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Communicable diseases

1. Am J TMH 2013 Feb 4 [Epub ahead of print]
Assessing the WHO 50% Prevalence Threshold in School-Aged Children as Indication for Treatment of Urogenital Schistosomiasis in Adults in Central Nigeria
Evans DS et al., The Carter Center, Atlanta, Georgia
Preventive chemotherapy with praziquantel is recommended in adults by the World Health Organization when prevalence of schistosomiasis in school-aged children (SAC) is ≥ 50%. This study ascertained the value of this threshold in predicting prevalence and intensity of Schistosoma hematobium (SH) infection in adults in central Nigeria. We evaluated urogenital schistosomiasis prevalence in 1,164 adults: 659 adults in 12 communities where mean hematuria among SAC in 2008 was 26.6% and 505 adults in 7 communities where the mean hematuria among SAC in 2008 was 70.4%. No statistically significant differences were found between the two groups of adults in prevalence of hematuria, prevalence of SH eggs, or intensity of infections. We conclude that, in this setting, the SAC threshold is not useful for treatment decisions in adults. Given the increased risk of subtle morbidity or urogenital schistosomiasis as a risk factor for human immunodeficiency virus (HIV), more liberal treatment of adults with praziquantel is warranted.

2. BMJ 2013;346:e8721
Editor’s Choice: Treat the worms, but do other things too
Godlee F., editor BMJ <fgodlee@bmj.com>
More than a third of the world’s population is infested with worms according to the Global Atlas of Helminth Infections (www.thiswormyworld.org). Most of those affected live in extreme poverty in resource poor settings in sub-Saharan Africa, Asia, and the Americas. Children are particularly vulnerable to the ill effects of a heavy parasitic load. As Nigel Hawkes says (doi:10.1136/bmj.e8558), given these facts, who would hesitate to provide the few pennies it costs to deworm a child? But one giant of a study has overshadowed all these deliberations: a cluster randomised trial of albendazole and vitamin A involving a million children in 72 areas in India. It is the biggest ever study of deworming, and although completed in 2005 it is only now about to be published. The delay in publication was, as many had assumed, due to its negative findings: given the financial and emotional investment in these programmes, the authors, led by Richard Peto, wanted to be absolutely sure of their conclusions. From the deworming arms of the trial, the study concludes that albendazole has no significant effect on mortality or weight gain. The news will be intensely disappointing for those who thought that a panacea of sorts had been found. Instead, it seems that the world must put its shoulder to the slower, more complex, business of building public health and social infrastructure in resource poor settings—including proper sanitation, nutrition, and education—and, of course, treating worms in those who have them.

Advances in treatment of bacterial meningitis
Beek van de D, Brouwer MC, Thwaites GE, Tunkel AR., Academic Medical Center, University of Amsterdam, Netherlands <d.vandebeek@amc.uva.nl>
Bacterial meningitis kills or maims about a fifth of people with the disease. Early antibiotic treatment improves outcomes, but the effectiveness of widely available antibiotics is threatened by global emergence of multidrug-resistant bacteria. New antibiotics, such as fluoroquinolones, could have a role in these circumstances, but clinical data to support this notion are scarce. Additionally, whether or not adjunctive anti-inflammatory therapies (eg, dexamethasone) improve outcomes in patients with bacterial meningitis remains controversial; in resource-poor regions, where the disease burden is highest, dexamethasone is ineffective. Other adjunctive therapeutic strategies, such as glycerol, paracetamol, and induction of hypothermia, are being tested further. Therefore, bacterial meningitis is a substantial and evolving therapeutic challenge. We review this challenge, with a focus on strategies to optimise antibiotic efficacy in view of increasingly drug-resistant bacteria, and discuss the role of current and future adjunctive therapies.

Health Policy

4. HPP 2012;27(8): 649-57
Editor’s Choice: An analysis of GAVI, the Global Fund and World Bank support for human resources for health in developing countries
Vujicic M et al., Human Development Network, The World Bank <vujicic74@gmail.com>
Shortages, geographic imbalances and poor performance of health workers pose major challenges for improving health service delivery in developing countries. In response, multilateral agencies have increasingly recognized the need to invest in human resources for health (HRH) to assist countries in achieving their health system goals. In this paper we analyse the HRH-related activities of three agencies: the Global Alliance for Vaccines and Immunisation (GAVI); the Global Fund for Aids, Tuberculosis, and Malaria (the Global Fund); and the World Bank. First, we reviewed the type of HRH-related activities that are eligible for financing within each agency. Second, we reviewed the HRH-related activities that each agency is actually financing. Third, we reviewed the literature to understand the impact that GAVI, Global Fund and World Bank investments in HRH have had on the health workforce in developing countries. Our analysis found that by far the most common activity supported across all agencies is short-term, in-service training. There is relatively little investment in expanding pre-service training capacity, despite large health worker shortages in developing countries. We also found that the majority of GAVI and the Global Fund grants finance health worker remuneration, largely through supplemental allowances, with little information available on how payment rates are determined, how the potential negative consequences are mitigated, and how payments are to be sustained at the end of the grant period. Based on the analysis, we argue there is an opportunity for improved co-ordination between the three agencies at the country level in supporting HRH-related activities. Existing initiatives, such as the International Health Partnership and the Health Systems Funding Platform, could present viable and timely vehicles for the three agencies to implement this improved co-ordination.

5. HPP 2012:27(8): 669-76
Policy talk: incentives for rural service among nurses in Ghana
Kwansah J et al., Policy, Planning, Monitoring and Evaluation Directorate, Ministry of Health, Accra
< janetkwsm@yahoo.co.uk>

Like many countries in sub-Saharan Africa, Ghana is faced with the simultaneous challenges of increasing its health workforce, retaining them in country and promoting a rational distribution of staff in remote or deprived areas of the country. Recent increases in both public-sector doctor and nurse salaries have contributed to a decline in international out-migration, but problems of geographic mal-distribution remain.

As part of a research project on human resources in the Ghanaian health sector, this study was conducted to elicit in-depth views from nursing leaders and practicing nurses in rural and urban Ghana on motivations for urban vs rural practice, job satisfaction and potential rural incentives. In-depth interviews were conducted with 115 nurses selected using a stratified sample of public, private and Christian Health Association of Ghana (CHAG) facilities in three regions of the country (Greater Accra, Brong Ahafo and Upper West), and among 13 nurse managers from across Ghana.

Many respondents reported low satisfaction with rural practice. This was influenced by the high workload and difficult working conditions, perception of being ‘forgotten’ in rural areas by the Ministry of Health (MOH), lack of professional advancement and the lack of formal learning or structured mentoring. Older nurses without academic degrees who were posted to remote areas were especially frustrated, citing a lack of opportunities to upgrade their skills. Nursing leaders echoed these themes, emphasizing the need to bring learning and communication technologies to rural areas.

