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## Health Sector Reform And Decentralization In Tanzania: The Case Of The Expanded Programme On Immunization At District Level

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### Abstract

What was the immediate stakeholders' response to decentralization of Expanded Program on Immunization at district level in Tanzania? Analysis of quantitative and qualitative data from a range of stakeholders was done. The immediate response included reduced cooperation, delayed financial disbursement, reduced supervisions and low EPI coverage (52.8 percent). It was concluded that there was a need to increase awareness of decentralization and management capacity at district level to facilitate positive alignment of the stakeholders.

**Key words:** decentralization, stakeholders, EPI, Tanzania

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## **Health Sector Reform And Decentralization In Tanzania: The Case Of The Expanded Programme On Immunization At District Level**

### **INTRODUCTION**

What was the immediate stakeholders' response to decentralization at district level with a focus on vertical programmes? Since the early 1990s many countries started to implement reforms in the health sector as a strategy for improving performance of the health systems (Phillips, 1987; Thorne, 1994; Mwale, 1999). The major components of health sector reforms had been decentralization through devolution and integration of district health care services (Conyers, 1983; Gilson & Mills, 1995). It included devolving political, administrative, financial, and personnel control from centre to lower level (usually a district). The expected benefits of decentralization include increased efficiency, participation at the local level, and responsiveness to the local problems (Milewa *et al.*, 1998; Conyers, 1983; Gilson *et al.*, 1994b; Cheema & Rondinelli, 1997; Zakus & Lysack, 1998). Decentralization implied that the Ministry of Health remained with the responsibilities of policy making, long term macro-planning as well as monitoring. Districts were given authority to undertake local planning, management of health services, allocation of resources, financing, control of finances, supervision, monitoring, and evaluation (Conn *et al.*, 1996)(Leighton, 1996). Furthermore, decentralization had been one of the key elements of Primary Health Care (PHC), economic development, and a major strategy to achieve health for all by the year 2000 (WHO & UNICEF, 1978).

The health sector reforms also included decentralization and integration into the district health system of successful vertical programmes such as those of tuberculosis and leprosy control, and the expanded programme on immunization (EPI). These programmes were previously centrally planned, funded by donors, operated efficiently in parallel to the general structure of health care, and achieved substantial progress in provision of services (Ministry of Health, 1997). For example, EPI increased vaccine coverage from less than 20 per cent in 1970s to about 80 per cent in the 1990s, and reduced the burden of vaccine preventable diseases (Reingold & Phares, 2001).

Nonetheless, the reported high EPI coverage was a national average with very wide variations between and within districts. Decentralization provided an opportunity for districts to address the local problems associated with the EPI services. However, achieving the expected benefits of decentralization while maintaining and up scaling EPI gains was very difficult to achieve. It depended to large extent on close monitoring of the performance of the two processes, and timely adjustment when necessary. Integration of vertical Programmes like maternal child health and family planning (MCH/FP), sexually transmitted diseases and immunodeficiency virus infection (STD/HIV) need to be done carefully (Mayhew, 1996). It requires research and policy analysis to guide the process.

Integration of EPI services in Tanzania at national level started in 1996, and decentralization to district level started in the year 2000. Decentralization was implemented in phases and was completed in 2003. The health sector reforms involved changing the stable dynamic relationship between stakeholders at all levels. The changes could have made stakeholders react resulting to support or opposing the reforms. The impact of the stakeholders' reactions could negatively influence the reform process resulting to low likelihood of achieving the desired benefits. Given the success of EPI as a vertical programme, reforms focusing on EPI were more likely to invoke stakeholders' reaction. The immediate stakeholders'

reaction to decentralization could lead to poor implementation process of EPI. Thus there was a need to understand the immediate reaction of the stakeholders and their roles in EPI services.

To answer the questions above stakeholder analysis of the decentralization process at district level was done. The stakeholders' analysis adopted the interactive model of policy implementation (Thomas & Grindle, 1990). In the interactive model stakeholders (actors) can't be separated from the process of policy flow that is problem identification, policy formulation, implementation and evaluation. At each of these stages the stakeholders could influence the non-start, reversal or continuation of the process. From available information, the immediate stakeholders at district (level of decentralization) were District Executive Director and councillors as district council leadership. There were also council health management Teams, health providers and the community.

