



## Health Service Integration: What works



Improved Health Infrastructure boost the morale of staff and patients (New Khayelitsha Hospital) in SA

Health service integration, the theme of this newsletter, has been defined as the “managerial or operational changes to health systems to bring together inputs, delivery, management and organisation of particular service functions.” Integration improves access and facilitates use of services, and addresses what has been referred to as the four ‘d’s’ – duplication, distortion, disruption and distraction.

In recent years, the integration of HIV and TB services, in particular, has been a major focus of research both locally and globally. TB-HIV service integration can occur along a continuum, from encouraging referral between services, to intensified screening for co-infection, to full service integration in one location and provided by a single team. In this newsletter, Uyei, Coetzee and colleagues from UCT report on an analysis of routine data from HIV and TB services in the Western Cape which showed that patients receiving dual TB and HIV treatment were significantly less likely to die or drop out when receiving care from one clinical team compared to non-integrated services. Despite this compelling evidence, barriers to integration remain: one of these is the fear that when vertical services are integrated with others or into the mainstream of health services, quality is compromised as services confront overall

systems weaknesses. Scott and Sanders (UWC) in their comparative study of TB/HIV integration processes in rural KwaZulu-Natal and urban Cape Town emphasize the need for integration processes to focus on systems level strengthening, especially with regards to supervision and support systems for primary health care.

As Dudley and Garner (US) point out in their systematic review, the concept of integration goes beyond the idea of bringing together two or more pre-existing vertical services such as TB and HIV, to considerations of how to expand health service entitlements by introducing new services into the mainstream of health care. Two contributions from the Alan J Flisher Public Mental Health Centre (UCT) focus on strategies for integrating mental health care, one of the biggest areas of unmet health needs, into maternal health services. Honiken et al report on operations research showing that through combination of training, screening tools and referral to counseling systems, it is feasible to provide mental health care in maternal health services. Lund and colleagues are extending this work with a randomized controlled trial of the efficacy of screening and care for maternal depression by community health workers in Khayelitsha, a strategy already shown to be effective in the Asian context. Sanders (UWC) further argues for

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# Health System Integration

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the local adoption of international evidence on antibiotic treatment of childhood pneumonia by CHWs.



Another integration initiative in the Western Cape is the development and evaluation of guidelines ('Primary Care 101') and training for integrated diagnosis and provision of chronic care - whether for communicable or non-communicable diseases - in the Eden and Overberg Districts (Fairrall et al, UCT).

Finally, integration of services does not necessarily have to occur through the channel of the primary health care system. Early childhood development centres and the school health system are key opportunities for delivery of services. However, before investing in new programmes, it is imperative to weigh up the evidence carefully, as pointed out in the systematic review by Young et al (Cochrane Collaborative Centre) on school de-worming programmes. ●

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## THE INTERNATIONAL FORUM ON QUALITY AND SAFETY IN HEALTH

Do you have a quality improvement or patient safety initiative to share? Don't miss the opportunity to present your work to the very best of the international healthcare community. The 18th annual International Forum for Quality and Safety in Healthcare (<http://emails.bmjgroup.com/c/1wfOBwrKB81mq646Mas0u4G>) will bring together 3000 delegates from over 80 countries in London from 16-19 April 2013 around the Theme of Improving Quality, Reducing Cost, Saving Lives.

The call for Abstracts is now open at <http://emails.bmjgroup.com/c/1wfOq06rvNMvdZUkG2YUf8J>  
**Deadline for submissions: 29 October 2012**

## Integrated tuberculosis and HIV service delivery

Jennifer Uyei, David Coetzee and their colleagues at the University of Cape Town and New York University explain its impact on patient health outcomes.

Although we know that HIV and TB infection are closely linked, we do not know about the best mode for delivering concurrent therapy and how to link related services such as HIV testing, TB screening, prevention, and care. Currently, the organization and delivery of services in sub-Saharan Africa for HIV and TB largely operate as vertical disease specific programs. We wanted to examine how integrating TB and HIV service delivery impacted on health outcomes of TB/HIV co-infected patients on concurrent anti-TB and antiretroviral therapy in Cape Town.