Proposed solutions included clearer terms of contract detailing length of stay at a post, and transparent procedures for transfer and promotion; career opportunities for all cadres of nursing; and benefits such as better on-the-job housing, better mentoring and more recognition from leaders. An integrated set of recruitment and retention policies focusing on career development may improve job satisfaction and retention of nurses in rural Ghana.

6. HPP 2013:28(1): 11-9
Global Immunization Vision and Strategy (GIVS): a mid-term analysis of progress in 50 countries
Kamara L et al., Immunization Vaccines and Biologicals Department (IVB), Expanded Program on Immunization (EPI), World Health Organization <kamaral@who.int>

Within the overall framework set out in the Global Immunization Vision and Strategy (GIVS) for the period 2006–2015, over 70 countries had developed comprehensive Multi-Year Plans (cMYPs) by 2008, outlining their plans for implementing the GIVS strategies and for attaining the GIVS Goals at the midpoint in 2010 or earlier. These goals are to: (1) reach ≥90% and ≥80% vaccination coverage at national and district level, respectively; and (2) reduce measles-related mortality by 90% compared with the 2000 level. Fifty cMYPs were analysed along the four strategic areas of the GIVS: (1) protecting more people in a changing world; (2) introducing new vaccines and technologies; (3) integrating immunization, other health interventions and surveillance in the health system context; and (4) immunizing in the context of global interdependence. By 2010, all 50 countries planned to have introduced hepatitis B (HepB) vaccine, 48 the Haemophilus influenzae type B (Hib) vaccine and only a few countries had firm plans to introduce pneumococcal or rotavirus vaccines. Countries seem to be inadequately prepared in terms of cold-chain requirements to deal with the expected increases in storage that will be required for vaccines, and in making provisions to establish a corresponding surveillance system for planned
new vaccine introductions. Immunization contacts are used to deliver other health interventions, especially in the countries in the World Health Organization (WHO) Africa Region. The cost for the planned immunization activities will double to US$27 per infant, of which US$5 per infant is the expected shortfall. Global Alliance for Vaccines and Immunization (GAVI) funding is becoming the largest contributor to immunization programmes.

7. HPP 2013:28(1): 20-9

Comparative costs and cost-effectiveness of behavioural interventions as part of HIV prevention strategies
Hsu J et al., London School of Hygiene and Tropical Medicine
<justine.hsu@lshtm.ac.uk> <justinehsu@alumni.lse.ac.uk>

Background: Behavioural interventions have been widely integrated in HIV/AIDS social marketing prevention strategies and are considered valuable in settings with high levels of risk behaviours and low levels of HIV/AIDS awareness. Despite their widespread application, there is a lack of economic evaluations comparing different behaviour change communication methods. This paper analyses the costs to increase awareness and the cost-effectiveness to influence behaviour change for five interventions in Benin.

Methods: Cost and cost-effectiveness analyses used economic costs and primary effectiveness data drawn from surveys. Costs were collected for provider inputs required to implement the interventions in 2009 and analysed by ‘person reached’. Cost-effectiveness was analysed by ‘person reporting systematic condom use’. Sensitivity analyses were performed on all uncertain variables and major assumptions.

Results: Cost-per-person reached varies by method, with public outreach events the least costly (US$2.29) and billboards the most costly (US$25.07). Influence on reported behaviour was limited: only three of the five interventions were found to have a significant statistical correlation with reported condom use (i.e. magazines, radio broadcasts, public outreach events). Cost-effectiveness ratios per person reporting systematic condom use resulted in the following ranking: magazines, radio and public outreach events. Sensitivity analyses indicate rankings are insensitive to variation of key parameters although ratios must be interpreted with caution.

Conclusion: This analysis suggests that while individual interventions are an attractive use of resources to raise awareness, this may not translate into a cost-effective impact on behaviour change. The study found that the extensive reach of public outreach events did not seem to influence behaviour change as cost-effectively when compared with magazines or radio broadcasts. Behavioural interventions are context-specific and their effectiveness influenced by a multitude of factors. Further analyses using a quasi-experimental design would be useful to programme implementers and policy makers as they face decisions regarding which HIV prevention activities to prioritize.

8. IJE 2012;41:1602–13

Demographic and health surveys: a profile
Corsi DJ et al., Harvard Center for Population and Development Studies, Boston
<svssubram@hsph.harvard.edu>

Demographic and Health Surveys (DHS) are comparable nationally representative household surveys that have been conducted in more than 85 countries worldwide since 1984. The DHS were initially designed to expand on demographic, fertility and family planning data collected in the World Fertility Surveys and Contraceptive Prevalence Surveys, and continue to provide an important resource for the monitoring of vital statistics and population health indicators in low- and middle-income countries. The DHS collect a wide range of objective and self-reported data with a strong focus on indicators of fertility, reproductive health, maternal and child health, mortality and self-reported health behaviours among adults. Key advantages of the DHS include high response rates, national coverage, high quality interviewer training, standardized data collection procedures across countries and consistent content over time, allowing comparability across populations cross-sectionally and over time. Data from DHS facilitate epidemiological research focused on monitoring of prevalence, trends and inequalities. A variety of robust observational data analysis methods have been used, including cross-sectional designs, repeated cross sectional designs, spatial and multilevel analyses, intra-household designs and cross-comparative analyses. In this profile, we present an overview of the DHS along with an introduction to the potential scope for these data in contributing to the field of micro- and macro-epidemiology. DHS datasets are available for researchers through MEASURE DHS at www.measuredhs.com.


Review: Paying for performance and the social relations of health care provision: An anthropological perspective
Magrath P et al., University of Arizona, Tucson, USA

Over the past decade, the use of financial incentive schemes has become a popular form of intervention to boost performance in the health sector. Often termed “paying for performance” or P4P, they involve “the transfer of money or material goods conditional upon taking a measurable action or achieving a predetermined performance
target” (Eldridge & Palmer, 2009, p.160). P4P appear to bring about rapid improvements in some measured indicators of provider performance, at least over the short term. However, evidence for the impact of these schemes on the wider health system remains limited, and even where evaluations have been positive, unintended effects have been identified. These have included: “gaming” the system; crowding out of “intrinsic motivation”; a drop in morale where schemes are viewed as unfair; and the undermining of social relations and teamwork through competition, envy or ill feeling. Less information is available concerning how these processes occur, and how they vary across social and cultural contexts. While recognizing the potential of P4P, the authors argue for greater care in adapting schemes to particular local contexts. We suggest that insights from social science theory coupled with the focused ethnographic methods of anthropology can contribute to the critical assessment of P4P schemes and to their adaptation to particular social environments and reward systems. We highlight the need for monitoring P4P schemes in relation to worker motivation and the quality of social relations, since these have implications both for health sector performance over the long term and for the success and sustainability of a P4P scheme. Suggestions are made for ethnographies, undertaken in collaboration with local stakeholders, to assess readiness for P4P; package rewards in ways that minimize perverse responses; identify process variables for monitoring and evaluation; and build sustainability into program design through linkage with complementary reforms.

