

DRAFT

MITIGATION OF HIV/AIDS AT THE DISTRICT LEVEL: *The Case for the Collection of Local Indicators and the Development of District Management Information Systems*

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Introduction:

In ideal circumstances, all social sector and other strategic government ministries should routinely generate a set of early warning signals in respect of impending system malfunction or failure. The fact is that few such systems in Africa do so with any consistent reliability, but even if this were not the case, the capacity to adequately analyze and add value to such strategic data is limited. Even in the most functional of systems, the record shows that remarkably little analysis and decision-support information finds its way into the hands of officials, *particularly* at the regional and district levels. In respect of the most serious modern challenge to the function and output of social and strategic systems, namely HIV/AIDS, this failing is particularly problematic.

The education sector is a case in point: In principle, planning for the resourcing and provisioning of education is driven by annual or bi-annual school enrolment and capacity surveys which contribute data to an Education Management Information System (EMIS). In practice, few EMIS function to the extent that they can, or do, provide timeous management information or guide decision making in respect of what is usually the largest sectoral claimant on any country fiscus.

There are several reasons for this, perhaps germane to other sectors:

- EMIS have in fact collapsed and been reinvented so often in so many African countries that their repeated resurrection has generated a significant industry in its own right. Decision making, on a comparatively macro-economic scale, is consequently often dependent on the vagaries of political will, simple or formulaic budget increments or adherence to the status quo. In short, data-based judgments are disconcertingly few and far between, confirming that **widespread information system collapse is due in large part to the lack of management demand for decision support.** If anyone doubts this unvarnished assertion, consider that decisions of some financial magnitude are made *every* year in *every* education ministry with little or no data of any relevance.

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- Where EMIS are more or less functional, they collect data from the bottom end of the system and consign it to the top, usually with long delays and little value-added analysis. The point is that rarely if ever is management information – or even cleaned and consolidated data – made available to local and district levels of the system. In consequence, **there is little local access to, or use of, management information at precisely the levels best placed to use it.** Worse, the perception of data collection for no obvious purpose has alienated local level officials and left them cynical and even reactionary; this latter point is manifest in a widespread disregard for accuracy in data capture or even its manipulation for personal or community gain. The result, inevitably, is the devaluation of EMIS in the eyes of all concerned and the incremental collapse of such systems.
- By definition, officials at every level have learnt to cope without data and indeed are often amused or irked by the insistence of development agencies that certain 'key indicators' be regularly provided. A review of the international literature will however reveal large holes in the current and historical education data of many countries, and place question marks behind the data that *is* available. Given the lack of management appetite, the cyclical collapse of EMIS and the lack of local and district access to data, this is hardly surprising. **For as long as there continues to be a disconnection between demand and supply, there can be no expectation of data consistency, utilization or quality control.**
- Finally, given this unhappy analysis, we should not be shocked to discover that there has been little progress within education – or the wider social sector – in developing **key indicators of system performance**, or, on the other side of the same coin, **key indicators of HIV/AIDS or other erosive impacts.** Not only have education systems largely failed to add value to the data they collect, they have also failed to distill out of it *simple and relevant* indicators of value to district and national managers and their development partners.

Enter HIV/AIDS:

In education, in the AIDS era, we are all too aware that the system is being incrementally eroded by the impact of educator, manager and learner attrition, yet we are hard pressed to put numbers to the equation, precisely because the means to measure the problem is in disarray. *We know* that educator absence from duty is affecting quality in the classroom, yet we have no real measure of the loss of contact hours, for example. We are left to assume, estimate and project, learning with hindsight wisdom and the emerging confirmation of these trends. **Because the operation of management information systems is more often than not sub-optimal, we have no way of knowing where routine dysfunction stops and HIV/AIDS or any other erosive impact starts – effectively masking the real level of such impact and reinforcing sectoral cynicism.**

The same holds illustratively true for health: Functional health information systems are also few and far between and seem similarly challenged to provide consumable analysis. Even in comparatively well-endowed systems and societies in Africa, we would be hard pressed to point to evidence of data access and utility at either the national or district level for precisely the same reasons. Indeed, offers of technical assistance to help in the establishment of such health MIS have been rebuffed in a number of countries, and it is clear that the appetite for any further insight into systemic management problems is limited – *not least because of the specter of HIV/AIDS impact.*

In short, HIV/AIDS is adding to existing systemic problems and stressing the capacity of systems in all sectors to cope; yet these sectors seemingly fail to grasp the need for some early warning of impact or even the means to benchmark, measure and monitor it. Data systems continue to stumble and fail with little protest from senior officials, apparently inured to the need for hard management information or access to it, particularly at the local and district levels.

