Integration of HIV services in low income countries

Louis Pizarro

Sidaction satellite
AIDS 2014
Melbourne
20th of July
1. Some definitions
2. A patient perspective
3. A health system perspective
4. Solthis approach
What integration means?

Systematic analysis of the relative merits of integration in various contexts and for different interventions is complicated as there is no commonly accepted definition of ‘integration’. (Atun 2009)

UNAIDS: Joining together different kinds of services or operational programs in order to maximize outcomes, e.g. by organizing referrals from one service to another or offering one-stop comprehensive and integrated services. This includes services from a singular provider and from separate providers (within one site) where there is clearly functional referral system.
The key to successful integration is to make use of scarce human and logistic resources for multiple important purposes without diminishing health benefits to the population served.

5 factors are appropriate topics of scientific study when the integration of diverse interventions is being introduced:
- Coverage of interventions.
- Quality of services.
- Acceptability by the target population.
- Complexity remains consistent
- Unintended consequences.
1. Some definitions

2. A patient perspective

3. A health system perspective

4. Solthis approach
Comprehensive MCH Services

Integrated MCH Service

- Antenatal care
- HIV testing
- HIV Maternal ARV Prophylaxis
- Maternity
- Newborn Prophylaxis
- Immunizations
- Early Infant Diagnosis for HIV

- HIV care and support
- CD4 cell count testing
- Antiretroviral therapy
- Long term follow-up

COMMUNITY
Linked Response for Prevention, Care, and Treatment of HIV/AIDS, STIs, and Reproductive Health Issues: Results After 18 Months of Implementation in Five Operational Districts in Cambodia

5 Operational Districts (ODs): Kirivong OD in Takeo province, and 4 ODs in Prey Veng province

Before

Linked Response launched 2nd quarter 2008

- Health Centre (HC)
  - Minimum package activities (no HIV testing at ANC)
  - Referral
  - Comprehensive package activities Plus, including Antiretroviral treatment

- Referral Hospital (RH)
  - Referral and Follow-Up
  - Community

After

- Linked HC
  - Minimum package activities + HIV testing at ANC
  - Referral and Follow-Up
  - District – Province
  - HIV - MCH coordinators

- Satellite HC
  - Comprehensive package activities, including HIV testing at ANC, ARV prophylaxis and delivery care for HIV+ women
  - Referral and Follow-Up

- Hub - RH
  - Comprehensive package activities Plus, including Antiretroviral treatment (+ referral for PCR DNA testing)
  - Community

2007

2008

2009

Implementation, supervision, measuring progress made

Delvaux et al

J Acquir Immune Defic Syndr • Volume 57, Number 3, July 1, 2011
Development and pilot testing of HIV screening program integration within public/primary health centers providing antenatal care services in Maharashtra, India

Figure 2 Decreasing gap between ANC registration and HIV screening among antenatal care attendees, Satara district.
« Although overall study rigor was low, the studies showed that family planning/HIV service integration is effective in increasing contraceptive uptake among clients with HIV who do not wish to become pregnant. »
Improving antiretroviral therapy scale-up and effectiveness through service integration and decentralization

Amitabh B. Suthar\textsuperscript{a}, George W. Rutherford\textsuperscript{b}, Tara Horvath\textsuperscript{b}, Meg C. Doherty\textsuperscript{a} and Eyerusalem K. Negussie\textsuperscript{a}