10. SocScM 2012:75:1786-12
Hidden costs: The direct and indirect impact of user fees on access to malaria treatment and primary care in Mali
Johnson A et al., Project Muso Ladamunen, Yirimajo, Mali

About 20 years after initial calls for the introduction of user fees in health systems in sub-Saharan Africa, a growing coalition is advocating for their removal. Several African countries have abolished user fees for health care for some or all of their citizens. However, fee-for-service health care delivery remains a primary health care funding model in many countries in sub-Saharan Africa. Although the impact of user fees on utilization of health services and household finances has been studied extensively, further research is needed to characterize the multi-faceted health and social problems associated with charging user fees. This ethnographic study aims to identify consequences of user fees on gender inequality, food insecurity, and household decision-making for a group of women living in poverty. Ethnographic life history interviews were conducted with 24 women in Yirimadjo, Mali in 2007. Purposive sampling selected participants across a broad socio-economic spectrum. Semi-structured interviews addressed participants’ past medical history, socio-economic status, social and family history, and access to health care. Interview transcripts were coded using the guiding analytical framework of structural violence.

Interviews revealed that user fees for health care not only decreased utilization of health services, but also resulted in delayed presentation for care, incomplete or inadequate care, compromised food security and household financial security, and reduced agency for women in health care decision making. The effects of user fees were amplified by conditions of poverty, as well as gender and health inequality; user fees in turn reinforced the inequalities created by those very conditions. The qualitative data reveal multi-faceted health and socioeconomic effects of user fees, and illustrate that user fees for health care may impact quality of care, health outcomes, food insecurity, and gender inequality, in addition to impacting health care utilization and household finances. As many countries consider user fee abolition policies, these findings indicate the need to create a broader evaluation framework done that can measure the health and socioeconomic impacts of user fee policies and of their removal.

Review: Health financing in fragile and post-conflict states: What do we know and what are the gaps?
Witter S, Institute for International Health and Development, Queen Margaret University, Edinburgh

There has been a growing concern with post-conflict and fragile states over the past decade, both in relation to their high level of health and development needs but also for the risk they pose to the wider international community. This paper presents an exploratory literature review to analyse the themes and findings of recent writing on one important pillar of the health system - health financing - in these countries. It finds that here is a growing but still very limited literature. Most of the insights from existing literature relate to the role of donors. There is a need for more work on access to care and equity over the post-conflict period, the mix and sequencing of financing mechanisms, resource allocation, regulation, public financial management, payment systems and incentives at facility and health worker levels, and on overall health financing strategies and their possible contribution to wider state-building. Topics which have received attention, such as contracting and non-state actors, could benefit from more rigorous analysis with a longer time perspective. A longitudinal approach, which examines how decisions taken in the immediate post-conflict period may or may not influence longer term developments, would provide important insights. As health systems in fragile and post-conflict states are often forced to innovate, they can generate useful lessons for other settings too.
Is Option B+ the best choice?
Coutsoudis A et al.

Summary of prevention of mother-to-child transmission options and concerns with Option B+

Options for prevention of mother-to-child transmission of HIV

**Option A:**
Mother: if CD4 cell count ≤350 cells per μL, start triple antiretrovirals at diagnosis and continue for life. If CD4 cell count >350 cells per μL, start antepartum zidovudine at 14 weeks’ gestation. Intrapartum: standard dose nevirapine, zidovudine, and lamivudine; postpartum: zidovudine and lamivudine for 7 days.
Child: standard dose nevirapine daily for 6 weeks in non-breastfed infants or with mothers on antiretroviral therapy, or until 1 week after all breastfeeding has stopped.

**Option B:**
Mother: all pregnant women start triple antiretrovirals irrespective of CD4 cell count. If CD4 cell count ≤350 cells per μL, continue triple antiretrovirals for life. If CD4 cell count >350 cells per μL, start triple antiretrovirals at 14 weeks’ gestation and continue intrapartum and through childbirth. Stop if mother is not breastfeeding or continue until 1 week after all breastfeeding has stopped.
Child: daily nevirapine or zidovudine from birth to 4–6 weeks.

**Option B+:**
Mother: All pregnant women start on triple antiretrovirals irrespective of CD4 cell count and continue for life.
Child: daily nevirapine or zidovudine from birth to 4–6 weeks.

Concerns with Option B+

Ethical concerns:
- Should pregnant women be prioritised for treatment for reasons other than immediacy of their medical condition?
- Have the implications of introduction or exacerbation of intrahousehold and community tensions because of different treatment access been adequately considered?
- Should selective test-and-treat interventions be considered ahead of achieving universal access for patients with CD4 cell counts <350 cells per μL?
- Is it ethical to give women with high CD4 cell counts treatment for life without fully understanding the long-term benefits and risks?
- Will the roll-out of antiretrovirals for a selected group I health in resource-limited settings or settings with drug-supply restrictions?

Medical concerns:
- Are there benefits for mother-to-child transmission and long-term infant HIV-free survival?
- Are the benefits for maternal health worth the potential increase in drug resistance?
- Will long-term exposure to antiretrovirals in mothers reduce horizontal transmission and change the trajectory of the HIV epidemic?
- Do we have enough evidence to suggest that pregnant women and new mothers are a risk group who have discordant relationships and contribute to the HIV epidemic?

Programmatic concerns:
- Can B+ be implemented in strained health systems without disruption of the introduction of treatment programmes?
- Will the implementation of B+ need scarce resources such as personnel, laboratory support, and drugs to be diverted from the drive towards universal access to HIV treatment or universal access to treatment for other non-HIV life-threatening or infectious diseases?
- Will the necessary levels of adherence be maintained?

Economic concerns:
- Is the assumption valid that economies of scope will favour this three-in-one intervention (i.e., prevention of mother-to-child transmission, treatment, and treatment-as-prevention)?
- If retention rates are not high, will the economic argument in favour of B+ be invalid?


**Extra-couple HIV transmission in sub-Saharan Africa: a mathematical modelling study of survey data**
Bellan SE et al., University of California, Berkeley, USA <steve.bellan@gmail.com>

**Background:** The proportion of heterosexual HIV transmission in sub-Saharan Africa that occurs within cohabiting partnerships, compared with that in single people or extra-couple relationships, is widely debated. We estimated the proportional contribution of different routes of transmission to new HIV infections. As plans to use
Antiretroviral drugs as a strategy for population-level prevention progress, understanding the importance of different transmission routes is crucial to target intervention efforts.