The district was a level of policy implementation and therefore the influence of stakeholders at that level would have the highest impact at the implementation phase of policy process. The process through which the stakeholders would influence implementation could be through the quality of interaction. The stakeholders' quality of interaction would impart on roles played by active stakeholders. This in turn would affect the quality of services i.e. process quality and perceived quality. It will eventually lead to reduction in the utilization of the health services.

The study aimed at understanding the decentralization changes that took place at district level and the post-decentralization interaction of the implementers at the district. The study also explored the changes in supervision (tracer management activity) due to decentralization. Reduction in management quality including supervision would lead to low quality of health services provided. The final aim of the study was to demonstrate the relationship between changes in quality of health care and level of support of the health services by the communities as evidenced by utilization of EPI services. This would provide an input to enable decentralization managers take appropriate action timely to improve success of the process.

## **METHODOLOGY**

The study was undertaken in a Tanzania Mainland rural district. It was randomly selected from among districts decentralized in the first phase in 2000. Permission to conduct the study was obtained from the Ministry of Health and district authorities. Informed consent was obtained verbally from all participants, who were assured of strict confidentiality, and all responses were therefore de-linked from the individual respondent. The analysis and reporting maintained the confidentiality including non-disclosure of the study district. Consequently, any information that could lead to disclosure of the study district was withheld. The minimum sample size of children aged between 12 and 23 months to be surveyed was estimated at 341 using STATCALC EPINFO 6.0, which was then multiplied by 1.5 as the sampling correction factor. The study sample size was therefore 512 children.

The first level of the study involved district council authorities who comprised DED, District Planning Officer (DPO), and councillors. Other respondents at the district level were the Council Health Management Team (CHMT), the District Cold Chain Officer (DCCO) and District Maternal and Child Health Coordinator (DMCHCO). At the community level study units were ward and village secretaries. The interviews and focus group discussions were conducted by one of the authors assisted by specially trained research assistants familiar with the district.

This was a follow up study. Baseline in-depth interviews were conducted which elicited information on interaction of stakeholders and implementation. A follow up was done using key informants, document reviews and observation. After two years a focus group discussion was then held among the different stakeholders to draw a consensus on the findings.

A household level unit of study was children between 12 and 23 months. The survey was done towards the beginning of the third year after decentralization. From the district census reports, it was estimated that 12 villages would provide the required sample of children in the target group. A multistage sampling technique was used for random selection of four divisions, one ward from each of the four divisions, and three villages from each of the four wards. All households in each of the villages with a child aged between 12 to 23 months were listed, identifying either the parent or guardian of the child in the household. The EPI cluster sampling technique was not used because the aim was to link the nearest facility and other community variables with child completion of vaccination schedules.

The household surveys assessed completion of the vaccination schedules among the studied children, and identified the nearest health facility. At the identified facilities, registers were reviewed to identify CHMT supervisory visits each year since 1999 (one year before the reforms). Data was also collected on the quality of EPI in the same period. Box 1 shows the EPI quality indicators studied. Qualitative data was analysed manually. Completion of EPI schedule was defined as a child between 12 and 23 months old who had received OPV3, measles, DPT3 and BCG. The respondent was asked to produce the child growth-monitoring card to verify the oral response. Quantitative data was analysed using STATA

**Box One: Health facility EPI service quality variables**

1. Number of times fuel was delivered to the facility
2. Number of supervisory visits to the facility in the past 12 months

**Whether the facility properly**

3. Properly calculated coverage population
  4. Properly use notice board
  5. Properly stored vaccines in the past 12 months
  6. Properly maintained vaccine temperature within limits in past 12 months
  7. Fridge properly worked in the past 12 months
  8. Properly kept vaccination timetable in the past 12 months
  9. Informed clients when to come
  10. Provided and completed road to health cards
- and**
11. Providers not available in case of problem
  12. Service providers felt to be helpful.

## RESULTS

Before decentralization the head of the civil service in the district was the District Executive Director (DED). The District Medical Officer (DMO) was answerable to DED on rural health services, and to Ministry of Health on district hospital. However, the DMO was an employee of the Ministry of Health. The District Cold Chain Officer (DCCO) was overall responsible for the EPI services reporting to the regional cold chain officer (RCCO) and Ministry of Health (MoH).