\textbf{Methods:} The reviewers searched PubMed, Embase, PsycINFO, Web of Science, CENTRAL, and the WHO Index Medicus databases. Randomized controlled trials and observational cohort studies were included if they compared ART coverage, retention in HIV care, and/or mortality in MNCH, TB, or OST facilities providing ART with MNCH, TB, or OST facilities providing ART services separately; or primary health facilities or communities providing ART with hospitals providing ART.
<table>
<thead>
<tr>
<th></th>
<th>Integrated</th>
<th>Separated</th>
<th>Relative risk (95% CI)</th>
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<tbody>
<tr>
<td><strong>MNCH</strong></td>
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<td>ART coverage</td>
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<td>-</td>
<td>1.58 (1.17–2.14)</td>
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<td>105</td>
<td>22</td>
<td>0.92 (0.76–1.11)</td>
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<td>Overall (I^2 = 83%)</td>
<td>-</td>
<td>-</td>
<td>1.37 (1.05–1.79)</td>
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<td>Retention in HIV care</td>
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<td>94</td>
<td>0.96 (0.89–1.04)</td>
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<td>278</td>
<td>103</td>
<td>1.37 (1.05–1.79)</td>
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<td><strong>TB</strong></td>
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<td>Overall (I^2 = 98%)</td>
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<td>1.83 (1.48–2.25)</td>
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<td><strong>Mortality</strong></td>
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<td>Van Rie (D.R.C)</td>
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<td>78</td>
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<td>Overall (I^2 = 84%)</td>
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<td>0.55 (0.29–1.05)</td>
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<td><strong>OST</strong></td>
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<td>ART coverage</td>
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<td>Zaller (U.S.A.)</td>
<td>89</td>
<td>745</td>
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<td>Retention in HIV care</td>
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<td>170</td>
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<td>Achmad (Indonesia)</td>
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<td>175</td>
<td>1.03 (1.00–1.06)</td>
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<tr>
<td>Mortality</td>
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<td>Achmad (Indonesia)</td>
<td>2</td>
<td>13</td>
<td>0.77 (0.18–3.26)</td>
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</table>
Methods: We conducted a retrospective cohort study including adult ART-naive patients initiating ART between January 2006 and June 2008 in public sector clinics in Manica and Sofala provinces. Cox proportional hazards models with robust variances were used to estimate the association between clinic model (vertical/integrated), clinic location (urban/rural), and clinic experience (first 6 months/post first 6 months) and attrition occurring in early patient follow-up (<6 months) and attrition occurring in late patient follow-up (>6 months), while controlling for age, sex, education, pre-ART CD4 count, World Health Organization stage and pharmacy staff burden.
Integration of HIV Care and Treatment in Primary Health Care Centers and Patient Retention in Central Mozambique
Integration of HIV Care and Treatment in Primary Health Care Centers and Patient Retention in Central Mozambique

A) Early Patient Follow-up (<=6 Months)

B) Late Patient Follow-up (>6 Months)

Follow-up (Months)

Integration Clinics
Vertical Clinics

Retention Probability

Lambdin et al
J Acquir Immune Defic Syndr • Volume 62, Number 5, April 15, 2013
Evidence about HIV-NCD integration in the literature

1. Cervical Cancer screening in to HIV services (Sneden, Huchko, Cohen, & Yamey)
2. Gestational Diabetes screening in to HIV treatment/PMTCT (Gonzalez-Tome et al., 2008)
3. HIV/AIDS, Diabetes, and Hypertension services in to a chronic disease clinic (Janssens et al., 2007)
4. Leveraging HIV programs to support diabetes services (Rabkin et al., 2012)
5. Integrating smoking cessation in to HIV care (Drach et al.)
6. Integrating HIV/AIDS and Alcohol (Bryant, Nelson, Braithwaite, & Raoch, 2010)
Health systems implications of the 2013 WHO consolidated antiretroviral guidelines and strategies for successful implementation

Charles Holmesa, Yogan Pillayb, Albert Mwangoc, Jos Perriensd, Andrew Balld, Oscar Barrenechee, Steven Wignallf, Gottfried Hirnschalld and Meg C. Dohertyd

« Systems of care that may already be stressed need to be further augmented through innovations, and in many cases provided with additional resources in order to become more efficient, resilient, robust and effective. »

➡️ Easy to say, hard to do it !
➡️ Particularly in fragile states.
1. Some definitions
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Integrating delivery system and external context:
Each situation is unique

Redefining global health-care delivery
Jim Yong Kim, Paul Farmer, Michael E Porter

Lancet 2013; 382: 1060-69
An assessment of interactions between global health initiatives and country health systems

World Health Organization Maximizing Positive Synergies Collaborative Group*
Why differentiating between health system support and health system strengthening is needed

Grace Chee*,†, Nancy Pielemeier‡, Ann Lion§ and Catherine Connor¶

[Diagram showing the relationship between WHO Building Blocks and Health Programs with specific examples of support and strengthening strategies.]