We used a survey to measure the degree to which TB and HIV service delivery was integrated at 33 clinics, and compared across clinics using patient data routinely collected by health departments. Three aspects of integrated service delivery were significantly associated with patient outcomes. Integrated TB and antiretroviral treatment service delivery and the delivery of TB and HIV care by one clinical team, were associated with lowered odds of death - risk was reduced by about 50 to 60%. Care by the same clinical team was also associated with a 35% reduction in loss to follow up.

Strangely, the third factor, viz. encouraged co-operation between TB and HIV staff, appeared to have a deleterious effect on survival and loss to follow up (83% and 63% increased risk, respectively). This may be explained by the fact that encouraged cooperation may be the consequence of poor integration, or the result of high mortality or loss to follow up. In other words, encouraged cooperation may have been perceived to be necessary to facilitate patient care.

Nevertheless, this study showed that integrated TB and antiretroviral treatment service delivery is significantly associated with improved outcomes of TB/HIV co-infected patients on concurrent treatment. These findings strongly support efforts by the World Health Organization and local governments to integrate TB and antiretroviral treatment services, and may alleviate concerns that re-structuring TB programs could unravel long-standing gains. ●

# Community-based health care: Integrated services at household level

**David Sanders from the School of Public Health at UWC explains why we need more Community Health Workers who are allowed to do more**

The 'Re-engineering Primary Health Care' strategy places heavy emphasis on population based health and outcomes, including proposals for community-based services involving a PHC outreach team based on nurses and community health workers (CHWs) and mobilising communities.

Research evidence and experience both support these latter activities. CHWs can successfully undertake a range of interventions in maternal, newborn and child health (MNCH). While in South Africa CHWs' activities have often been restricted to a few actions, especially in relation to HIV and AIDS care and prevention, there is a growing number of countries where CHWs perform a wide range of tasks, integrating care across diseases and interventions, including in MNCH care.

Rapid improvements in child health are occurring in several countries where good household coverage is attained through a high ratio of community-level workers properly supported by clinics and health centres. These CHWs are equipped with basic skills to identify, prevent and treat common conditions.

The number of tasks a CHW can reasonably perform depends upon the ratio of CHWs to households, the duration and quality of their training, and the extent and quality of their supervision. In Thailand and Rwanda, recognised as 'good performers', likely to reach their MDG goals, a high CHW-to-household ratio ensures that all households, including the poorest, are visited regularly and health problems are detected early. Such a high ratio of CHWs to households has been attained by having both full-time and part-time CHWs. In Thailand high coverage is achieved by instituting a 'two-tier' system with one full-time CHW for every 300-500 households, who then supervises 10 part-time CHWs who have more limited training.

If South Africa were to adopt such an approach this would require a total of about 700,000 community-based workers, the majority of them part-time. In addition to rendering health care more accessible and equitable, this strategy will create jobs, and improve health by reducing poverty.



Community Health Workers: On HIV/AIDS awareness campaign in rural areas of SA

UNICEF recently reported that CHWs are successfully treating pneumonia with antibiotics in 21 African countries. In South Africa pneumonia accounts (conservatively) for 6% of all under-5 deaths (in 2009 Stats SA reported that respiratory infections accounted for 11.7% of infant deaths). The plans to re-engineer primary health care continue to limit their role in treatment: CHWs in South Africa are prohibited from treating intestinal worms currently, let alone pneumonia. Policies permitting community-level workers to use antibiotics to treat pneumonia have been controversial because of concerns by health professionals that antibiotics might be misused or over-used. In Nepal and in Ethiopia, monitoring the quality of care provided by community workers in treating pneumonia has shown that the quality of care has remained high. Supportive national policies, including greater flexibility of professional councils, are needed to allow CHWs to administer antibiotics for specific childhood diseases along with strengthened regulatory and quality controls for the distribution and appropriate use of antibiotics.

