



# **The Costs of Programmes at Selected Youth Centres in South Africa**

## **FRONTIERS/Family Health International**

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## SUMMARY

Youth centres offer reproductive health care as one of many services, including those for recreation and vocational training. To gain a better understanding of the role that Youth Centres play in meeting the reproductive health needs of adolescents in South Africa, a study was recently completed that reviewed the functioning, quality of care and utilization of a sample of 12 youth centres from three different programmes: loveLife, UNFPA-DfID Youth Adolescent Reproductive Health Programme (YARHP), and the KwaZulu-Natal (KZN) Provincial Department of Health (DOH). As part of this study, a cost analysis was undertaken at eight of these youth centres (two from loveLife, two from the KZN DOH, and four from YARHP), which compared the productivity of the youth centres in providing the services necessary for behaviour change. The objectives of this study were to provide policymakers, programme managers and donors with costing information to help in decisions about making youth centres function more efficiently, and about deciding which models should be replicated. The analysis determined the total cost of running each youth centre, including the costs of producing each of the centre's programmes. Costs were then divided by programme outputs to determine the cost per unit of output specific to each programme.

There was considerable variation in the annual running costs of each centre, with four centres having costs greater than R500,000 (over \$62,500). There was also wide variation in the costs of different programmes – the cost per clinical visit varies from R78 to R33, and the cost per reproductive health information/life skills visit was between R11 and R145. While there was considerable variation in the routine costs of running the reproductive health programmes in the centres, the variation in the estimated numbers visiting the centres was much greater, which primarily accounts for the variation in cost per visit. The study also modelled the clinical and reproductive health visit costs under different assumptions. If clinical visits are considered the ultimate output of the centres, then the total centre costs per clinical visit are considerably raised where a high proportion of resources are devoted to purposes other than providing clinical services. Nurses at the youth centres often spent less than half of their clinical service time with clients and so it is recommended that youth centres should examine staff time use and consider other activities for nurses during the slack periods.

It is apparent that if the primary purpose of the recreation and computer training is to attract youth into the centres and to motivate them to use clinical services or to get reproductive health information then this is not happening, as the clinical and recreational programmes serve different groups. It is not clear how the resources for these programmes could be better used to recruit adolescents for the clinical services. If these programmes are mainly viewed as meeting the developmental and job skill needs of adolescents, however, then the costs of these programmes should be compared with those of other organizations that have similar objectives. The role of peer educators needs to be better understood as they are a key factor associated with visits for reproductive health information/life skills. This study was not able to determine the most cost-effective youth centre model for improving reproductive health as it provides information on costs and productivity only, and to address this issue further research is needed to include measures of change in reproductive health knowledge, attitudes and behaviour.

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## Background

Resources to improve the reproductive health of youth are limited and choices need to be made between different approaches to reaching and serving them. Within the broad approach of using a ‘youth centre’, whether to invest in comprehensive multi-service youth centres or to support programmes that have an emphasis on clinic services only is a key issue. Youth centres frequently offer reproductive health care as one of many services, including those for recreation and vocational training, an important purpose of which is to attract youth in order to motivate them to obtain and use reproductive health education and services.

There has been very little research on using youth centres improving adolescent reproductive health, however. A recent review by the FOCUS project (Pathfinder International, 2001) concluded that youth centres are not a ‘cost-effective’ way to increase the use of reproductive health services, although it should be noted that none of the studies included in the review actually included data on costs<sup>1</sup>. Research in sub-Saharan Africa has shown that most young people use youth centres for recreation rather than for counselling or clinical services (Erulkar and Mensch, 1997; Glover et al., 1998), and as recreation services take up a large proportion of the total resources they account for a large percentage of centre running costs (Phiri and Erulkar, 1997).

A study was recently completed that explored the productivity of three different youth centre models in South Africa (Erulkar et al, 2001) – the loveLife programme; those run by the KwaZulu Natal Provincial Department of Health (KZN DOH); and the DfID/UNFPA-supported ‘Youth and Adolescent Reproductive Health Programme (YARHP). Twelve youth centres were included in this study and in eight of these (chosen to be representative of each model), data on the costs of providing services were collected (see box 1). This report presents the findings from these data.