After decentralization, an elected district council, the highest political body in the district, became responsible for district health care functions. Also after the reforms, the DMO was de-linked from the Ministry of Health and became an employee of the District Council. Planning for EPI at district level was integrated into a comprehensive district health plan. The implementation of EPI activities i.e. supervision and delivery were also integrated in to the CHMT activities. EPI transport was put under the responsibility of the district council. Table 1 summarizes the district health care functions by performing before and after decentralization.

**Table 1: EPI Responsibilities before and after Decentralization**

Function	Period in Relation to Decentralization	
	Before	After
Managing EPI service delivery	DCCO	CHMT
Planning	DMO	CHMT, District Planning Officer, and District Council
Resource Allocation	DMO	District Executive Director and District Council
Personnel Management	DED	District Council
Supervision and Monitoring	DMO	CHMT

DCCO=District Cold Chain Officer,  
DMO=District Medical Officer,  
DED=District Executive Director,  
CHMT=Council Health Management Team

All the decentralization bodies in the local government had been established (see Table 2). But within the district health care, CHMT was the only health care decentralization body that had been formed. Members to CHMT were the District Medical Officer (DMO), District Nursing Officer (DNO), District Pharmacist (DP), District Laboratory Technician (DLT), District Health Officer (DHO), Hospital Secretary, and District Dentist (DD). One and half years after decentralization it was reported that, formation of other health care decentralization bodies like, the Council Health Board was still in the formation process.

**Table 2: Establishment of Decentralization Bodies by System and Level by March 2002**

<b>Level</b>	<b>Body</b>	<b>Within 24 Months of Decentralization</b>
<b>Local Government</b>		
Ward	Ward Development Committee	Yes
	Ward Health Committee	Yes
Village	Village Council	Yes
	Village Health Committee	Yes
<b>Health System</b>		
Ward	Health Facility Committees	No
	Facility Management Committee	No
Village	None	Not applicable
	None	Not applicable

The position of the stakeholders on the decentralization level could be expressed through acceptance of the decentralization bodies. The study then explored the perceived usefulness of the existing decentralization bodies by the stakeholders. The CHMT members (who lost power to District Council) reported that the established bodies (local government ward and village decentralization bodies) had been very useful in facilitating community participation in the control of infectious diseases. Thus they were supportive of the lower level decentralization bodies. The ward and village respondents had similar observations, and reported that the bodies had facilitated rehabilitation of a community MCH Clinic, dispensary, and promotion of Insecticide Treated Mosquito Nets (ITN), and environmental sanitation. However, their (village and ward bodies) participation was not a continuous process but only when requested. On the contrary the CHMT had no high opinion over the District Council. The CHMT was convinced that the District Council was not giving it the necessary support to perform its functions (interviews and discussions). At the same time the District Council was convinced that the CHMT allegiance to the council needed improvement. Thus, interaction between these two stakeholders was low.

Interaction among stakeholders in decentralization was important to facilitate teamwork, easy and timely communication. CHMT respondents felt that district authorities were not giving them adequate cooperation. It was also reported that there were always unjustified delays and mistrust in disbursing funds from the council, and that the procedures for requesting funds, expenditure justification, approval, and accounting, were unnecessarily bureaucratic. One request for funds from the council made three

weeks prior to the interview day was presented to demonstrate delay in fund disbursement. The council and CHMT office were hardly two kilometres apart. Thus interaction between CHMT and the District Council was a difficult one. Consequently, this negatively affected resource management especially finances.

Furthermore, CHMT reported that after decentralization EPI funding was insufficient for the stipulated monthly supervisory visits. Supervision and distribution funds came from basket funds. The basket funds were allocated to districts in proportion to the population at a rate of 0.5 US dollars per capita. The amount of funds disbursed to districts for supervision was reached after considering all supervisory requirements; hence, it was considered enough (key informant at the Ministry of Health). Interview reports from other districts revealed that several districts had different experiences. They reported regular supervisions; and that fund disbursement was smooth; they were very positive about their council. The four DEDs interviewed concurred among themselves that smooth running of the district depends on good interpersonal relationships and understanding of administrative procedures which many medical personnel were ignorant.