**Methods:** We built a mechanistic model of HIV transmission with data from Demographic and Health Surveys (DHS) for 2003-2011, of 27 201 cohabiting couples (men aged 15-59 years and women aged 15-49 years) from 18 sub-Saharan African countries with information about relationship duration, age at sexual debut, and HIV serostatus. We combined this model with estimates of HIV survival times and country-specific estimates of HIV prevalence and coverage of antiretroviral therapy (ART). We then estimated the proportion of recorded infections in surveyed cohabiting couples that occurred before couple formation, between couple members, and because of extra-couple intercourse.

**Findings:** In extra-couple couples, we estimated that extra-couple transmission accounted for 27-61% of all HIV infections in men and 21-51% of all those in women, with ranges showing intercountry variation. We estimated that in 2011, extra-couple transmission accounted for 32-65% of new incident HIV infections in men in cohabiting couples, and 10-47% of new infections in women in such couples. Our findings suggest that transmission within couples occurs largely from men to women; however, the latter sex have a very high-risk period before couple formation.

**Interpretation:** Because of the large contribution of extra-couple transmission to new HIV infections, interventions for HIV prevention should target the general sexually active population and not only serodiscordant couples.

14. NEJM 2012;367:2110-8

Antiretroviral Agents and Prevention of Malaria in HIV-Infected Ugandan Children
Achan J et al.

**Background:** Human immunodeficiency virus (HIV) protease inhibitors show activity against Plasmodium falciparum in vitro. We hypothesized that the incidence of malaria in HIV-infected children would be lower among children receiving lopinavir–ritonavir–based antiretroviral therapy (ART) than among those receiving nonnucleoside reverse-transcriptase inhibitor (NNRTI)–based ART.

**Methods:** We conducted an open-label trial in which HIV-infected children 2 months to 5 years of age who were eligible for ART or were currently receiving NNRTI-based ART were randomly assigned to either lopinavir–ritonavir–based ART or NNRTI-based ART and were followed for 6 months to 2 years. Cases of uncomplicated malaria were treated with artemether–lumefantrine. The primary end point was the incidence of malaria.

**Results:** We enrolled 176 children, of whom 170 received the study regimen: 86 received NNRTI-based ART, and 84 lopinavir–ritonavir–based ART. The incidence of malaria was lower among children receiving the lopinavir–ritonavir–based regimen than among those receiving the NNRTI-based regimen (1.32 vs. 2.25 episodes per person-year; incidence-rate ratio, 0.59; 95% confidence interval [CI], 0.36 to 0.97; P=0.04), as was the risk of a recurrence of malaria after treatment with artemether–lumefantrine (28.1% vs. 54.2%; hazard ratio, 0.41; 95% CI, 0.22 to 0.76; P=0.004). The median lumefantrine level on day 7 after treatment for malaria was significantly higher in the lopinavir–ritonavir group than in the NNRTI group. In the lopinavir–ritonavir group, lumefantrine levels exceeding 300 ng per milliliter on day 7 were associated with a reduction of more than 85% in the 63-day risk of recurrent malaria. A greater number of serious adverse events occurred in the lopinavir–ritonavir group than in the NNRTI group (5.6% vs. 2.3%, P=0.16). Pruritus occurred significantly more frequently in the lopinavir–ritonavir group, and elevated alanine aminotransferase levels significantly more frequently in the NNRTI group.

**Conclusions:** Lopinavir–ritonavir–based ART as compared with NNRTI-based ART reduced the incidence of malaria by 41%, with the lower incidence attributable largely to a significant reduction in the recurrence of malaria after treatment with artemether–lumefantrine. Lopinavir–ritonavir–based ART was accompanied by an increase in serious adverse events.


Uptake of Home-Based Voluntary HIV Testing in Sub-Saharan Africa: A Systematic Review and Meta-Analysis
Sabapathy K et al.

**Introduction:** Improving access to HIV testing is a key priority in scaling up HIV treatment and prevention services. Home-based voluntary counselling and testing (HBT) as an approach to delivering wide-scale HIV testing is explored here.

**Methods and Findings:** We conducted a systematic review and random-effects meta-analysis of studies published between 1 January 2000 and 24 September 2012 that reported on uptake of HBT in sub-Saharan Africa, to assess the proportion of individuals accepting HBT and receiving their test result. Our initial search yielded 1,199 articles; 114 were reviewed as full-text articles, and 19 publications involving 21 studies (n = 524,867 individuals offered HBT) were included for final review and meta-analysis. The studies came from five countries: Uganda, Malawi, Kenya, South Africa, and Zambia.
The proportion of people who accepted HBT (n = 474,377) ranged from 58.1% to 99.8%, with a pooled proportion of 83.3% (95% CI: 80.4%–86.1%). Heterogeneity was high (τ² = 0.11). Sixteen studies reported on the number of people who received the result of HBT (n = 432,835). The proportion of individuals receiving their results out of all those offered testing ranged from 24.9% to 99.7%, with a pooled proportion of 76.7% (95% CI: 73.4%–80.0%) (τ² = 0.12). HIV prevalence ranged from 2.9% to 36.5%. New diagnosis of HIV following HBT ranged from 40% to 79% of those testing positive. Forty-eight percent of the individuals offered testing were men, and they were just as likely to accept HBT as women (pooled odds ratio = 0.84; 95% CI: 0.56–1.26) (τ² = 0.33). The proportion of individuals previously tested for HIV among those offered a test ranged from 5% to 66%. Studies in which <30% of individuals had been previously tested, local HIV prevalence was <10%, incentives were provided, or HBT was offered to household members of HIV-positive individuals showed higher uptake of testing. No evidence was reported of negative consequences of HBT.

Conclusions: HBT could substantially increase awareness of HIV status in previously undiagnosed individuals in sub-Saharan Africa, with over three-quarters of the studies in this review reporting >70% uptake. It could be a valuable tool for treatment and prevention efforts.

Toward an Understanding of Disengagement from HIV Treatment and Care in Sub-Saharan Africa: A Qualitative Study.
Ware NC et al.

Background: The rollout of antiretroviral therapy in sub-Saharan Africa has brought lifesaving treatment to millions of HIV-infected individuals. Treatment is lifelong, however, and to continue to benefit, patients must remain in care. Despite this, systematic investigations of retention have repeatedly documented high rates of loss to follow-up from HIV treatment programs. This paper introduces an explanation for missed clinic visits and subsequent disengagement among patients enrolled in HIV treatment and care programs in Africa.

Methods and Findings: Eight-hundred-ninety patients enrolled in HIV treatment programs in Jos, Nigeria; Dar es Salaam, Tanzania; and Mbarara, Uganda who had extended absences from care were tracked for qualitative research interviews. Two-hundred-eighty-seven were located, and 91 took part in the study. Interview data were inductively analyzed to identify reasons for missed visits and to assemble them into a broader explanation of how missed visits may develop into disengagement. Findings reveal unintentional and intentional reasons for missing, along with reluctance to return to care following an absence. Disengagement is interpreted as a process through which missed visits and ensuing reluctance to return over time erode patients' subjective sense of connectedness to care.