The difference now is that HIV/AIDS can and will spill 'routine dysfunction' over into unpredictable crises of demand and supply, in an era when the international community demands not only regular and rigorous reporting to motivate support, but adherence to a set of ambitious goals for education, health and social development. The question is, how can we accommodate these needs *and* improve the real function, utility and sustainability of MIS at every level and in every sector?

Decentralizing MIS:

We take the position that MIS reform and sustainable functionality is critical for both effective system management *and* HIV/AIDS mitigation; that both ends are served by a reconceptualization of MIS and a repositioning of its strategic importance. But we also argue that there is little prospect of an MIS revolution at a national level in countries where no real information culture exists; that we must consider a fresh approach that breaks the chain of MIS establishment, collapse and reinvention, with little apparent benefit to the sector concerned.

In terms of the HIV/AIDS threat, we argue that while national policy framework development, planning and prioritized implementation are vital, (particularly in demonstrating political will and commitment) the battle against this pandemic will be won or lost at the district and local level. While policy and regulation must create a climate in which counter-measures can prosper, effective implementation lies in the hands of officials at the point of delivery, in the schools, clinics and communities. If we are unable to empower and enable an informed management response at the most direct point of delivery, the best of intentions may be undone.

Ultimately, this is about management: The quest to mitigate the impact of HIV/AIDS on social systems relies fundamentally on their well managed and normative function; to pursue the restoration (or establishment) of good management practice as a means of mitigation, in conditions of community and other local partnership. This is far from being an idealistic approach: In the midst of catastrophe, there is opportunity; in this instance, the enormity of the crisis – denial notwithstanding – may well bind together education, health, welfare and other officials with local populations in unprecedented solidarity.

In these circumstances, it is critical that a range of basic HIV/AIDS impact indicators – synonymous with routine system function indicators – are available to alert management at every level, but particularly to guide and condition response at the district level. The caveat is that these indicators must be self-evidently meaningful, readily available for collection and local analysis, *and* be available to inform and empower local and district level managers.

This last point is not without its problems: There is a widely held conviction in many social sector ministries that complex decision-making lies beyond the capacity of any district or other official outside the head office. The fact that such officials have seldom, if ever, had the chance to exercise their judgment may cloud the issue, but in the AIDS era, these same officials are now on the front line and responsible in an unprecedented way. Our task is to find a way to ensure that they are equipped for the job and armed with the kind of indicators that can inform fundamental management functions – not least response to the local symptoms of systemic HIV/AIDS impact.

Impact Indicators and District Management Information Systems:

Simply put, we argue that there is a need to systematize the identification of sector-relevant indicators, the sustainable means to capture and analyze these *in order to empower management and response at the district level.*

The essence of the concept is that district and local level officials should capture, analyze and use indicators of local and district significance, in a process that is complementary to, but not duplicatory of, national sectoral MIS. Apart from seeking to break the cycle that currently bedevils MIS effectiveness, this approach is intended to place the onus on local decision makers to make informed judgments – within their sub-regional competence – and deal with the range of AIDS-exacerbated problems that are currently largely invisible to the center.

Mobilizing this approach is not a simple task, but it will be encouraging to note that within the complexities of the education sector, there has been some considerable success. This particular problem has engaged the MTT for some considerable time and, with initiating support from DFID, a District Education Management and Monitoring Information System (DEMMIS) was designed, developed and piloted some three years ago.