CHMT needed to have adequate interaction with the health care providers to sustain good quality health care provision. The CHMT and provider interaction occurred through supervision. Decentralization consequent to changes in power structures and ensuing stakeholder politics might affect the quality of supervision. Table 3 presents the number of supervisions per year before and after decentralization. Following health services decentralization, there was a 22 per cent decline in the number of EPI supervisory and delivery visits. The low interaction between CHMT and District Council led to poor management of resources. This consequently resulted into reduced supervisory visits and which in turn led to low interaction between CHMT and providers.

As mitigation to the impact of decentralization, the Ministry of Health issued a circular (Ref No. HED/51/130/PHCS/CTU/VOL.IV/74) that the former district level EPI providers (DCCO and DMCHCO) should resume their EPI functions (reversing some of the integration). A result of the Ministry of Health intervention, there was a rise in EPI visits in the following year. This shows that stakeholders' poor interaction at district level negatively influenced supervisory visits, and the Ministry of Health who had both power (financial and administrative) managed to reverse it.

**Table 3: Number of Supervisory Visits to Peripheral Facility by Year and Month\***

Year	EPI supervision visits to 5 facilities per month in each year.												Total
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec	
1999	3	5	4	3	8	15	4	5	8	9	10	7	81
2000**	5	6	2	2	5	14	8	6	2	5	4	4	63
2001	5	3	5	6	14	9	3	7	5	4	10	8	79

\*Source health facility registers: \*\*Decentralization started early 2000

The study also explored the interaction of the providers and the communities as beneficiaries of EPI services. In-depth interviews and discussions were done to understand the position of communities as far as EPI services was concerned. It was concluded that the communities (who were also primary stakeholders) had no high support of EPI services. One respondent recalled an occasion when they had informed and planned with ward and village authority to go and mobilize people for an immunization day. On arrival in the village, the authority had instead mobilized the community to perform a traditional ceremony to cleanse the village of bad spirits, which they might have considered more important.

The consensus that communities had no high support for EPI was further explored in a household survey to determine EPI coverage. Among the 640 households surveyed, 641 children in the targeted age group were identified, of whom the proportion that had been completely vaccinated was 52.8 per cent (95 per cent CI 48.9-56.6). Antigen coverage varied, showing that the leading antigen coverage was BCG at 93.9 per cent, and measles having the least coverage at 53.6 per cent (Table 4).

**Table 4: EPI Coverage by Antigen in Study Sample n=641in 2001**

<b>Antigen</b>	<b>per cent age Completing Schedule</b>
BCG	93.9
DPT1	94.5
DPT2	88.2
DPT3	79.8
OPV1	87.5
OPV2	80.4
OPV3	70.7
Measles	53.6
Completed Vaccine Schedule	52.8

Logistic regression analysis of quality indicators of EPI services revealed that the fewer number of supervisory visits and improper maintenance of vaccine temperature predicted a significant ( $p<0.05$ ) reduction in the odds ratio (OR) of completing vaccination. Another factor that had significant impact was properly working fridge. This factor increased significantly ( $p<0.05$ ) the odds ratio of completing



vaccination. When the community felt that a provider was not available when needed it as well predicted a significant ( $p < 0.05$ ) reduction in odds ratio of completing vaccination (Table 5).

**Table 5: Logistic Regression Analyses on Completion of Vaccination by Quality Parameters for EPI Services**

<b>Quality Factor at Nearest Facility</b>	<b>OR</b>	<b>SE</b>	<b>P-value</b>	<b>[95per cent CI]</b>
1. Number of fuel deliveries	1.28	0.18	0.083	0.96 - 01.71
2. *Supervisory visits past 12 months	0.78	0.08	0.024	0.63 - 00.97
3. Properly calculated pop coverage	1.04	0.31	0.896	0.57 - 01.88
4. Properly uses notice board	0.63	0.64	0.650	0.08 - 04.62
5. *Properly stores vaccines past 12 months	5.16	2.40	0.000	2.07- 12.85
6. *Properly maintained vaccine temperature past 12 months	0.05	0.06	0.022	0.00 - 00.66
7. Fridge properly worked past 12 months.	5.95	7.02	0.131	0.59 - 60.20
8. Properly kept vaccination timetable past 12 months	2.37	3.82	0.590	0.10 - 55.61
9. Services providers felt to be helpful	0.40	0.27	0.170	0.11 - 01.50
10. Informed clients to come again	0.77	0.44	0.657	0.25 - 02.39
11. *providers not available in case of problem	0.34	0.17	0.040	0.12 - 00.95
12. Properly completed health cards	1.61	1.49	0.607	0.26-09.90