Conclusions: Missed visits are inevitable over a lifelong course of HIV care. Efforts to prevent missed clinic visits combined with moves to minimize barriers to re-entry into care are more likely than either approach alone to keep missed visits from turning into long-term disengagement.

Malaria

Effect of the Affordable Medicines Facility-malaria (AMFm) on the availability, price, and market share of quality-assured artemisinin-based combination therapies in seven countries: a before-and-after analysis of outlet survey data
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Background: Malaria is one of the greatest causes of mortality worldwide. Use of the most effective treatments for malaria remains inadequate for those in need, and there is concern over the emergence of resistance to these treatments. In 2010, the Global Fund launched the Affordable Medicines Facility-malaria (AMFm), a series of national-scale pilot programmes designed to increase the access and use of quality-assured artemisinin based combination therapies (QAACTs) and reduce that of artemisinin monotherapies for treatment of malaria. AMFm involves manufacturer price negotiations, subsidies on the manufacturer price of each treatment purchased, and supporting interventions such as communications campaigns. We present findings on the effect of AMFm on QAACT price, availability, and market share, 6-15 months after the delivery of subsidised ACTs in Ghana, Kenya, Madagascar, Niger, Nigeria, Uganda, and Tanzania (including Zanzibar).

Methods: We did nationally representative baseline and endpoint surveys of public and private sector outlets that stock antimalarial treatments. QAACTs were identified on the basis of the Global Fund's quality assurance policy. Changes in availability, price, and market share were assessed against specified success benchmarks for 1 year of AMFm implementation. Key informant interviews and document reviews recorded contextual factors and the implementation process.

Findings: In all pilots except Niger and Madagascar, there were large increases in QAACT availability (258-519 percentage points), and market share (159-403 percentage points), driven mainly by changes in the private
for-profit sector. Large falls in median price for QAACt per adult equivalent dose were seen in the private for-profit sector in six pilots, ranging from US$1.28 to $4.82. The market share of oral artemisinin monotherapies decreased in Nigeria and Zanzibar, the two pilots where it was more than 5% at baseline. **Interpretation:** Subsidies combined with supporting interventions can be effective in rapidly improving availability, price, and market share of QAACt, particularly in the private for-profit sector. Decisions about the future of AMFm should also consider the effect on use in vulnerable populations, access to malaria diagnostics, and cost-effectiveness.

**Mental Health**

18. BMJ 2012;345:e8507

**Feature:** Mental health in India; Can India walk the talk when it comes to mental health?

Chatterjee P, journalist, New Delhi, India <patralekha.chatterjee@gmail.com>

The Indian government plans to revamp the country’s mental health policy, but putting policy into practice presents huge challenges, writes Patralekha Chatterjee.

India’s public health community is cautiously optimistic: mental ill health, a problem desperately in need of attention, now seems to be high on the health establishment’s agenda. Two factors—money and staffing—will decide how far and how soon policy prescriptions are translated into practice.

India has a huge unmet need for mental healthcare. Without reliable, up to date, disease specific data, it is hard to say how serious the situation is. But official data on suicides are a telling indicator of the challenge ahead: in the decade 2001-11, the number of recorded suicides in the country increased by around 25%, from 108,506 in 2001 to 135,585 in 2010, according to the latest annual report from the National Crime Records Bureau.

**Non-communicable diseases**


**Tackling Non-Communicable Diseases In Low- and Middle-Income Countries: Is the Evidence from High-Income Countries All We Need?**

Ebrahim S et al.

Applied health research and development for non-communicable diseases (NCDs) in low- and middle-income countries (LMICs) is limited, and despite repeat calls for action, the NCD burden is increasing unchecked. NCD research in high-income countries (HICs) and LMICs can result in mutual advantages in the areas of replication and extending findings; discovering new causes of NCDs; studying health effects of exposures rare or ubiquitous in HICs; and exploring links between infectious diseases and NCDs.

Different NCDs are at varying stages of needing research, policy development, and action. These stages range from not knowing the population burden of many NCDs to knowing all we need to take action. Changes in the global and national funding agendas will be required to strengthen the research and health system capacity for NCDs, which should reduce deaths and disability attributable to NCDs and yield economic dividends.

**Paediatrics**


**Introduction to a Special Supplement: Evidence for the Implementation, Effects, and Impact of the Integrated Community Case Management Strategy to Treat Childhood Infection**

Marsh DR et al.

Because millions live at or beyond the periphery of the health system, there is a need to improve access to care for common childhood infectious diseases by bringing treatment closer to the community, especially in rural settings where distance, cost, and limited availability of primary health centers exist. Integrated community case management (iCCM) is a strategy to train, support, and supply community health workers (CHWs) to provide diagnostics and treatments for pneumonia, diarrhea, and malaria for sick children of families with difficult access to case management at health facilities. A pro-equity strategy, iCCM is not easy to implement. Health systems tend to be the most challenged in those high mortality settings in which iCCM is most needed. Moreover, iCCM has many steps that must be performed sequentially and completely for care to be successful. Deviations can result in bad outcomes for the sick child, the community (i.e., increased drug resistance), and the program. In addition, CHWs delivering iCCM must master ancillary skills, such as documentation and supply management, among others. The global health community needs guidance for implementing iCCM. The World Health Organization and UNICEF have just released a Joint Statement for iCCM as an equity-focused strategy to improve access to case management. This supplement commences with a re-publication of
this document, which summarizes much of the global evidence base until now. The purpose of these papers is to augment the experience base and evidence base for iCCM, and then chart the way forward for future research. This large collection of CCM research informs 16 research questions. The country reports are almost exclusively from sub-Saharan Africa, with analyses from the Democratic Republic of the Congo, Ethiopia, Ghana, Côte d'Ivoire, Malawi, Mali, Rwanda, Sierra Leone, Uganda, Zambia, and Pakistan. Other papers address global issues, such as methods to measure access to case management and indicators to monitor iCCM programs. This supplement informs nearly all results and processes in the evaluation framework.


**Global paediatric advanced life support: improving child survival in limited-resource settings**

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Nearly all global mortality in children younger than 5 years (99%) occurs in developing countries. The leading causes of mortality in children younger than 5 years worldwide, pneumonia and diarrhoeal illness, account for 1·396 and 0·801 million annual deaths, respectively. Although important advances in prevention are being made, advanced life support management in children in developing countries is often incomplete because of limited resources. Existing advanced life support management guidelines for children in limited-resource settings are mainly empirical, rather than evidence-based, written for the hospital setting, not standardised with a systematic approach to patient assessment and categorisation of illness, and taught in current paediatric advanced life support training courses from the perspective of full-resource settings. In this Review, we focus on extension of higher quality emergency and critical care services to children in developing countries. When integrated into existing primary care programmes, simple inexpensive advanced life support management can improve child survival worldwide.