### Box 1: Description of youth centres

Centre	Type of Centre	Programmes	Staff
Sakhulutsha	Lovelife	Clinical, Recreation, Vocational, reproductive health information/lifeskills	Programme manager, nurse, two youth educators, general assistant
Kutloanong	Lovelife	Clinical, Recreation, Vocational, reproductive health information /lifeskills	Programme manager, nurse, two youth educators, general assistant
Mphambo	YARHP	Clinical, Recreation, reproductive health information /lifeskills	Programme manager, youth educator
Thlokomelo	YARHP	Clinical, Recreation, Vocational, reproductive health information /lifeskills	Programme manager, youth educator, general assistant
Moletsi	YARHP	Clinical, reproductive health information /lifeskills	Nurse, youth educator
Upington	YARHP	Clinical, reproductive health information /lifeskills	Nurse, youth educator, general assistant
Commercial City	DOH	Clinical	Three nurses, general assistant, youth educator
Empangeni	DOH	Clinical, reproductive health information /lifeskills	Two nurses, one third time each

<sup>1</sup> Only one study (Townsend et al., 1987) has provided information on the costs and effectiveness of alternative strategies to provide reproductive health services to youth in poor urban areas of Monterrey, Mexico.

Full details of each model are given in Erulkar et al (2001) but in brief they are as follows. The loveLife Y-Centres are multi-purpose youth centres combining clinical services and reproductive health education with recreation and vocational services. The centres have peer education programmes that reach youth within the centres as well as in the larger community. The YARHP centres provide similar services, although the scope of the recreation services is generally on a smaller scale than for the loveLife centres and they do not have vocational services.<sup>2</sup> The two DOH centres provide clinical services for reproductive health and no recreational services are provided. One of the two DOH centres maintains a network of peer educators that work in the community.

## Study objectives

The ultimate objective of this report is to provide policymakers, programme managers and donors with information on the costs of the different programmes to help make decisions about how to make youth centres function more efficiently and which models should be recommended for replication. Specifically, this study aimed to determine:

1. The costs of youth centre models and the distribution of costs across the various programmes;
2. The cost per visit for clinical services and for reproductive health information in different youth centre models and the relationship between the use of provider time and clinical labour costs;
3. The cost of various types of clinical visits; and
4. The impact on clinical and reproductive health visit costs of treating some recreation and computer costs as motivation to obtain clinical and reproductive health services.

## Methods

The total cost of each centre includes the costs of the resources used to produce the centre's programmes. The amount used of each resource is multiplied by the unit cost of that resource and then these costs are summed. Costs are calculated for each of the programmes provided in the youth centre. Costs are then divided by programme outputs to determine the cost per unit of output specific to a programme. A brief description of the methods used is given here; the Appendix gives more details.

**Costs:** The resources used in each centre include labour, supplies and capital. Labour costs refer to the salaries and benefits associated with using various personnel including nurses, youth educators and cleaners. The costs of supplies refer drugs and contraceptives as well as cleaning supplies and stationary. Capital costs include those items that have a useful life of more than one year so that they are used to produce services over long periods of time; this includes the building, equipment and furniture. The yearly costs associated with the use of capital are used to calculate annual capital costs for all resources.

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<sup>2</sup> At the time that information on programme costs was collected, one of the YARHP centres was being converted into a loveLife Y-Centre.

The costs of the training programmes were not disaggregated by resources used, as this would have introduced added complexity into the study; training is calculated as a single item.

Each centre was divided into programme areas, which included the following:

- **Clinical** refers to the area of the centre where clients get reproductive health services including family planning and STI services.
- **RH information/life skills**<sup>3</sup> refer to those areas of the centres where visitors may go to meet either with the youth educator or with peer educators.
- **Recreation** refers to areas of the centres in which visitors may engage in sports, participate in drama, or meet with their friends.
- **Computer** refers to the area in which visitors come to increase their computer skills.
- **Overhead** refers to shared or common areas. For example, centres may contain a manager's office, a kitchen, bathroom, or waiting areas.

The types of resources used in each programme, including those assigned to overhead, were listed and then how much of each resource was used, the cost of each resource, and how resources were allocated to different programs were calculated. Costs associated with the second stage of training peer educators that worked in reproductive health information/life skills and computer and recreation programmes were also included (information on numbers trained in the first stage was not available).

Detailed information on data collection procedures is shown in Box 2 (all costs are in rand; at the time of the study, the exchange rate was \$1 US = R8). Overhead costs were allocated in proportion to programme costs.