\*Statistically significant at  $p < 0.05$

OR=Odds Ratio, SE=Standard Error, CI=Confidence Intervals

## **DISCUSSION**

The study demonstrated that CHMT as stakeholders in the study district had shown an initial opposition to decentralization. It was also unfortunate that the District Council was not able to positively manage the reaction of the CHMT. This consequently resulted to low supervision visits due to poor resource management. The poor interaction between stakeholders manifested immediately after the start of decentralization. This was exemplified by poor interaction between CHMT and providers, which influenced to some extent, the poor quality of EPI services. The poor quality of services made the

interaction of communities and EPI providers also low. Thus as a result communities as important stakeholders had low support to EPI.

The study identified initial district level problems related to stakeholders' response. The identified problems were delayed formation of decentralization bodies, inadequate cooperation from the district council, delayed expenditure approval, and shortage of funds. The immediate period after the EPI reforms was followed with reduction in the number of supervisory visits through which vaccines and related inputs were distributed. The reduction in supervisory visits led to fewer contacts between CHMT and providers. This could explain the negative provider behaviours such as non-availability, poor communication etc. Perception that providers were not available when needed statistically significantly ( $p < 0.05$ ) reduced the probability of completing EPI vaccination. This behaviour reflected low morale of EPI providers in the periphery. The morale of the service providers as well as the quality of the EPI services negatively affected the communities as primary stakeholders. Subsequently, the EPI coverage decreased to less than 53 per cent compared to the pre-decentralization national average of 80 per cent in the 1990s. Thus the stakeholders' immediate response to decentralization was not in favour of sustaining or improving the performance of EPI.

Decentralization to lower levels was to be achieved through community participation and consequently meeting the objectives of the health system. The increased participation and local political environment would lead to increased EPI utilization and hence coverage. In low-income countries as Tanzania decentralization has been observed to be associated with increased EPI coverage as a result of the local political system (Khaleghian, 2003). However, there was delayed formation of the district health board, health facility and village health committees, and community participation in the health system remained low. Thus further delaying community participation as well as that of other stakeholders.

The decentralization of health care through local government meant that CHMT had to be responsible to the local government through the District Council as the highest body (Ministry of Health, 1998a). The immediate CHMT response was to oppose the transfer of authority to the District Council, as was manifested by the problems like, poor accountability, poor communication, and cooperation between CHMT and the council. As observed elsewhere such problems delayed disbursement of funds leading to apparent shortage of resources, and therefore defeated the decentralization objective of improving the resources availability and disbursement to achieve desired goals (World Health Organization, 1981).

Strategies would then be needed to improve communication between the stakeholders who in this case included the CHMT and the Council and also their understanding of regulations and procedures. Whereas some districts could manage EPI with the same resources per capita others were not able. This suggested that both geographical and human factors contributed differently to the prevailing EPI situation. CHMT forms an important component of the human factor. Thus further training in planning, resource allocation, implementation, and monitoring, and overall management would be an advantage. Training CHMT to improve management skills has long been proposed as part of the ongoing health sector reforms (Gilson *et al.*, 1994b; Gilson & Mills, 1995). Since Tanzania has more than 120 districts, which might make it difficult for centralized training, it would be more practical to strengthen the regions to provide districts with backstopping services. Notwithstanding the importance of the acquisition of management skills, it should be noted that this would take time and calls for gradual decentralization as was observed in China (Tang & Bloom, 2000).

Stakeholders' oppositions to reforms are expected, common, and complicate management of health care. Decentralization of health care including EPI was expected to improve the quality of these services (Bryant, 1999; Tang & Bloom, 2000). It took place within the context that EPI services had previously attained good coverage and with positive impact on the health of the people (Amin, 1996). The success of EPI depended in part on good management of the programme at each level from the centre to the district level (Woodall, 1988). The EPI success could then be used as evidence to oppose the decentralization process, maintain the vertical nature of the programme, and to justify reversing the decentralization. Instead one should understand the strategies behind the success of EPI and apply them to for the success of decentralization and integration of health care.