THE INTERNATIONAL JOURNAL OF HEALTH PLANNING AND MANAGEMENT
Published online 9 July 2012 in Wiley Online Library
(wileyonlinelibrary.com) DOI: 10.1002/hpm.2122
Health Pyramide

**HIV Sites**
- CHU / HN
- CHR
- HD / HP / CS Réf
- CS

**PSM Structure**
- CAME (PCG, PPM)
- Dépôts régionaux (PPMr)
- Dépôts de districts (DRC)

**Institution**
- MS (CSLS, PNPCSP, ULSS) CNLS
- DRS
- DPS
LE CIRCUIT D’APPROVISIONNEMENT

THE SUPPLY CHAIN

SYSTÈME D’INFORMATION
INFORMATION SYSTEM

ASSURANCE QUALITÉ
QUALITY ASSURANCE

SUIVI - ÉVALUATION
MONITORING - EVALUATION

RÈGLEMENTATION PHARMACEUTIQUE
PHARMACEUTICAL REGULATORY

COORDINATION
COORDINATION

INVENTARY MANAGEMENT
GESTION DES STOCKS

DISTRIBUTION

PURCHASING ACHATS

QUANTIFICATION DES PRODUITS
QUANTIFICATION OF NEEDS

SELECTION DES PRODUITS
PRODUCTS SELECTION

DISPENSATION ET UTILISATION
DISPENSING AND USE
Systèmes d'approvisionnement des produits pharmaceutiques au MALI. Janvier 2008

From WHO
Building a Durable Response to HIV/AIDS: Implications for Health Systems

Rifat Atun, MBBS, MBA, FRCP, FFPH, FRCP*† and Jacqueline Bataringaya, MD*

(J Acquir Immune Defic Syndr 2011;57:S91–S95)

**FIGURE 2.** Transitioning from a public health approach to managing HIV infection to complex individualized care.
In many countries with high maternal mortality rates:
→ health care worker absenteeism (20–40%);
→ leakage of funds and stockouts of drugs;
→ a huge “know–do” gap persists, despite in-service training;
→ rampant mistreatment of patients is but the tip of the iceberg of dismal quality care.
→ organizational forms (best practices) adopted and adapted from elsewhere become a strategy to camouflage deeper dysfunction.

The culture of the health services for treating HIV was far more open to innovation.

→ The push for integration in the face of stagnating resources and increasing demand may now force the HIV community to confront the deeper challenges of implementation that have been so disastrously ignored in maternal health.
Experiences of health care providers with integrated HIV and reproductive health services in Kenya: a qualitative study

Methods: Semi-structured in-depth interviews were conducted with 32 frontline clinical officers, registered nurses, and enrolled nurses in Kitui district (Eastern province) and Thika and Nyeri districts (Central province) in Kenya.

Results: At personal level, providers valued skills enhancement, more variety and challenge in their work, better job satisfaction through increased client-satisfaction. However, they also felt that their salaries were poor, they faced increased occupational stress from: increased workload, treating very sick/poor clients, and less quality time with clients.
Cost, cost-efficiency and cost-effectiveness of integrated family planning and HIV services

Starley B. Shade

Setting: Twelve health facilities in Nyanza, Kenya were randomized to integrate family planning into HIV care and treatment; six health facilities were randomized to (nonintegrated) standard-of-care with separately delivered family planning and HIV services.

Main outcome measures: We assessed costs, cost-efficiency (cost per additional use of more effective family planning), and cost-effectiveness (cost per pregnancy averted) associated with the first year of integration of family planning into HIV care. More effective family planning methods included oral and injectable contraceptives, subdermal implants, intrauterine device, and female and male sterilization.
Cost, cost-efficiency and cost-effectiveness of integrated family planning and HIV services

Cost per HIV-infected woman by clinic size

- Integrated
- Non-integrated
- Expon. (integrated)
- Expon. (Non-integrated)

Cost per HIV-infected female patient

Currently enrolled HIV-infected female patients in clinic

AIDS 2013, 27 (Suppl 1):S87–S92
Cost, cost-efficiency and cost-effectiveness of integrated family planning and HIV services

Cost per additional HIV-infected woman
Using more-effective FP by clinic size

- Integrated
- Non-integrated

Expon. (integrated)
Expon. (Non-integrated)

Cost per additional HIV-infected woman
using more effective FP

Currently enrolled HIV-infected female patients in clinic

AIDS 2013, 27 (Suppl 1):S87–S92
Integration and efficiency gains
S. Sweeney (2012)

1. HIV and TB - SRH services: Address co-infections; similar health services levels and may affect the same persons.

2. Low marginal cost of integrated services: Clinic space exists and staff have much of the knowledge and skills.

3. HIV services may be valued by clients seeking general services and PLWHIV may have other unmet health needs.

4. Low correlation in existing demand: clients seeking other health services may not seek HIV-related services independently.
1. A number of integrated HIV services have been shown to be cost-effective.