22. Lancet 2013;381(9861):142-51

**Global epidemiology of sickle haemoglobin in neonates: a contemporary geostatistical model-based map and population estimates**

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**Background:** Reliable estimates of populations affected by diseases are necessary to guide efficient allocation of public health resources. Sickle haemoglobin (HbS) is the most common and clinically significant haemoglobin structural variant, but no contemporary estimates exist of the global populations affected. Moreover, the precision of available national estimates of heterozygous (AS) and homozygous (SS) neonates is unknown. We aimed to provide evidence-based estimates at various scales, with uncertainty measures.

**Methods:** Using a database of sickle haemoglobin surveys, we created a contemporary global map of HbS allele frequency distribution within a Bayesian geostatistical model. The pairing of this map with demographic data enabled calculation of global, regional, and national estimates of the annual number of AS and SS neonates. Subnational estimates were also calculated in data-rich areas.

**Findings:** Our map shows subnational spatial heterogeneities and high allele frequencies across most of sub-Saharan Africa, the Middle East, and India, as well as gene flow following migrations to western Europe and the eastern coast of the Americas. Accounting for local heterogeneities and demographic factors, we estimated that the global number of neonates affected by HbS in 2010 included 5,476,000 (IQR 5,291,000-5,679,000) AS neonates and 312,000 (294,000-330,000) SS neonates. These global estimates are higher than previous conservative estimates. Important differences predicted at the national level are discussed.

**Interpretation:** HbS will have an increasing effect on public health systems. Our estimates can help countries and the international community gauge the need for appropriate diagnoses and genetic counselling to reduce the number of neonates affected. Similar mapping and modelling methods could be used for other inherited disorders.

Reproductive Health

23. BMJ 2013;346:f65

**Analysis: Reduced premature mortality in Rwanda: lessons from success**

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In the immediate aftermath of the 1994 genocide, which claimed up to a million lives and left two million homeless, Rwanda was among the poorest countries in the world. Health and education systems, already weak and limited in reach before the conflict, lay in ruins; less than 5% of the population had access to clean water; the banking system had collapsed; almost no taxes were collected. Epidemics of infectious disease—including AIDS, malaria, tuberculosis, and waterborne infections—further thinned the population.

Today Rwanda has been transformed. Mass violence has not recurred within the country’s borders, and its gross domestic product (GDP) has more than tripled over the past decade. Growth has been less uneven than in other countries in the region, partly because both local and national governments have made equity and human
development guiding principles of recovery. Recent studies suggest that more than one million Rwandans were lifted out of poverty between 2005 and 2010, as the proportion of the population living below the poverty line dropped from 77.8% in 1994 to 58.9% in 2000 and 44.9% in 2010. Life expectancy climbed from 28 years in 1994 to 56 years in 2012. It is the only country in sub-Saharan Africa on track to meet most of the millennium development goals by 2015. Although metrics for equity are disputed, it is an increasingly well known fact that Rwanda today has the highest proportion of female civil servants in the world.

Some have characterised Rwanda’s rebirth as good fortune or as a “black box” case with few lessons for others. However, as doctors and researchers who have worked for a decade with Rwanda’s Ministry of Health and its development partners, we contend that the country’s approach to strengthening its health system offers insights for other countries faced with persistent poverty and lagging health indicators. The impressive reduction in premature mortality speaks for itself. Linking sound analysis to a collaborative approach to strengthening health systems, Rwanda has instituted policies that have produced remarkable outcomes. This has occurred in concert with economic growth. Although the term “local ownership” is often invoked in development circles, it is rare to see it implemented successfully. The lessons from Rwanda’s success should inform the work of those around the world who seek to deliver on the commitment of comprehensive and equitable healthcare for all.


Why Do Women Not Use Antenatal Services in Low- and Middle-Income Countries? A Meta-Synthesis of Qualitative Studies
Finlayson K et al.

Background: Almost 50% of women in low- and middle-income countries (LMICs) don't receive adequate antenatal care. Women's views can offer important insights into this problem. Qualitative studies exploring inadequate use of antenatal services have been undertaken in a range of countries, but the findings are not easily transferable. We aimed to inform the development of future antenatal care programmes through a synthesis of findings in all relevant qualitative studies.

Methods and Findings: Using a predetermined search strategy, we identified robust qualitative studies reporting on the views and experiences of women in LMICs who received inadequate antenatal care. We used meta-ethnographic techniques to generate themes and a line-of-argument synthesis. We derived policy-relevant hypotheses from the findings. We included 21 papers representing the views of more than 1,230 women from 15 countries. Three key themes were identified: “pregnancy as socially risky and physiologically healthy”, “resource use and survival in conditions of extreme poverty”, and “not getting it right the first time”. The line-of-argument synthesis describes a dissonance between programme design and cultural contexts that may restrict access and discourage return visits. We hypothesize that centralised, risk-focused antenatal care programmes may be at odds with the resources, beliefs, and experiences of pregnant women who underuse antenatal services.

Conclusions: Our findings suggest that there may be a misalignment between current antenatal care provision and the social and cultural context of some women in LMICs. Antenatal care provision that is theoretically and contextually at odds with local contextual beliefs and experiences is likely to be underused, especially when attendance generates increased personal risks of lost family resources or physical danger during travel, when the promised care is not delivered because of resource constraints, and when women experience covert or overt abuse in care settings.


“The health exception”: a means of expanding access to legal abortion
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Abstract: In most Latin American countries, abortion is not illegal if there is a risk to the life or health of the woman. This article discusses the process of expanding the interpretation of this “health exception” to mean that even the possibility of harm to health should make an abortion legal – which then becomes a mechanism for expanding women’s right of access to safe abortion services. The article reports on an assessment of the impact of disseminating information on this interpretation of risk to health in Latin America, and how a regional process of debate and training of health service providers in 2009–10 has influenced the views and practice of health professionals in Argentina, Colombia, Mexico and Peru. The training included human rights arguments for applying the health exception in a comprehensive manner. All the respondents recognized the importance of interpreting risk to health as far more than the risk of death. Data from two clinics in Colombia also show an important increase in the number of women who had a legal abortion following this training. Dissemination of information and training on the health exception must continue – to protect women’s right to health, reduce mortality and morbidity among those with unwanted pregnancies and encourage timely access to safe abortion.
Still living with fistula: an exploratory study of the experience of women with obstetric fistula following corrective surgery in West Pokot, Kenya

Abstract: Obstetric fistula is a complication of pregnancy that affects women following prolonged obstructed labour. Although there have been achievements in the surgical treatment of obstetric fistula, the long-term emotional, psychological, social and economic experiences of women after surgical repair have received less attention. This paper documents the challenges faced by women following corrective surgery and discusses their needs within the broader context of women’s health. We interviewed a small sample of women in West Pokot, Kenya, during a two-month period in 2010, including eight in-depth interviews with fistula survivors and two focus group discussions, one each with fistula survivors and community members. The women reported continuing problems following corrective surgery, including separation and divorce, infertility, stigma, isolation, shame, reduced sense of worth, psychological trauma, misperceptions of others, and unemployment. Programmes focusing on the needs of the women should address their social, economic and psychological needs, and include their husbands, families and the community at large as key actors. Nonetheless, a weak health system, poor infrastructure, lack of focus, few resources and weak political emphasis on women’s reproductive health do not currently offer enough support for an already disempowered group.