Prior to decentralization, EPI was being financed from the centre. After decentralization, funds to meet the cost of health activities at district level including that of EPI were under the authority of the district council. The transfer of authority over funds to the district council had a high potential of being opposed by the CHMT members. The claim that funds were not adequate could be a manifestation of stakeholders' opposition to the transfer of authority. However, it could also be lack of experience to implement basket fund budgeting. Another manifestation of stakeholders, opposition of the transfer of authority could be through giving less priority to EPI activities and translating to low quality of implementation. A similar situation allocating fewer resources and less attention to a formerly vertical programme has been reported elsewhere (Hanson, 2000). Managing the decentralization process could be more successful if strategies to increase management skills through stakeholders' analysis were made available at district level.

Inadequate funds to conduct outreach services call for exploration of other sources of funds. Such sources include enhancement of community participation through creation of the facility committees. Community participation has been used to implement various projects with remarkable success (Rifkin, 1987; Tanner & de Savigny, 1987; Garfield, 1999; Snow *et al.*, 1999). However, communities as stakeholders have to be positively motivated to participate.

Supervision was/and is a very important management function; it ensured that quality of service was maintained (Atherton *et al.*, 1999). EPI supervision was to be integrated into the functions of the CHMT, and the tasks to be accomplished included training, cold chain check, and data collection. The analysis found that the frequency of EPI visits to health facilities decreased immediately after decentralization but reversed when the ministry decided that DCCOs had to resume their EPI functions. Formerly, DCCOs had, at their disposal, permanent well-maintained vehicles to be used for EPI supervisory visits. With decentralization EPI transport was integrated into the district transport pool, EPI supervision was expected to follow regular supervision schedule, and has to be planned within the CHMT implementation schedule. It is clear then that the decentralization undermined the interests of some stakeholders, while strengthening that of others. However the Ministry's administrative power reversed the process to status quo. Thus stakeholder with strong positions and high power with strong technical interests reversed the process.

The study suggested that strategies were needed to address the post-decentralization declines in EPI coverage resulting from the deteriorating quality of EPI services at health facility level. The relationship between vaccination coverage and management quality of EPI services has been documented and emphasized (Robertson *et al.*, 1992; Levin *et al.*, 1999). Such strategies should focus initially on improving the CHMT relations with District Councils and performance of CHMT and health facilities. Thus there was a need to analyse and consequently positively align stakeholders at the district level.

## CONCLUSION

The analysis identified a marked decrease in the EPI coverage immediately to post-decentralization, and attributed this situation to declining quality of EPI services, due to delayed and inadequate financing, poor cooperation between the council and CHMT, demoralized health service providers, decreased supervision and distribution of vaccines and related inputs. Strategies should be put in place to streamline positive stakeholders' alignment. This would facilitate improved relations between CHMTs and District Council, the performance of CHMT and health facilities. It should include training of CHMT and other health service providers to develop skills on planning and implementation of health services, communication, negotiation, accountability, and involvement of communities.

## REFERENCES

- Amin,R. (1996) Immunization coverage and child mortality in two rural districts of Sierra Leone. *Soc Sci Med*, **42**, 1599-1604.
- Atherton,F., Mbekem,G. & Nyalusi,I. (1999) Improving service quality: experience from the tanzania family health project. *International Journal for Quality in Health Care*, **11**, 353-356.
- Bryant,M. (1999) Planning for and within Decentralized Health Systems. *Myths and Realities About the Decentralization of Health System* (ed. by R.Kolehmainen-Aitken), pp. 11-26. Management Sciences for Health (MSH), Boston.
- Cheema,G.S. & Rondinelli,D.A. (1997) Decentralization and Development Conclusions and Directions. *Africa's Changing Markets for Human and Animal Health Services: The New Institutional Issues*. (ed. by D.K.Leonard), pp. 295-315. African Studies Center, California.
- Conn,C.P., Jenkins,P. & Touray,S.O. (1996) Strengthening health management - experience of district teams in the Gambia. *Health Policy and Planning*, **11**, 64-71.
- Conyers,D. (1983) Decentralization: the latest fashion in development administration? *Public Administration and Development*, **3**, 97-109.
- Garfield,R. (1999) Malaria control in Nicaragua: social and political influences on disease transmission and control activities. *Lancet*, **354**, 414-418.
- Gilson,L., Kilima,P. & Tanner,M. (1994) Local government decentralization and the health sector in Tanzania. *Public Administration and Development*, **14**, 451-477.
- Gilson,L. & Mills,A. (1995) Health sector reforms in sub-Saharan Africa: lessons of the last 10 years. *Health Policy*, **32**, 215-243.
- Hanson,S. (2000) Health sector reform and STD/AIDS control in resource poor settings-- the case of Tanzania. *Int.J.Health Plann.Manage.* **15**, 341-360.