Without a higher ratio of CHWs to population, and without allowing them to do more, South Africa's encouraging new policies in PHC are unlikely to achieve their intended impact in MNCH. ●

# The Perinatal Mental Health Project (PMHP)

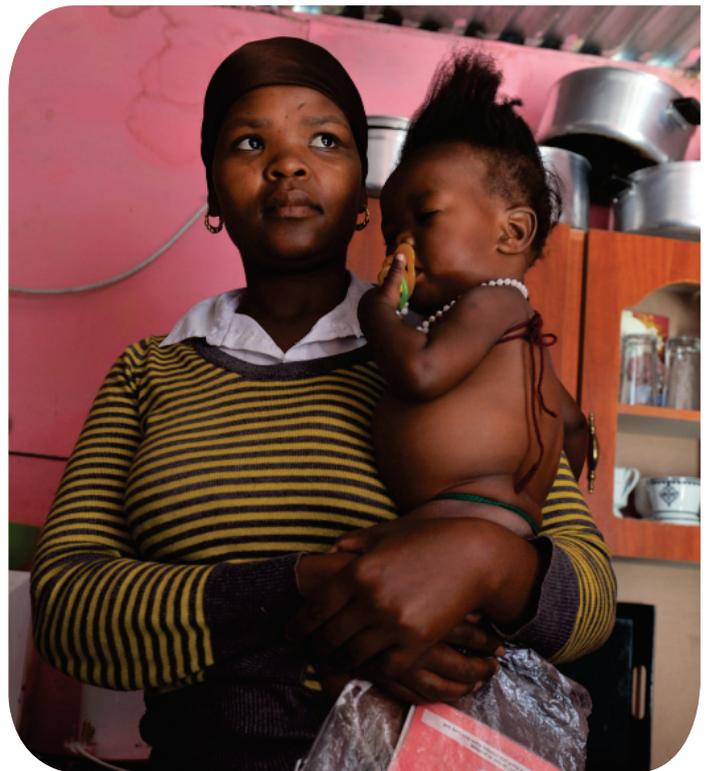
## Simone Honikman and colleagues explain the concept of Stepped Care for Maternal Mental Health in South Africa

Maternal mental health is largely neglected in low and middle income countries. Yet the prevalence of these disorders is nearly three times higher than in high income countries. In South Africa there is a high prevalence of maternal mental disorders amongst women living in low income settings. In Khayelitsha, 39% of women were diagnosed with antenatal depression while in Kwa-Zulu Natal, 47% of pregnant women had antenatal depression. Our research at Hanover Park in 2012 suggests that 53% of women attending the maternity facility have a diagnosable psychiatric disorder including depression, anxiety disorders and PTSD. However, despite evidence for high levels of antenatal and postnatal depression, there is no routine screening or treatment of maternal mental disorders in primary care settings in South Africa.

To address the enormous gap in treatment for maternal mental disorders, we developed an intervention for integrating maternal mental health care into primary care. The stepped-care model makes optimal use of existing resources: nursing staff conduct mental health screening as part of routine history-taking, calculate screening scores and refer to dedicated on-site counsellors; these counsellors refer more vulnerable women to social support services, psychiatric services and specialist NGOs, as required. Thus, most care for the majority of women occurs at the primary level, increasing efficiency and uptake.

The intervention includes capacity building for health care workers. Transformative training processes are used to enable staff to reflect on their own emotional experiences whilst developing empathic understanding and skills for effective client engagement.

The intervention was well accepted and taken up. Over a 3-year period (2008 to 2011) 90% of women who attended primary care were offered screening; of these women, 95% accepted screening; of these 32% qualified for referral to a counsellor; and, of these, 62% agreed to be referred. A total of 1,981 counselling sessions were conducted and a small proportion (2% of those who received counselling, 20 women) were referred to a psychiatrist. Importantly, at postnatal follow-up, most women (88% of those sampled) reported that they were more able to cope with their presenting problem as a result of the counselling.



**Maternal mental disorders a silent problem in low and middle income countries**

What lessons did we learn? Through routine screening and referral, the PMHP model demonstrates the feasibility and acceptability of a stepped care approach to provision of mental health care at primary care level. Maternity health workers may be trained to screen and refer for mental distress in low resource primary care settings. Training programmes to support the mental health needs of health workers may help to prevent compassion fatigue and 'burn out'. Even with limited resources, other primary care settings could integrate mental health into existing service sites and increase access for vulnerable populations. ●

## Strategies for integrating primary health services in low- and middle-income countries at the point of delivery

Lilian Dudley and Paul Garner (Centre for Evidence-based Health Care, Stellenbosch University)

In some low- and middle-income countries, healthcare services are organised by specific health problems. So, we have family planning clinics, TB clinics or child health services. The logic is that specialised clinics lead to better care and health outcomes because skilled healthcare providers provide the specialised services and technologies needed. However, this can cause fragmentation as people are required to visit separate clinics depending on their health problem and can be inefficient, not only for the patient who has to visit different services for health care, but for the provider who must duplicate services. For example, a mother has to go to one clinic for family planning services and another for her children to be vaccinated; someone with HIV and TB must attend separate clinics for each disease.