In essence, the MTT sought to create a system with all the attributes mentioned above, agree a simple set of sector-specific indicators of both system functionality *and* HIV/AIDS impact, and test it in operational conditions over time. It is not the purpose of this short paper to detail the system, but to review certain of its features which may hold promise for wider, multi-sectoral application:

- DEMMIS provides a very simple reporting template for completion by school principals on a *monthly* basis. This frequency in itself is a radical departure and flies in the face of received EMIS; however, since it is designed with the self-interest of every involved official in mind and has real local utility, 36 months of piloting in some 200 schools (in rural KwaZulu Natal) has confirmed that monthly completion is no problem;
- DEMMIS captures data that is required by regulation to be kept at the classroom and school level in any event; in practice, this data is seldom ever collected or reviewed and signals the variable quality of school record systems. In a recent school survey, we established for example that less than 40% of schools (in KwaZulu Natal) kept systematic teacher attendance and other records;
- Very limited data is captured since, at least in principle, a complete school census takes place annually and DEMMIS does not set out to duplicate this. The limited number of questions involved coincides with what we would regard as the key indicators of impact, and avoids the academic inclination to seek data that simply does not exist. In short, we focus on the issues that govern the day-to-day function of the system and those that have relevance for the district manager and his/her capacity to respond to HIV/AIDS-related issues. Examples of these questions/indicators are shown below;
- This data is captured monthly on a date which precedes the routine monthly meeting of district officials, so 'piggy-backs' existing activities and travel. The school retains a copy of the data, to regularize its own record keeping, and sends on a copy via the school inspector to the district. Although the system can be entirely paper-based if necessary, the data is captured on computer at district offices by a clerk, using a simple capture and reporting template. Data capture training takes half-a-day, and monthly capture for around 100 district schools takes about four hours;
- The system generates reports for the school inspector, the district manager and school districts, including comparative information on performance for regionally-proximate clusters of schools. Interestingly, these reports have the effect of enhancing the regional reputation of managers as they are able to report key issues monthly and in detail; for this reason, the pilot area has been expanded by other district managers seeking to become involved;
- The district manager is provided with an interpretative checklist in order to consider his/her options based on the data and trends evidenced, including the need to consult at senior levels in the event of real concern;

- This approach has generated a monthly time series of key performance indicators for the first time in anyone's experience and has provided insights into both systemic function and HIV/AIDS impact. One chilling example is the ability of the district to update monthly the number of learners who have been orphaned in the preceding 30 days;
- The pilot is, by definition, no longer a pilot after 36 months. However, it is instructive to note that the South African province of KwaZulu Natal in which it has been located has elected to rationalize its departmental structure; the first function to be reduced, and indeed gutted, is the EMIS section, providing some support for the arguments advanced above. As a consequence, the officials responsible for the pilot have been redeployed and the Province's commitment to take DEMMIS to scale across all 6000 schools has been put on hold, notwithstanding access to levels of data never seen before. While at this juncture it would be reasonable to suppose that this signals failure, in fact DEMMIS is in the process of piloting and introduction in some six other African countries.

DEMMIS: School-Level Questions and Indicators

The temptation to over-elaborate questionnaires or seek indicators that cannot be easily or commonly captured is great, but it is suggested that this list must be constrained by two key conditions: First, they must be available in the average school and not be so difficult to capture that they are fudged or fabricated. Second, they must be readily consumable by local level officials and communities. In short, they must *mean* something of obvious management value to every stakeholder concerned.

The list is disarmingly brief and unsurprisingly broken into three categories, as follows:

- a) **Educators, by sex, age and qualification: (Completed by Principal)**
 - 1 **Temporary Absence:** Number of days absent, by reason (list including sickness, official business, compassionate [pregnancy, family tragedy], study, unauthorized)
 - 2 **Permanent Absence:** Reasons including death, transfer/relocation, promotion, loss to other employment, unknown
 - 3 **Replacement Educators:** Number of days required/provided
- b) **Learners, by sex, age and grade: (Completed by Principal)**
 - 1 **Temporary Absence:** Number of days absent, by reason (list including sickness, compassionate [death in family, sickness in family, pregnancy in family], pregnancy, lack of nutrition, unpaid school fees, transport problems, unknown)
 - 2 **Permanent Absence:** Reasons including death, relocation, drop out, pregnancy, orphaning, employment, unknown
 - 3 **Orphaning:** Number of learners who have lost, a] one parent, or b] both parents in the preceding month

