, compared to 39 references in the 2010 Update. There are 6 references to published articles, 5 references each to ICASA 2011 abstracts and masters theses from AAU (2 being from the joint MSC in Health Informatics program that is being run jointly by the School of Public Health and the College of Management, Information and Economic Sciences). One reference each are to an abstract from the 13th World Public Health Congress, a report from HAPCO and a country fact sheet from FHI, Ethiopia.

Health informatics, monitoring and evaluation are gaining increasing importance due to the rapidly increasing databases and complex and specialized information that are being generated by all areas of HIV/AIDS research and the need to obtain reliable and comparable information and to analyze this information for decision making. It is therefore a matter of concern that the number of publications in this area declined by half since last year, although the actual number of references in this update is slightly larger because of the inclusion of several references to studies addressing some aspects of health information, monitoring and evaluation in Section 4 (Ali et al., Gormley et al., Lemma et al., Nowakowski et al., Telake et al.), Section 5 (Bogale et al., Bradley et al., Garoma, Mujahid), Section 6 (Geremew et al., Guebre Mariam, Aklilu, Linnander et al., Mindaye, Worku et al.). We expect the evaluation and application of various research methods and tools in HIV/AIDS interventions to continue towards further improving the quality and replicability of research and to facilitate cost-effective and appropriate interventions.

Five studies reported the results of surveys and methods estimating and monitoring the prevalence and distribution of HIV and common co-infections (4, 7, 8, Ethiop J Health Dev 2012;26(2).
11, 13). They included one study each of burial surveillance of HIV (4), application of data mining techniques in predicting patterns of HIV, hepatitis and syphilis infections among blood donors (11) and TB (13), both of which have been reported on in earlier updates. They also include evaluation of the recently introduced methods of integrated registers for TB and HIV surveillance in children (7) and a study of routine VCT data for HIV surveillance as an alternative for using serological data from ANC clients (8). The large VCT database holds promise for the use of these data as an alternative to ANC sentinel surveillance, although further evaluation of the VCT data are necessary, especially in rural areas with low VCT coverage.

Another 9 studies examined different methods of communication, management and care of HIV patients and access to laboratory resources that promise to increase the quality of care. The first study of ART surveillance data in private hospitals in Ethiopia pointed to deficiencies in the monitoring and reporting of ART Program data and called for an effective strategy to increase patient retention and tracing (2). Additional ART utilization studies are needed in other towns and in rural areas to inform health planners on the development of such a strategy. The establishment of an ART laboratory recording and reporting system (3) and an improved laboratory logistics management system (10) may also facilitate ART monitoring and evaluation efforts. Adherence to national guidelines for clinical practices, an important requirement for further improvements in the care of child patients (6), was also discussed by Geremew et al. (45, in Section 6). Additional research is also needed to further evaluate new approaches in HIV care and treatment services (12), electronic health management information systems (16), institutional access to clinical resources through onsite learning resource centers (17).

Another new theme presented in this section pertains to physician/patient information exchange. It is of interest that although the great majority of patients were reportedly satisfied with the information they received from their doctors about half of them reported that their doctors failed to identify resources and support and to adequately involve them in decision making (5). Further studies may identify means and ways to overcome these impediments to optimizing treatment outcomes. Lastly, the Multi-sectoral HIV/AIDS Response, Monitoring & Evaluation Report of HAPCO (14) informs on recent progress in these areas and touches on many of the issues discussed in this section.

Diaspora Research

Two of the 3 references in this section are to journal articles and one to an IAS 2011 abstract. Belete (1) describes the history of the People to People NGO, including the bridging program developed in partnership between Addis Ababa University, the University of Wisconsin and the US Twinning Program that involves Ethiopian health professionals in the Diaspora. A 12-year cohort study among Ethiopian immigrants in Israel found high loss to follow-up (2). The finding that immigrants in Israel who had never received ART acquired HIV through sexual behavior (3) has implications for ART.

Section 1. Basic Biomedical Research

This section covers laboratory-based biomedical research, including studies on HIV structure, replication, and host immune responses; co-infection with other agents; development and testing of laboratory procedures; and other related laboratory studies.


Section 2. Epidemiological, Behavioral, Socio-economic and Cultural Research

This section includes studies on the epidemiology of HIV and other opportunistic infections, AIDS and related diseases, and risk and protective behaviors. It also covers research on the biological, psychosocial, socioeconomic, cultural, structural, and other contextual determinants of HIV transmission and prevention.