One solution is to integrate services at the point of delivery to improve co-ordination and service delivery. By providing services together, for example for mothers and their children in one centre, integration ensures that services are managed and delivered together, for efficiency and high quality. It is also believed that integration of care leads to improved and more equitable access for people from different communities and socio-economic backgrounds, greater convenience and satisfaction and better health overall. In contrast, others believe that integration of care may overload healthcare professionals who lack the specialised skills to manage specific diseases, which could

conversely lead to poorer quality services and poorer health.

We conducted a systematic review (which is the best method to look for evidence) to assess integration. The review found nine studies that evaluated integrated care and made two types of comparison.

1) Integration of care, by adding a service to an existing service (for example, tuberculosis (TB) or sexually transmitted infection (STI) patients are offered HIV testing and counselling; or mothers attending an immunisation clinic are offered contraception).

2) Integrated services versus single, special services (for example, family planning, maternal and child health delivered as a special vertical programmes compared to services integrated into routine healthcare).

There was some evidence that adding on services or creating linkages to an existing service improved its use and delivery of health care. But we did not find clear evidence that fuller integration of primary healthcare services improved people's health status in low- or middle-income countries. While the idea that integration should improve service delivery and health status is intuitive, we need stronger evidence for confirmation. For that reason, it is essential that policy makers and planners considering integrating healthcare services should monitor and evaluate them using good study designs. ●

### RESEARCH EVENTS/DATE TO REMEMBER

#### Global Maternal Health Conference 2013

The Global Maternal Health Conference 2013 (GMHC2013) is a technical conference for scientists, researchers, and policy-makers to network, share knowledge, and build on progress toward eradicating preventable maternal mortality and morbidity by improving the quality of maternal health care. The conference, co-sponsored by Management and Development for Health, Dar es Salaam, Tanzania, and the Maternal Health Task Force at Harvard, takes place from January 15-17, 2013 in Tanzania. Abstract should be submitted online by 31st September 2012 via <http://maternalhealthtaskforce.org/conference>

#### 21st IUHPE World Conference on Health Promotion

The International Union for Health Promotion and Education (IUHPE) and Thai Health Promotion Foundation (ThaiHealth) host the 21st IUHPE World Conference from 25th to 29th August 2013 in Pattaya, Thailand. Deadline for abstracts submission: December 20th, 2012, <http://www.iuhpeconference.net/>

# PRIMARY CARE 101 – A GUIDELINE FOR INTEGRATED CARE

Primary Care 101 is an expansion of PALSA PLUS that addresses all the common problems among adults attending primary care services. It is being implemented using short onsite training sessions at clinics. A pilot is currently underway in 19 clinics in the Eden and Overberg districts, where the impacts on treatment for hypertension, diabetes, chronic respiratory disease and depression are being evaluated. Lara Fairall, from the Knowledge Translation Unit at the University of Cape Town Lung Institute explains what Primary Care 101 has to do with integration.

One in four adults walking through a clinic door has hypertension, one in six diabetes, one in five HIV, one in five a common mental disorder... most of us will have to contend with not just one, but several chronic conditions as we grow older. Yet our primary care services, particularly in larger facilities, are still structured around single conditions. You go to a clinic on one day for your HIV check-up and receive your repeat ARVs, but can't get your blood pressure checked at the same time or have your family planning needs met.

Co-morbidities (more than one condition at one time) are common, and on the rise. The term "integration" is increasingly mentioned in boardrooms, at conferences and in lecture halls. But what does it actually mean and where to start?

