Methods: Two cross-sectional evaluations were conducted, the baseline in January 2011 and the follow up in September 2014, which were then used to evaluate progress with the scorecard. The indicators assessed at baseline and follow up included website availability, data availability of select health data sources, and publication timeliness of these sources. The MOH assessment included four assessment indicators and the NSO assessment included eight.
Findings: This scorecard assessment revealed that some countries have made progress but that others have regressed in making data available between 2011 and 2014. Little progress was noted in website availability, but that result was largely due to overall good availability in both assessment periods. Among the 20 countries that made progress in data availability between 2011 and 2014, 13 improved in multiple indicators. The assessment of data timeliness revealed that most countries (76%) have conducted a census within the past 10 years, but that the reporting of census data is poor and needs improvement in both availability and timeliness. Timeliness of the annual statistical Abstract and reference year of immunization data were good, demonstrating that countries are capable of reporting work in a timely manner if a report is produced.
Interpretation: This assessment is the first to evaluate the data availability and timeliness of key outputs expected from MOHs and NSOs. The use of two assessments permits characterization of the rate of progress during a time when many in the public health field are calling for greater data sharing, standards development, and evidence-based practice. However, the assessment is limited to government websites, which represent only one method of sharing data with interested parties and stakeholders. Low-income countries face challenges in supporting their public health needs, but this is all the more reason to prioritize effective data collection and dissemination to support evidence-based policy development and the tracking of targets. This study shows that low-income countries generally are capable of making data available in a timely manner, but that progress has been limited and uncertain.
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Rare, serious and comprehensively described suspected adverse drug reactions reported by surveyed healthcare professionals in Uganda

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Background: The ability of healthcare professionals (HCPs) to suspect or recognize adverse drug reactions (ADRs) is a major challenge and lack of adequate detail compromises their analysis. We determined the comprehensiveness of the most recent of previous-month suspected ADRs recognised by HCPs in Uganda, the characteristics of those who provided comprehensive ADR-descriptions, and identified suspected ADRs with a safety alerting potential.
Methods: During 2012/13 in public health facilities including the National Referral Hospital, five Regional Referral Hospitals representative of the Eastern, Northern, Western, Southern and Central regions of Uganda, HCPs were invited to self-complete a questionnaire on recognition and reporting of ADRs. Lower level public health facilities, private for-profit and private not-for-profit health facilities in the district where a Regional Referral Hospital was selected were included. Ethical approval was granted by the Uganda National Council for Science and Technology and HCPs gave written informed consent.
Findings: Questionnaires were returned by 1,345 respondents, about two-thirds of those to whom they were distributed. Ninety per cent (241/268) of HCPs who suspected ADRs in the previous month provided information on five key descriptors as follows: body site (206), medication class (203), route of administration [explicitly (127) and implicitly (63)], patient age (133), and ADR severity (128). Comprehensiveness, defined as explicit provision of at least four key descriptors, was achieved by at least two-fifths (46%, 124/268) of the HCPs who suspected ADRs in the previous month. More comprehensive descriptions were received from HCPs in private health facilities and regions other than central and those not involved in teaching medical students. Overall, 106 serious and 51 rare past-month ADRs were described by 1,345 respondent HCPs who, on average, saw 41 (SD = 46; n =1,226 of 1,345) patients daily: 1,544,060 patient-days. The commonest serious and rare ADR was Stevens-Johnson syndrome (SJS), mostly associated with oral nevirapine or cotrimoxazole. Other notable serious ADRs were quinine-associated child fatality, severe post injection paralysis, and miscarriage; Artemisinin-based Combination Therapy [ACTs (artemether/lumefantrine)]-associated severe hypoglycaemia, swelling of the face, and generalized body sores; post-exposure prophylaxis (PEP)-associated SJS after a needle-stick injury; nevirapine-associated hepatotoxicity; and analgesics (oral diclofenac)-associated haemoptysis.
Interpretation: Comprehensive ADR descriptions were reported by at least two-fifths of surveyed Ugandan HCPs who had suspected an ADR in the previous month. More comprehensive descriptions were received from private health facilities and regions other than central, but were less likely from HCPs who taught medical students. Comprehensive ADR reporting by HCPs is an essential alerting tool for identifying rare and serious ADRs in sub-Saharan Africa. Limitations Recall bias due to use of self-report and that no ADR causality assessment was done.
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Visions of Big Data and the risk of privacy protection: A case study from the Taiwan health databank project

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Program/Project Purpose: As cloud computing increases and large databases expand in the Internet era, "Big Data," is going to transform how we live, work, and think. However, these new phenomena also create a unique challenge for current legal frameworks to handle privacy protection, individual autonomy, and data applications. A database created by Taiwan's National Health Insurance (NHI) provides a valuable opportunity to study the complex and dynamic issues raised by the recent frenzy of "Big Data". Since 1995, the government of Taiwan has integrated 99 percent of its health-care providers under single-payer universal coverage, which insures its entire population of twenty-three million. Due to Taiwan's advanced IT industry and infrastructure, the National Health Insurance Research Database (NHIRD), which includes datasets of service claims, billing, payments, hospital visits, and drug prescriptions, has become one of the largest health-care database systems in the world and is widely used for academic research. Recently, the government announced an initiative to link the NHIRD with other public databases for academic and commercial value-added applications. Upon its completion, the data consortium will be an incredible tool for medical research, health-care management, and commercial