Training traditional birth attendants to use misoprostol and an absorbent delivery mat in home births

A 50-fold disparity in maternal mortality exists between high- and low-income countries, and in most contexts, the single most common cause of maternal death is postpartum hemorrhage (PPH). In Bangladesh, as in many other low-income countries, the majority of deliveries are conducted at home by traditional birth attendants (TBAs) or family members. In the absence of skilled birth attendants, training TBAs in the use of misoprostol and an absorbent delivery mat to measure postpartum blood loss may strengthen the ability of TBAs to manage PPH. These complementary interventions were tested in operations research among 77,337 home births in rural Bangladesh. The purpose of this study was to evaluate TBAs’ knowledge acquisition, knowledge retention, and changes in attitudes and practices related to PPH management in home births after undergoing training on the use of misoprostol and the blood collection delivery mat. We conclude that the training was highly effective and that the two interventions were safely and correctly used by TBAs at home births. Data on TBA practices indicate adherence to protocol, and 18 months after the interventions were implemented, TBA knowledge retention remained high. This program strengthens the case for community-based use of misoprostol and warrants consideration of this intervention as a potential model for scale-up in settings where complete coverage of skilled birth attendants (SBAs) remains a distant goal.

Tuberculosis

Research on Implementation of Interventions in Tuberculosis Control in Low- and Middle-Income Countries: A Systematic Review

Background: Several interventions for tuberculosis (TB) control have been recommended by the World Health Organization (WHO) over the past decade. These include isoniazid preventive therapy (IPT) for HIV-infected individuals and household contacts of infectious TB patients, diagnostic algorithms for rule-in or rule-out of smear-negative pulmonary TB, and programmatic treatment for multidrug-resistant TB. There is no systematically collected data on the type of evidence that is publicly available to guide the scale-up of these interventions in low- and middle-income countries. We investigated the availability of published evidence on their effectiveness, delivery, and cost-effectiveness that policy makers need for scaling-up these interventions at country level.

Methods and Findings: PubMed, Web of Science, EMBASE, and several regional databases were searched for studies published from 1 January 1990 through 31 March 2012 that assessed health outcomes, delivery aspects, or cost-effectiveness for any of these interventions in low- or middle-income countries. Selected studies were evaluated for their objective(s), design, geographical and institutional setting, and generalizability. Studies reporting health outcomes were categorized as primarily addressing efficacy or effectiveness of the intervention. These criteria were used to draw landscapes of published research. We identified 59 studies on IPT in HIV infection, 14 on IPT in household contacts, 44 on rule-in diagnosis, 19 on rule-out diagnosis, and 72 on second-line treatment. Comparative effectiveness studies were relatively few (n = 9) and limited to South America and sub-Saharan Africa for IPT in HIV-infection, absent for IPT in household contacts, and rare for second-line treatment (n = 3). Evaluations of diagnostic and screening algorithms were more frequent (n = 19) but
geographically clustered and mainly of non-comparative design. Fifty-four studies evaluated ways of delivering these interventions, and nine addressed their cost-effectiveness.

Conclusions: There are substantial gaps in published evidence for scale-up for five WHO-recommended TB interventions settings at country level, which for many countries possibly precludes program-wide implementation of these interventions. There is a strong need for rigorous operational research studies to be carried out in programmatic settings to inform on best use of existing and new interventions in TB control.

29. Lancet 2012;380(9851):1406-17
Prevalence of and risk factors for resistance to second-line drugs in people with multidrug-resistant tuberculosis in eight countries: a prospective cohort study
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Background: The prevalence of extensively drug-resistant (XDR) tuberculosis is increasing due to the expanded use of second-line drugs in people with multidrug-resistant (MDR) disease. We prospectively assessed resistance to second-line antituberculosis drugs in eight countries.

Methods: From Jan 1, 2005, to Dec 31, 2008, we enrolled consecutive adults with locally confirmed pulmonary MDR tuberculosis at the start of second-line treatment in Estonia, Latvia, Peru, Philippines, Russia, South Africa, South Korea, and Thailand. Drug-susceptibility testing for study purposes was done centrally at the Centers for Disease Control and Prevention for 11 first-line and second-line drugs. We compared the results with clinical and epidemiological data to identify risk factors for resistance to second-line drugs and XDR tuberculosis.

Findings: Among 1278 patients, 43•7% showed resistance to at least one second-line drug, 20•0% to at least one second-line injectable drug, and 12•9% to at least one fluoroquinolone. 6•7% of patients had XDR tuberculosis (range across study sites 0•8-15•2%). Previous treatment with second-line drugs was consistently the strongest risk factor for resistance to these drugs, which increased the risk of XDR tuberculosis by more than four times. Fluoroquinolone resistance and XDR tuberculosis were more frequent in women than in men. Unemployment, alcohol abuse, and smoking were associated with resistance to second-line injectable drugs across countries. Other risk factors differed between drugs and countries.

Interpretation: Previous treatment with second-line drugs is a strong, consistent risk factor for resistance to these drugs, including XDR tuberculosis. Representative drug-susceptibility results could guide in-country policies for laboratory capacity and diagnostic strategies.

30. TMIH 2013;18(1):109-16
Costs of inpatient treatment for multi-drug-resistant tuberculosis in South Africa
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Background: In South Africa, patients with multi-drug-resistant tuberculosis (MDR-TB) are hospitalised from MDR-TB treatment initiation until culture conversion. Although MDR-TB accounts for <3% of incident TB in South Africa, 55% of the public sector TB budget is spent on MDR-TB. To inform new strategies for MDR-TB management, we estimated the per-patient cost (USD 2011) of inpatient MDR-TB treatment.

Methods: All resources used by patients admitted to the MDR-TB hospital with confirmed MDR-TB from March 2009 to February 2010 were abstracted from patient records for up to 12 months after initial admission or until the earliest of final discharge, abscondment or death. Costs of hospital stay/day were estimated from hospital expenditure records and costs for drugs, laboratory tests, radiography and surgery from public sector sources. 133 patients met study inclusion criteria of whom 121 had complete cost records.