4 **School Fee Exemptions:** Amount unpaid/lost in gross terms in the preceding month

c) **Management, by sex, age and rank/function: (by District Manager)**

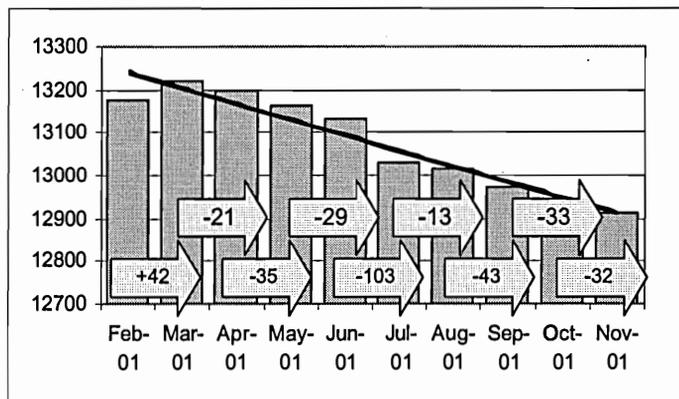
1 **Absence of Circuit Inspectors:** By sex and age,

a] **Temporary Absence:** number of days absent (list including sickness, official business, compassionate [pregnancy, family tragedy], study, unauthorized, and;

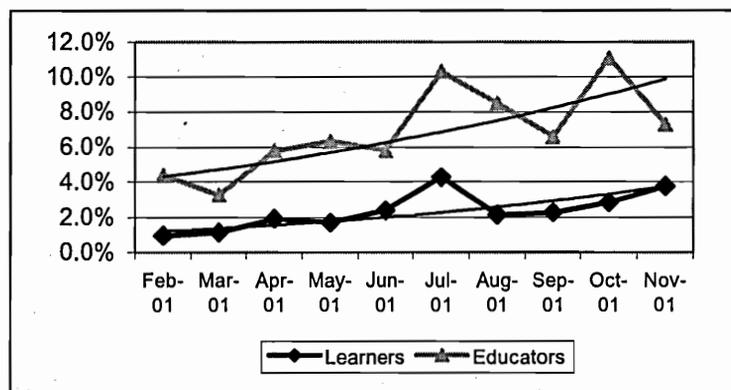
b] **Permanent Absence:** Reasons including death, transfer/relocation, promotion, loss to other employment, unknown

DEMMIS Outputs:

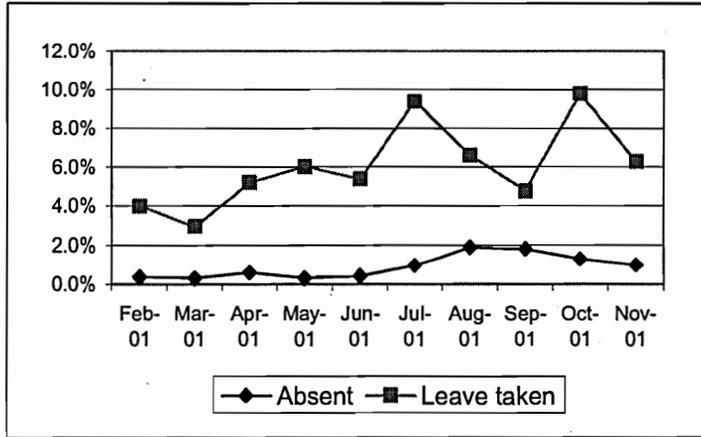
For illustrative purposes, the following simple graphs were generated from pilot data early in the process; they show immediately a range of issues that bridge the issues of system functionality and early evidence of HIV/AIDS impact:



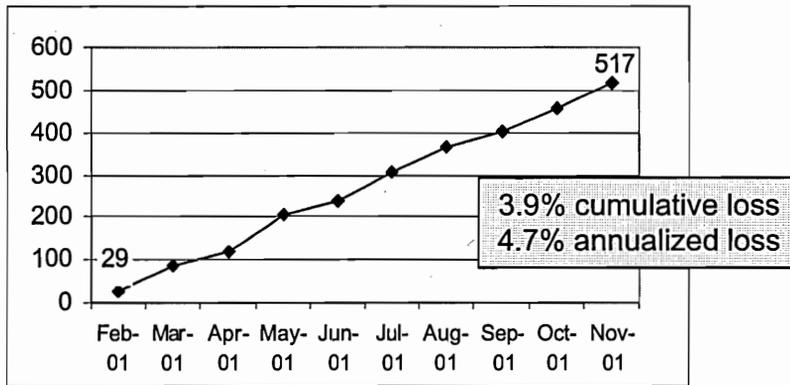
KZN DEMMIS: Change in Learner Enrolment
(Annualized 2.6% decline)