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89. Hailaye Y. Hepatitis B virus infection among HIV/AIDS patients with and without antiretroviral therapy in Debre Berhan Hospital, Ethiopia. MSc Thesis: College of Health Sciences, Addis Ababa University, 2011.
93. International Group on Analysis of Trends in HIV Prevalence and Behaviors in Young People in Countries most Affected by HIV. Trends in HIV prevalence and sexual behavior among young people aged 15-24 years in countries most affected by HIV. Sex Transm Infect 2010 Dec;86 Suppl 2:i72-i83.
126. Mujahid M. An assessment of the implementation of the health extension program in some selected woredas of Jimma Zone of Oromia Regional State. MA Thesis: College of Education and Behavioral Studies, Addis Ababa University, 2011.
142. Shiferaw A. Screening for cryptococcal disease in HIV-infected patients visiting Black Lion and ALERT ART clinics in Addis Ababa. MSc Thesis: College of Health Sciences, Addis Ababa University, 2011.


**Section 3. Impacts Research**

This section includes studies on the characteristics and clinical course of HIV infection and opportunistic infections, treatment to AIDS and opportunistic infections, effects and outcomes associated with treatment, clinical and non-clinical care and supportive services provided to people living with HIV/AIDS.


3. Chekol A. Birth outcome and HIV infection among labouring women in Assosa Hospital, Southwest Ethiopia. **Ethiop J Health Dev** 2011;25(1):10-16.


Section 4. Health Services and Health Policy Research
This section includes reports on research and programmatic activities that are aimed at expanding and improving the healthcare system, including such issues as expansion of services for people living with HIV/AIDS, health resource economics and management, healthcare staff training, and national as well as international policies, laws, and guidelines for the provision of services and the protection of people living with HIV/AIDS, women, children, and other vulnerable groups.

10. Aye VM. HIV/AIDS: Own, scale-up, and sustain, via the use of a new scientific discovery of the wrist dimension in determining the degree of physical damage on an infected person. Abstracts of the 13th World Public Health Congress; Addis Ababa, Ethiopia; April 2012. Abstract no. 57.

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28. Maheri A, Track E: Policy, program and health economics categories under special population groups and HIV, the exhibition will focus on orphans and vulnerable children and HIV. Abstracts of ICASA; Addis Ababa, Ethiopia; 2011. Abstract no. WEPE260.


37. Pinto AP. Fighting HIV/AIDS through international cooperation and the right to health normative features: The Brazilian South-South Cooperation case. Abstracts of the 13th World Public Health Congress; Addis Ababa, Ethiopia; April 2012. Abstract no. 49.

38. Rao P, Gabre-Kidan T, Mubangizi DB, Sulzbach S. Leveraging the private health sector to enhance HIV

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51. Yosuf A. Assessment of linking family planning services and HIV/AIDS voluntary counseling and testing services in Karamara Hospital, Jijiga, Ethiopia. MPH Thesis: College of Health Sciences, Haramaya University, 2011.

Section 5. Prevention Research
This section includes reports on research and programmatic activities that are aimed at provision of prevention services targeted against HIV/AIDS and related opportunistic infections. Included in this section are studies on information and behavioral change communication, provision of voluntary testing and counseling and mother-to-child transmission prevention services, community mobilization, and other efforts against HIV/AIDS.

7. Assefa A. Knowledge and attitude of high school students towards HIV voluntary counseling and testing: The case of Yeka Sub-city High Schools. 

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42. Hailu A. Assessment of provider-initiated HIV testing and counseling (PITC) acceptance, Disclosure and factors related to it, among outpatient department (OPD) patient in Debre Berhan Referral Hospital North Shoa Zone, Amhara Region. MPH Thesis: School of Public Health, Addis Ababa University, 2011.


75. Otieno GM. Exploring perceptions and practices of health care providers and patients on issues of malnutrition on TBC in Tigray. Unpublished: College of Health Sciences, Mekelle University, 2011.


79. Sherburne L, Kassa K, Hagos S, Lovich R. HIV prevention needs of daily laborers along Ethiopia's
85. Tessema B. Willingness of home based HIV counseling and testing service among residents in Chagni Town Administration and Guangua Woreda, Western Amhara Region. MPH Thesis: School of Public Health, Addis Ababa University, 2011.
91. Yilma AN, Singh SR, Fairley SJ, Taha MA, Dennis VA. Chlamydia Trachomatis prevention effort are critical and should not be forgotten by policymaker in countries in Sub Saharan Africa. Abstracts of the 13th World Public Health Congress; Addis Ababa, Ethiopia; April 2012. Abstract no. 332.

Section 6. Treatment, Care, Clinical Research
This section includes studies on the characteristics and clinical course of HIV infection and opportunistic infections, treatment to AIDS and opportunistic infections, effects and outcomes associated with treatment, clinical and non-clinical care and supportive services provided to people living with HIV/AIDS.
2. Abdella S. Patterns of response to antiretroviral therapy in relations to baseline CD4 cell count at Hiwot Fana Hospital, Harar, Ethiopia. MPH Thesis: College of Health Sciences, Haramaya University, 2011.
11. Alemu J. Hematologic profile of HIV infected individuals after received in highly active antiretroviral therapy (HAART) at Black Lion Specialized Hospital, Addis Ababa. MSC Thesis: School of Medicine, Addis Ababa University, 2011.