Results: By 12 months, 86% were discharged with culture conversion, 8% died in hospital, 2% were still admitted, and 3% had absconded. The mean hospital stay was 105 days. The mean total cost per patient was $17 164, of which 95% were hospitalisation costs (buildings, staff, etc.) and ≤ 2% each for MDR-TB drugs ($380); TB laboratory tests, including drug susceptibility testing ($236); and other costs.

Conclusions: The inpatient cost per patient treated for MDR-TB is more than 40 times the cost of treating drug-susceptible TB in South Africa. There is potential for substantial cost savings from improved management of drug-susceptible TB and shifting to a model of decentralised, outpatient MDR-treatment.

Miscellaneous

Impact of Horizontal Approach in Vertical Program: Continuous Quality Improvement of Malaria and Tuberculosis Diagnostic Services at Primary-Level Medical Laboratories in the Context of HIV Care and Treatment Program in Ethiopia
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The use of standardized tools for continuous quality improvement of laboratory services is crucial to identify service gaps, plan targeted interventions, and prove successes. Laboratory quality improvement tools (LQITs)
were developed and applied for 18 months at five health centers and one faith-based hospital laboratories in Southwest Showa Zone in Ethiopia to assess and monitor the quality of malaria and AFB microscopy total testing processes. For the six laboratories, baseline malaria microscopy scores were 55%, 42%, 52%, 55%, 54%, and 61%. Similarly, baseline AFB microscopy scores were 49%, 41%, 46%, 58%, 44%, and 70%. On the sixth quarter for the first four laboratories and the fourth quarter for the last two laboratories, malaria microscopy scores were 89%, 88%, 88%, 90%, 88%, and 89%, whereas AFB microscopy scores were 90%, 88%, 95%, 88%, and 90%. All laboratories scored above 85% for both services at the end of interventions.

32. BMJ 2013;346:f462
Analysis: Universal coverage of renal dialysis in Thailand: promise, progress, and prospects
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Thailand is one of the few developing countries that ensures access to essential health services for all its citizens. Instigated in the early 2000s, the universal health coverage scheme (UCS), extended basic coverage to everyone not already covered by existing public schemes and has been popular, persisting through political instability over the past decade. The benefits and costs of the UCS have increased since it was introduced. New benefits have included antiretroviral drugs for HIV, in 2004, and renal replacement therapy for end stage renal disease, in 2008.

Renal replacement therapy is expensive and complex, and—unlike HIV/AIDS—kidney diseases afflict a relatively small percentage of the population and have never reached the global or national health agenda. We examine the rationale and factors that influenced the adoption of universal funding of renal replacement therapy, what can be learnt from the decision making process, and the challenges of maintaining funding.

Abstract: Thailand’s experience in introducing renal replacement therapy as part of its universal health coverage scheme shows the importance of evidence and stakeholders’ active participation in all phases of policy development, say Sripen Tantivess and colleagues.

33. BMJ 2013;346:f628
Feature, Neglected diseases: Snakebite: a forgotten problem
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India has the worst snakebite problem in the world, largely affecting poor people and children from rural communities. This might explain why treatment and the training of doctors in India are lacking, explains Soumyadeep Bhaumik.

When Alexander the Great invaded India in 327-325 BC he was said to be impressed by the arrow heads poisoned with lethal venom from the Russell viper and the advanced clinical acumen of Indian doctors in managing snakebite. In 2009 the World Health Organization added snakebite to its list of neglected tropical diseases, hoping to reduce its burden on so many marginalised populations.

“We need to act now to deal effectively with this problem, which causes severe disability, brings misery to families, and which kills thousands of people,” said Lorenzo Savioli, director of the department of control of neglected tropical diseases at WHO. However, policy makers, clinicians, and the general public have largely ignored the snakebite problem, even though it kills thousands of people each year and causes social, economic, and personal misery to many more.

Ghulam Nabi Azad, the union health and family welfare minister of India, told the Lok Sabha, India’s lower house of parliament, in April 2012 that only 1440 people had died from snakebite in India in 2011. WHO, however, predicts as many as 1 841 000 envenomings and 94 000 deaths globally, with India having the most of any country, with an estimated 81 000 envenomings and 11 000 deaths a year. The Million Death Study estimated some 45 900 deaths from snakebite in India in 2005, about the same number as those from HIV/AIDS.

34. HPP 2012;27(8): 625-37
Revealing the popularity of traditional medicine in light of multiple recourses and outcome measurements from a user's perspective in Ghana
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Traditional medicine is known to be popular in sub-Saharan Africa, where over 80% have reported its utilization. It is claimed to be easily accessible, affordable, available and acceptable, but little is known about at which stage of treatment-seeking individuals turn to traditional medicines and the resulting satisfaction once used. This is due to a paucity of quantitative demand data on how many recourses of care people take for one episode of illness, whether individuals use traditional medicines as a secondary option to orthodox medicines, and if used, how satisfied they are with results. This study presents descriptive data from fieldwork carried out on 772 households in two regions of Ghana to ascertain actions taken for self-reported episodes of acute and previously diagnosed chronic diseases. Quantitative results that show by looking merely at first recourse, use of traditional medicines is fairly low, but once second recourses are accounted for there is a doubling and tripling of incidence of traditional medicine use for acute and chronic diseases, respectively. A commonly used patient-reported outcome
measurement, the EuroQol 5 Dimension (EQ5D), is used to measure satisfaction before and after traditional medicine use, to reveal significantly positive changes. The study shows that whilst individuals are highly satisfied with traditional medicine, it is more often the second recourse of treatment with a revealed preference for orthodox medicines as a first recourse. This suggests that research is needed to investigate why individuals turn to traditional medicine only as a second recourse and to clarify the insufficiencies of orthodox treatment. Policies which guide individuals to take the most efficient recourses for given symptoms, and further exploration of key reasons behind high levels of satisfaction following utilization, are encouraged.

35. Lancet 2012;380(9857):2053-2260
Special issue: The Global Burden of Disease Study 2010

Publication of the Global Burden of Disease Study 2010 (GBD 2010) is a landmark event for this journal. The collaboration of 486 scientists from 302 institutions in 50 countries has produced an important contribution to the understanding of present and future health priorities for countries and the global community. The content of this issue is devoted to the theme.

36. TMIH 2013;18(2):242-4
Please, let not Western quackery replace traditional medicine in Africa
Renckens CNM & Dorlo TPC

In May 2012, the first gathering of homeopaths was organized on African soil. Despite the lack of evidence for the efficacy of homeopathy in any disease and its blatant incompatibility with scientific medicine, the use and popularity of this Western quackery appears to be on the rise in Africa, whereas its popularity in Europe is slowly waning. Western homeopaths who have set up shop in Africa even impertinently suggest the potential of homeopathy in the treatment of HIC and malaria, inevitably with fatal consequences. These homeopaths like to compare their underdog position with that of traditional medicine (TM) and thereby hope to gain undeserved respect in Africa. They even boast support from the WHO.