- Khaleghian,P. Decentralization and Public Services: The case of Immunization. World Bank Policy Research Paper 2989, March 2003. 2003.
- Leighton,C. (1996) Strategies for achieving health financing reform in Africa. *World Development*, **24**, 1511-1525.
- Levin,A., Amin,A., Rahman,A., Saifi,R., Barkat-E-Khuda & Mozumder,K. (1999) Cost-effectiveness of family planning and maternal health service delivery strategies in rural Bangladesh. *International Journal of Health Planning and Management*, **14**, 219-233.
- Mayhew,S. (1996) Integrating MCH/FP and STD/HIV services - current debates and future directions [review]. *Health Policy and Planning*, **11**, 339-353.
- Milewa,T., Valentine,J. & Calnan,M. (1998) Management and active citizenship in Britain's reformed health service: power and community in an era of decentralisation. *Soc Sci Med*, **47**, 507-517.
- Ministry of Health . Health Sector Reform Programme of Work 1998/99 - 2000/2001 (Draft). 1-84. 1997. Dar es Salaam, Tanzania, MOH.
- Ministry of Health . Health Sector Reform - Programme of Work (POW) July 1999 - June 2002. 1-113. 1998. Dar es Salaam, Tanzania, MOH.
- Mwale,G. (1999) Health reform in Zambia. *Int.Nurs.Rev.*, **46**, 156-157.
- Phillips,H. (1987) The local state and public health reform in South Africa: Bloemfontein and the consequences of the Spanish 'flu epidemic of 1918. *J.South.Afr.Stud.*, **13**, 210-233.
- Reingold,A. & Phares,C. Infectious Diseases Ch 4 in. Merson MH Black RE Mills AJ. 139-206. 2001. Gaithersburg, Maryland, Aspen Publishers, Inc.
- Rifkin,SB. (1987) Primary Health Care, Community Participation and the Urban Poor: A Review of the Problems and Solutions. *Asia-Pacific Journal of Public Health*, **1**, 57-63.
- Robertson,R.L., Hall,A.H., Crivelli,P.E., Lowe,Y., Inskip,H.M. & Snow,S.K. (1992) Cost-effectiveness of immunizations: The Gambia revisited. *Health Policy and Planning*, **7**, 111-122.
- Snow,R.W., McCabe,E., Mbogo,C.N.M., Molyneux,C.S., Some,E.S., Mung'ala,V.O. & Nevill,C.G. (1999) The effect of delivery mechanisms on the uptake of bed net re-impregnation in Kilifi District, Kenya. *Health Policy and Planning*, **14**, 18-25.
- Tang,S.L. & Bloom,G. (2000) Decentralizing rural health services: A case study in China. *International Journal of Health Planning & Management*, **15**, 189-200.
- Tanner,M. & de Savigny,D. (1987) Monitoring of community health status: experience from a case study in Tanzania. *Acta Tropica*, **44**, 261-270.
- Thomas,J. & Grindle,M. (1990) After the decision: Implementing policy reforms in developing countries. *World Development*, **18**, 1163-1181.

Thorne,S. (1994) Efficiency vs. equality - health reform in Canada. *Can J Public Health*, 212.  
WHO & UNICEF . Alma Ata: Primary Health Care. 1-70. 1978.

Woodall,J.P. (1988) Epidemiological approaches to health planning, management and evaluation. *World Health Stat.Q.*, **41**, 2-10.

World Health Organization . Health Systems Support for Primary Health Care. Kleczkowski, BM,  
Elling, RH, and Smith, DL. 1981.

Zakus,J.D.L. & Lysack,C.L. (1998) Revisiting community participation [review]. *Health Policy and Planning*, **13**, 1-12.