marketing. Despite the government's vision of linking all personal records, allegations of intrusion into privacy—due to data collection and utilization—continue to be made. In 2012, a local NGO filed a lawsuit to claim citizens have a right to "opt out" of academic applications of the NHIRD because these applications go beyond the original insurance purpose and scope. Although the Taipei High Administrative Court, in June 2014, rendered its decision in favor of the government, based on reasonable use, public interest, and sufficient de-identification practices, the controversy and ongoing appeals have caused concern and may stop a variety of applications. The government's dream of "Big Data" faces sharp challenges, even at its very inception. This paper argues that the traditional approach of individual autonomy, such as notice and consent and the freedom to "opt in" or "opt out," is inadequate to protect privacy and safeguard autonomy in the rapidly growing big-data era. A possible solution would be a mechanism that ensures the privacy of medical data by providing individuals with a platform that allows them to monitor how their data have been used, by whom, and for what purposes. This paper contends that a system whereby individuals can check the status of their personal medical data and receive invitations to collaborate on privacy protection is essential to safeguard the privacy of data and empower individuals to control its use. This kind of democratic participation would facilitate transparency, create trust, and lead to a win-win situation between data subjects and data users.
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Improving health literacy through facilitated group focused antenatal care

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Background: Ghana has made great strides in antenatal care (ANC) with the most recent DHS showing 95% of pregnant women received ANC from a health professional. However, only 68% of women attending ANC report receiving information on the signs of pregnancy complications, highlighting a potential disconnect between attendance at ANC and information shared with and remembered by the women. This study was designed to examine the usefulness and feasibility of providing focused antenatal care (FANC) in a group setting to improve patient-provider communication, patient engagement, and improve health literacy. The aim of this study was to: 1) evaluate the use of a group format for FANC on provider's perceptions of communication and patient engagement; and 2) examine whether group FANC addresses the barriers to delivering health care information to pregnant women.
Methods: An exploratory, mixed methods design using surveys and a focus group were utilized to gather data. A facility-driven convenience sample of six Ghanaian midwives was recruited from an urban hospital in the Ashanti region for a training of trainers (TOT). To establish fidelity with the modules, seventy-two women were recruited to attend group sessions (6 groups of 12 participants) allowing the midwives to refine their facilitation skills and use of the modules over a three-month period. All survey measures were completed at two time points: after the initial TOT and three-months later after each midwife had conducted 14 group visits using the newly learned methodology. Survey questions were utilized to assess the midwives' perception of communication and patient engagement during group FANC. Qualitative data provided further understanding of maternal health literacy and the impact of participatory, group FANC. Written informed consent was obtained from all participants. IRB approval was obtained from the University of Ghana; Kwame Nkrumah University of Science and Technology; and the University of Michigan (HUM00054141).
Findings: The mean pre-test scores for the communication scale was 74.50 (SD=6.46) and 27.75 (SD=1.26) for the engagement scale. The mean post-test scores for the communication scale was 72.50 (SD=1.73) and 28.25 (SD=1.50) for the engagement scale. There were no significant differences in the mean communication ($t(df=3)=.541$, $p=.626$) and engagement ($t(df=3)=-.775$, $p=.495$) scores between the pre- and post-test. Three major themes emerged through the analysis of the qualitative data: (a) improved communication through the use of picture cards; (b) enhanced information sharing and peer support through the facilitated group process and; and (c) an improved understanding of patient concerns.
Interpretation: New, innovative approaches for improved communication to increase health literacy are sorely needed. Facilitated group FANC actively involves participants by incorporating their abilities, knowledge, and needs. Facilitated discussion models such as group FANC have the potential to improve health literacy, improving health outcomes.
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Elevating the importance of cold chain integrity in global health policy, disease reduction and health care cost management

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Program/Project Purpose: Fundamental global health goals including disease containment, access and cost-effectiveness greatly depend on the appropriate storage and handling of medical products. The temperature sensitivity of medical products is well-established. Less understood is the magnitude and impact of temperature breaches in the medical products supply chain. Supply chain breaks are common occurrences in all countries, regardless of a nation's infrastructure. Storage and handling breaches contribute to the spread of disease, create patient safety hazards and result in costly wastage of life-saving medicines. The Ebola outbreak is an example of a health emergency in which a poorly managed supply chain can directly undermine disease containment. Global health policy focuses on disease eradication and ensuring equitable access to care. Yet, safe delivery of medical products, a necessary condition for achieving these goals, is rarely addressed. One reason that public health stakeholders fail to prioritize supply chain management is the absence of many well-conducted studies on the impact of cold chain issues. The goal of this project was to provide a literature review in order to elevate the importance of supply chain considerations in global health policy decisions. The meta-analysis was conducted between December 2013 and March 2014, while the author was pursuing her MPH.
Structure/Method/Design: The primary aim of the research was to characterize and quantify medical products' storage and handling issues and their impact on global health objectives. An additional goal was to identify solutions that could be integrated into global and U.S. health programs to improve efficiency and effectiveness. The meta-analysis included studies on medical products' temperature stability, scholarly articles on storage and handling, references in the popular press, and interviews with public health leaders, including stakeholders at World Health Organization (WHO).