These were some of questions we asked ourselves when we first started to expand PALSA PLUS to address other aspects of adult primary care. Like many others, we now believe that the most relevant distinction is not between communicable and non-communicable diseases, but rather between acute and chronic problems. There are more similarities in the care we provide for AIDS and diabetes than between AIDS and, say, pneumonia. This is an important first step on the road to integrated care, as it allows us to start prioritizing what to integrate with what. It's reflected in our new guideline, Primary Care 101, by its division into two sections: one for symptoms (acute problems) and one for chronic conditions, whether they be infectious, non-communicable or mental health related.

The guideline aims to make the lives of our health workers a little easier – knowing that we have put everything they need from infectious and other guidelines into one easy-to-use format. We've also tried to highlight important areas for integration –



small actions health workers can take towards integrated care. If you recognize depression is common alongside chronic conditions like diabetes and HIV, you can screen for it at regular check-ups; assess cardiovascular risk in patients with COPD, because half of all deaths in COPD are actually from ischaemic heart disease.

We've also tried to adapt nurse initiated and managed ART (NIMART) to other priority diseases, successfully motivating for nurses trained in the Primary Care 101 pilot to be able to prescribe drugs that they would otherwise not have had access to. These now include commonly-used drugs for hypertension and diabetes. Outside of the Metro, most contacts between patients and primary care providers are with nurses. It's vital that these nurses be empowered to act on what they are seeing, initiating treatment where appropriate rather than rescheduling patients for doctor review.

So far, Primary Care 101 has been well received in the pilot clinics, particularly in rural areas where nurses are responsible for most of the care provided by a clinic. Nurses like the way Primary Care 101 integrates multiple guidelines, and clarifies prescribing and referral. In the words of one nursing sister from Eden, "If you take the time with the guidelines and go through them, with the chronic patients you will get the prescriptions right, and the follow-up." Appropriate chronic care is time-consuming and several nurses have reported feeling a little overwhelmed by the task. In response, the KTU is working with the Eden District to strengthen the systems changes needed to improve chronic care delivery, ensuring that the load is more equitably divided among clinical and non-clinical staff. For more information see [www.knowledgetranslation.co.za](http://www.knowledgetranslation.co.za)

# UNDERSTANDING INTEGRATED SERVICE DELIVERY

**Vera Scott and David Sanders from the School of Public Health, University of the Western Cape explain the equity implications**

Although national policies support ideas of programme integration, implementation must take local health service infrastructure into account. We conducted a large comparative programme evaluation of HIV and TB prevention and therapeutic services in 2 districts – one deep rural (Sisonke) and one urban (Cape Town) - to assess how integration is implemented and how it might impact on current rural-urban inequities in disease burden and access to care.

We used secondary data from two large evaluations of HAST programmes in 26 rural and 146 urban public primary care facilities that include the following tools: a review of routine data, a facility manager interview, a checklist for equipment and supplies, register reviews and a series of folder reviews. In our review, we focused on access, availability of resources and quality of care.

## WHAT DID WE FIND?

**Strengths:** In both sites, the existing physical health infrastructure is strong with an extensive network of general primary care facilities offering a wide range of services. Integration is achieved through co-location within the facility. This means that other services can offer synergies with the HIV/TB programme, such as family planning services and care for chronic diseases. Because geographic access is still constrained in sparsely-populated rural areas, integrated services that maximize the benefit possible at each facility visit can promote health equity.

**Difficulties:** However, in the rural district there were instances of nurses not fully trained, working without clinical mentorship and lacking supervision. These factors could undermine quality of care and aggravate inequity. When essential drugs are unavailable, this signals weaknesses in procurement systems and management.

To deliver a quality and equitable service, the general health system needs strengthening, as opposed to a programme specific intervention. In this way HIV/TB integration should benefit the general primary care delivery platform.

## HOW WERE SERVICES INTEGRATED?

The first dimension of integration is across different diseases. Co-infected HIV/TB clients received care for both conditions from the general primary care facilities as well as accessing STI diagnosis and care and reproductive health services. This dimension of integration is promoted as “comprehensive services” in Primary Health Care policy. This broader approach is important - integration is more than just simultaneous treatment of co-infected clients requiring both TB and ARV therapy.