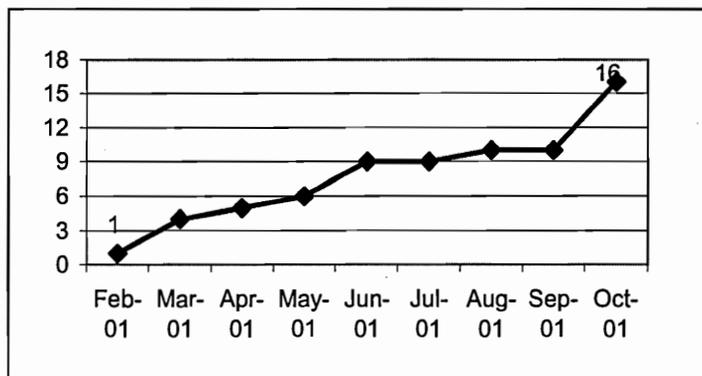
Learner and Educator Absenteeism rates –
Days lost as a percentage of available time



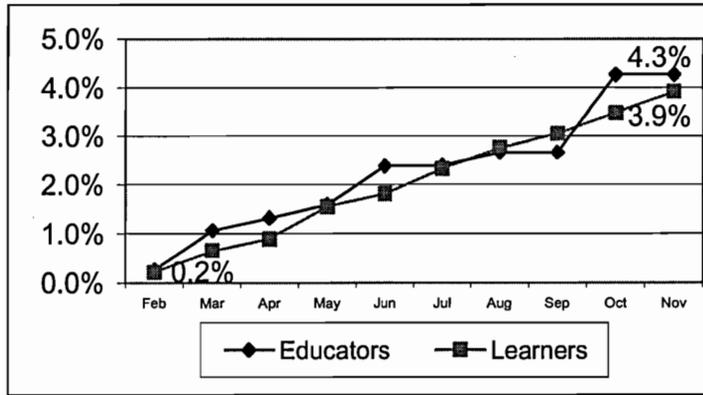
Educators – loss of contact time
Annualised loss of 8.4% time



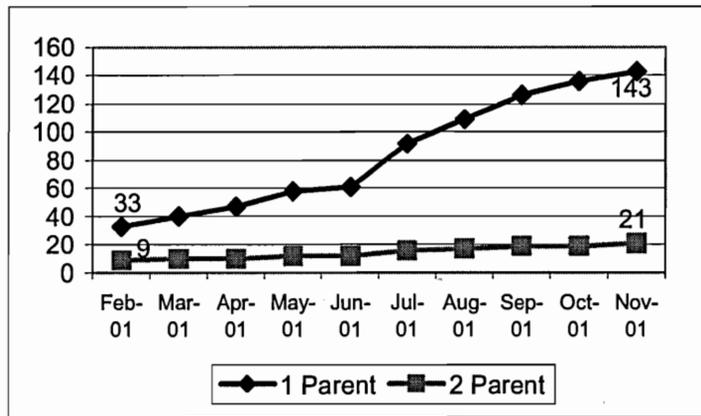
Learners that left the system



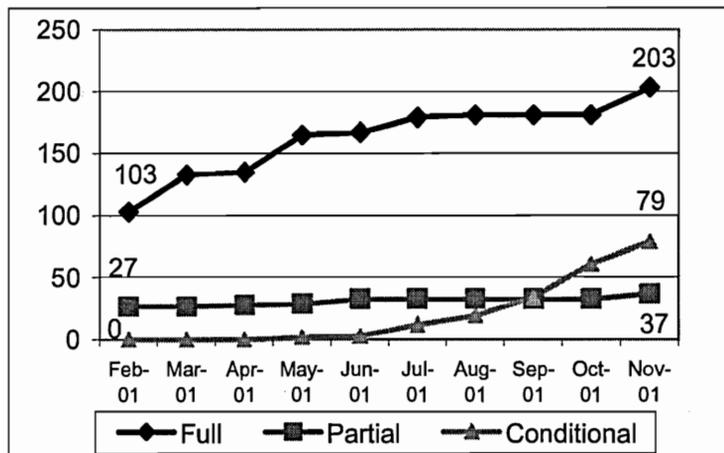
Educators lost to the system



Educators and Learners lost to the system as a percentage



Number of new orphans reported every month



Cumulative number of school fee exemptions granted

Conclusions:

As this paper will show, there are no magic bullets or simple solutions to the issues of MIS, data or indicator development; however, there are options that may – at some cost – open new avenues to the kind of data so desperately needed by the social sector and its development partners. We have attempted to show why MIS, particularly in education, but quite possibly across the social sector, is in some difficulty and that there is a need to find a way out of the cycle of collapse and reinvention – notwithstanding the development and training industry that has sprung up around it, with limited success.

We have illustrated one approach in the education sector, using a district level model, and argue that the best option open to us is to decentralize the capture, analysis and utilization of system data. We acknowledge that this course will be treated with some circumspection by national ministries, but argue that we have to create the space to try new things. Patently, traditional approaches to capacity development are problematic, given our penchant for training individuals, sending them back into dysfunctional systems and then employing them when it doesn't work out; we have to address systemic problems systemically and look to the cooperative development of new *systems* that will grow and retain their local owners and developers.

Put differently, we have to grow new MIS from the ground up with the active participation of the people who must own and drive these.

Other sectors of government may of course have quite different needs and concerns, but we would argue that there may be more commonalities than meet the eye: Supply and demand are common threads and the need to ensure sustainability in the face of HIV/AIDS morbidity and mortality creates a shared challenge across the social sector. This is, after all, a truly multi-sectoral issue and it may well be that creative analysis and engagement may yield agreement on common indicators or at least some measure of compatibility.

This paper is intended to provoke thought and response, and introduce an African perspective based on operational experience; most importantly, it seeks to help mobilize a fresh approach to a care-worn problem – that of the perennial failure of MIS at precisely the point in history when they are needed most.

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INITIATIVE ON HIV/AIDS AND SOCIAL TRANSFORMATION

AIDS is as much a social, political, economic, and cultural problem as a biomedical one. Understanding the pandemic certainly requires first-rate immunology and epidemiology, but it also requires grasping the social processes that shape individual behavior and those that shape the effectiveness of response. Successful responses to the pandemic depend not only on the development of medical treatments and behavior change, but also on political will, cultural understanding, the capacity of health care systems and the achievement of broader development goals.

Major medical advances have been made, most notably in anti-retroviral (ARV) drug treatments, and more are on the way. But it is unrealistic to think that the disease will be eliminated—or even greatly reduced—in the next few years. ARVs mean that AIDS is a disease people can live with, but how they are distributed raises questions of equity, efficiency and access. Unequal patterns of distribution may not merely raise ethical questions, but also occasions for civil unrest. Without the requisite institutions in place to effectively deliver these responses and ensure medical compliance, the emergence of drug resistant strains may roll back decades of scientific progress. And even if a vaccine is discovered tomorrow, it will be at least a generation before it can reach all who need it. There can be no quick fixes to this human catastrophe—some forms of which will only manifest over time. Responding to the imperative for immediate action has resulted in significant gaps in knowledge about the longer-term impacts of HIV/AIDS and in understanding what responses work and which contextual factors really matter.

The social sciences have a crucial role to play in improving knowledge on how AIDS spreads, what interventions and policies are effective, how different institutions respond and relate to each other, the governance challenges created by the global response, and the impacts of the pandemic on families and communities. And yet, AIDS is the biggest social issue that social science is not addressing deeply. Scaling up treatment programs demands not just money but a better understanding of social organizational issues, local cultures, and political contexts. The experts needed to address the pandemic are not just AIDS specialists, but economists who study the labor force, anthropologists who study cultural reproduction, sociologists who specialize in demographic modeling, and political scientists who understand problems of governance at scales from the local through the national to the global.

Only comparative analysis over the long term will reveal why the same intervention may work in one setting and not another, and why the same prevalence rate leads to the collapse of one village while being a tragedy that another survives. The relatively small and disparate work emerging on these questions, including operational and policy research, needs to be deepened, broadened and connected more systematically.