2. Little is known about the comparative efficiency of differing integration models.

3. Evidence gaps remain on economic impact of integration for HIV care and services for populations at higher risk of HIV exposure.

4. Further research is necessary to identify efficiency gains from integration beyond the service level and economic gains to HIV users.
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Our goal

Health System Strengthening

Solthis provides capacity building for healthcare systems in order to facilitate high quality, accessible and sustainable treatment for people living with HIV/AIDS in developing countries.

**High quality:**
Decrease the mortality and number of patient’s lost-to-follow-up

**Accessible:**
Decentralization into isolated areas, increase patients under treatment and receiving free of charge care

**Sustainable:**
Work on local and professionnal capacity building
Intervention strategy

5 priority functions in healthcare systems

Advice, train, mentor

- Healthcare providers (medical and paramedical)
- Laboratories and other technical platforms
- Pharmacies (procurement, supply chain management, dispensation)
- Health information systems (management of health data)
- Coordination bodies
A Systemic approach

**Systemic level**
- National health and HIV policies, standards and protocols
  - Role of the health authorities (Ministry of Health, Regional authorities etc...)
  - Practices and values, incentives

**Health centers level**
- Material conditions, infrastructure
- Work organization
- Patients management
- Role of the hierarchy

**Health workers level**
- Skills
- Self confidence, legitimacy, motivation

Expertise to improve policies, standards and protocols
Support for the patient management reorganization, tasks distribution
Needs evaluation, material and furniture set up, rehabilitations, equipment supply
Training
Technical support in daily practice
Integrating HIV data in the national health system
Mise en œuvre

Action de CASSIS à chaque niveau de la pyramide sanitaire

- Développement de méthodes et outils pour l’analyse et l’exploitation de l’information et pour la gestion du SIS
- Appui à l’intégration du SIS VIH dans le Système National d’Information Sanitaire

- Renforcement des capacités pour la supervision du SIS: formations, manuels de procédures, supervisions conjointes
- Développement des méthodes et outils pour l’exploitation de l’information

- Consolidation du circuit et des outils de collecte de l’information: formations et accompagnement, mise en place d’outils informatiques et papiers
- Renforcement des capacités d’analyse de l’information : formations, ateliers d’échange

Résultats attendus à chaque niveau de la pyramide sanitaire

- Autorités sanitaires nationales
  - Administration efficiente du SIS
  - Compilation, archivage et exploitation des rapports régionaux
  - Pilotage stratégique du programme VIH
  - Suivi-évaluation performant avec les bailleurs et partenaires extérieurs

- Directions de santé régionales
  - Compilation et archivage des rapports des sites
  - Supervision de la collecte de l’information

- Sites de prise en charge
  - Homogénéité, simplicité et disponibilité des outils de collecte
  - Exactitude, complétude et exploitation de l’information collectée
  - Exploitations des données et calculs d’indicateurs clés de suivi
To conclude...
The "vertical approach"

- "Island of sufficiency"
- Minimum level
- "The swamp"
- Additional health expenditure
- Island crumbling...
- Current health expenditure

USD 40
USD 30
USD 20
USD 10

The "horizontal approach"

- Minimum level health expenditure - "the swamp"
- Additional health expenditure - horizontal
- Current health expenditure

USD 40
USD 30
USD 20
USD 10

The "diagonal approach"

- "Island of sufficiency"
- Minimum level
- "The swamp"
- Additional health expenditure - diagonal
- Current health expenditure

USD 40
USD 30
USD 20
USD 10
Critics who insist that immunization programs are too vertical must accept that health systems are only strengthened when a specific program, be it for HIV, tuberculosis, or any other important challenge, scales up and tackles the then-apparent need for integrating services.

Theoretical discussion of health systems strengthening has yielded few tangible results, and the moral authority lies with those who act.