The second dimension of integration is bringing together prevention and care activities. For example HIV clients were being screened for STIs (an activity to reduce further transmission of HIV) and their contraception needs were addressed (an activity which reduces unwanted pregnancy contributing to prevention of mother-to-child transmission). There is little written about this dimension of integration in the literature, the implementation of which could serve as a model for other high prevalence settings.

## CONCLUSION

These two dimensions of integration have been achieved by co-location of services. Integration within one facility has been found to require more initial set up resources in terms of infrastructure (e.g. space for HCT counselling) and training of staff when compared to models of integration based on referral between services. The rural district, constrained by smaller facilities and staff complements, was able to achieve greater integration of services within the consulting room (the so-called “one stop approach”). Co-location of services assists in improving access efficiency where referral mechanisms are weak. Coupled to health system strengthening, this has the potential to improve access, quality and continuity of prevention and care, particularly for rural areas.

## ACKNOWLEDGMENTS

The Cape Town HIV/TB/STI task team designed and implemented the evaluation tools; colleagues in Sisonke district facilitated the rural adaption. ●

## TO DEWORM OR NOT TO DEWORM ...? THAT IS THE EVIDENCE BASED QUESTION

We publish below a news alert from the Cochrane Infectious Diseases group on the effect of deworming drugs on nutrition and school performance in children

The World Health Organization (WHO) report that more than a quarter of the world's population is infected with one or more of the soil-transmitted intestinal worms. WHO promote community and school programmes to give deworming drugs to all children in low-income countries regularly to improve nutrition, haemoglobin, cognition, school attendance, school performance and promote economic productivity. Given the important benefits around health and learning attributed to deworming programmes, this review looks at whether they are based on reliable evidence.

On the 11th July 2012, the Cochrane Library released an update of their Cochrane Review on 'Deworming drugs for soil-transmitted intestinal worms in children: effects on nutritional indicators, haemoglobin and school performance.' Researchers from the Cochrane Infectious Diseases Group used the latest methods and incorporated recent trials in preparing a new edition of this review. With over 65 thousand participants included in the analysis, the authors sought reliable information as to whether a child's weight, haemoglobin, and their cognition (ability to reason and think), and performance and attendance at school improved with deworming. The authors included randomised controlled trials, including community trials where the randomisation was by schools, as these are the most powerful and reliable studies to detect effects.

What did they find? When children were screened for infection, and then only those infected were treated, there was some modest evidence of benefit. However, in the analysis of deworming given as a single dose or repeatedly over time to children in communities where worms were common, the benefit was not clear or consistent. For weight, deworming did not show an effect, apart from 3 studies done over 15 years ago. In terms of haemoglobin, deworming did not appear to have any important effects; and in terms of cognition, exam performance or school attendance, data were limited, but what there was showed little or no evidence of an effect.

In terms of death the reviewers were not able to report the results of one trial of over a million children, completed in 2005, because the authors have not yet published the results.

These results have considerable significance for current global policies (promoted by the WHO, the World Bank and others), that claim substantive benefits of school programmes for deworming. We may need to rethink the value of this intervention, if evidence for effectiveness is marginal.

The original article (Taylor-Robinson et al, Cochrane Database of Systematic Reviews 2012, Issue 7. Art. No.: CD000371. DOI: 10.1002/14651858.CD000371.pub4) can be downloaded from <http://www.thecochranelibrary.com/view/0/index.html>. ●

## WORDS OF THANKS

As many of you are aware that this is our second effort at producing a research oriented newsletter, we hope to continue issuing this communication annually during our Research Day. With such a comprehensive project, it is always possible that some interesting research articles have been missed. So, we would like to apologise in advance if we have left out some interesting research topics in this second issue.

To include or consider more interesting articles in our next newsletter, or if you have questions please feel free to write to the Health Research sub-directorate [HealthResearch@pgwc.gov.za](mailto:HealthResearch@pgwc.gov.za). ●

The directorate will also be helping to facilitate engagement between health service managers and the wider research community so that the skills in the research community can be usefully brought to bear on priority health challenges facing our services.

We will welcome ideas or suggestions as we roll out this process. We would also like to express our appreciation to colleagues in the Provincial Communications Department for their assistance in putting this Newsletter together.