34. Desale A. Assessment of laboratory logistics management information practice for HIV/AIDS and tuberculosis (TB) laboratory commodities in selected public health facilities in Addis Ababa. MSC Thesis: School of Medicine, Addis Ababa University, 2011.
47. Girma A. Sero-prevalence of HBV and HCV among chronic liver disease patients visiting OPD in public hospitals in Addis Ababa, Ethiopia. MSc Thesis: School of Medicine, Addis Ababa University, 2011.
51. Hadush H. HCV and HIV co-infection among attendants of VCT center and HIV follow up clients of Mekelle Hospital. MSc Thesis: School of Medicine, Addis Ababa University, 2011.
52. Hailaye Y. Hepatitis B virus infection among HIV/AIDS patients with and without antiretroviral therapy in Debre Berhan Hospital, Ethiopia. MSc Thesis: School of Medicine, Addis Ababa University, 2011.
59. Khoury Z. Factors that interfere in the early or late search of attendance in HIV/AIDS people: A study of 1520 cases in Sao Paulo City Brazil responsible for 12.5% Brazilian AIDS cases. Abstracts of the 13th World Public Health Congress; Addis Ababa, Ethiopia; April 2012. Abstract no. 48.


64. Ligidi T, Gebre-Selassie S, Tsegaye A. The immunological status of newly diagnosed tuberculosis patients co-infected with human immunodeficiency virus-1 in Adama Hospital, Ethiopia. Ethiop Med J. 2011 Apr;49(2):75-83.


68. Melkamu F. Assessment of determinants of late presentation to HIV care and treatment and late initiation of ART among PLWHA attending ART clinic in Addis Ababa. MSC Thesis: School of Pharmacy, Addis Ababa University, 2011.


88. Tadesse L. Fertility desire and family planning utilization among HIV positive people who are on antiretroviral treatment in Arsi Zone, Oromia Region, Ethiopia. MPH Thesis: School of Public Health, Addis Ababa University, 2011.
92. Teka B. Sero-prevalence of H. pylori in HIV positive and negative controls in St. Paul Hospital, Addis Ababa. MSC Thesis: School of Medicine, Addis Ababa University, 2011.
95. Terefe MW. Outcomes of antiretroviral treatment program at referral teaching Hospital in North West Ethiopia. Abstracts of the 13th World Public Health Congress; Addis Ababa, Ethiopia; April 2012. Abstract no. 9342.


105. Wolde Tsadik A. Assessment of adherence to ART on current treatment guidelines among PLWHA. MPH Thesis: School of Public Health, Addis Ababa University, 2011.


110. Yizengaw K. Psychosocial challenges of HIV positive pregnant women who are member and non member of mother support group: The case of selected hospital in Addis Ababa. MA Thesis: College of Education, Addis Ababa University, 2011.


Section 7. Health Informatics, Monitoring, and Evaluation Research

This section includes research concerning monitoring and evaluation of HIV/AIDS programs and the development and use of quantitative and qualitative analytic and communication methods.


Health Congress; Addis Ababa, Ethiopia; April 2012. Abstract no. 67.


Section 8. Diaspora Research
This section includes studies on HIV/AIDS among Ethiopians in the Diaspora and of Ethiopian health professionals in the Diaspora contributing to HIV/AIDS interventions in Ethiopia.


Section 9. Earlier Bibliographies

All annual HIV/AIDS bibliographic updates in this journal starting in 2003 and other relevant bibliographies are listed in the March issues of the EJHD between 2003 and 2010.

Section 10. Selected Websites Featuring HIV/AIDS in Ethiopia


2. Center for International Health of the University of Bergen, Norway (also access to the Ethiopian Journal of Health Development): http://ejhd.uib.no/

3. Ethiopian AIDS Resources Center: http://www.etharc.org


5. Christian Relief and Development Association: www.crdaethiopia.org


7. People to People Organization: http://www.peoplepeople.org/

8. Save the Children: http://www.savethechildren.net/ethiopia/


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15. University of California, San Francisco HIV In Site: http://hivinsite.ucsf.edu/global?page=cr09-et-00
17. The International Technical Training and Education Center on HIV (I-TECH) of the University of Washington: http://www.go2itech.org/itech?page=co-03-00
18. The International Center for AIDS Care and Treatment Programs (ICAP) at Columbia University’s Mailman School of Public Health: http://www.columbia-icap.org/wherewework/ethiopia/index.html