**Outputs:** Clearly, those visitors who receive contraception or STI services are receiving outputs that should lead to protection against pregnancy or reduction in STIs. It is not clear, however, if the use of other reproductive health services, or other non-health services at the youth centres, affect reproductive health. For example, contact with peer educators may provide youth with information and skills to improve their reproductive health, but other services are less directly linked to reproductive health outcomes and may serve mainly to motivate youth to obtain reproductive health information or services. Recreation and vocational education services, of course, serve other purposes. Following the arguments made by the FOCUS Project, the provision of contraceptive services and of reproductive health information are considered to be the only products of youth centres that may increase the reproductive health of youth.

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<sup>3</sup> Life skills training covers topics such as human physiology, sexuality, HIV/AIDS, assertiveness training, decision-making, and substance abuse. Training may be conducted by a youth educator at the centre or by trained peer educators. Some youth that receive training in life skills undergo a second round of training and become peer educators (see Erulkar et al, 2001 for more information).

**Box 2: Detailed information on data collection, costs, and allocation of resources for various programs**

		Clinical programme	Recreation programme	Computer programme	RH information/ Lifeskills programme	Overhead	Data collection method used	Cost
Line item								
Capital	Equipment	Sterilizer, exam table, sheets, blood pressure machine, scalpel	Games, TV, video, basketballs	Computers, printer, desks	Car	Desks, computers, printers, kitchen appliances	Inventory	Price paid if recent or replacement cost. Items over US\$100/ R800 annualised
	Building rent	Consultation room	Recreation areas	Computer room	Peer education hall	Programme manager office, waiting room, storage rooms	Interview with programme manager and estimation of percentage of space each room occupies of whole centre	Current rent amount or comparable amount for equivalent space
	Construction and renovation	Any construction or renovation specific to clinical programme	Any construction or renovation specific to recreation programme- basketball courts	Any construction or renovation specific to computer programme	Any construction or renovation specific to peer education programme	Any general facility construction- repairing roof, burglar doors, locks, carpets	Interview with programme manager	Receipt or estimation. Items over US\$100 annualised
Supplies		Contraceptive, drugs			Car insurance and maintenance	Water, telephone, electricity	Interview with programme manager	Price paid
Labour	Percentage of each staff's time working in each programme	Nurse	Youth educator	Youth educator	Youth educator	Programme manager, general assistant	Interview with staff or programme manager	Salary and benefits
Trainings			Basketball training	Computer training	Motivational, Million Voices, Lifeskills, Advanced		Receipts or interviews with programme manager	Amount spent for each or per diems multiplied by number of participants

Each of the clinical staff members completed a register on the number of clients they saw for clinical reasons, the reason for the visit, any contraceptives or drugs provided, and the time spent with each client. This register was maintained for a one-week period, and the information was used to calculate the average number of visits per year, by multiplying the number of visits for the one-week period by the number of weeks that the centre was expected to provide this service. This number varied according to whether clinical services were provided by more than one staff member. It was assumed that if the centre employed one nurse then services would be available for 43 weeks (allowing for annual leave and holidays) while centres with two or more nurses would provide services for 50 weeks under the expectation that nurses would take leave at different times<sup>4</sup>.

Information was gathered from a sign-out register on the number of youth who visited the centre during a one-week period for reproductive health information/life skills. Each centre was assumed to be open for 50 weeks per year; thus the number of visits obtained during the one week of data collection was multiplied by 50 (no comparable data were available from the centres on numbers that visited over longer time periods). Youth are assumed to meet with a peer educator during a visit for this reason, but it was not possible to estimate the number of contacts that peer educators made outside the centres. Nor was it possible to determine the number of active peer educators, and as the previous report (Erulkar et al, 2001) indicated great variation in the number of contacts reported by peer educators outside the youth centres, it was decided to exclude these visits in the output total. The output for the reproductive health information/life skills programme is therefore the number of youth who signed out as visiting the centre for this reason.

Although clinic visits were measured in three ways, inconsistencies were found. In some clinics, providers may not have recorded all visits during the one-week period. Some youth that contacted a nurse may have been reluctant to say that they sought out clinical services when they were interviewed. Data collected over the three-month period show very different distributions of reason for visit compared with the nurse register, and differences among clinics are great. For example, some clinics report a lot of condom visits and some do not.

The data obtained from the sign-out register may not be representative of a longer time period. It is possible that special events in the reproductive health information/life skills programme occurred at some centres but not at others, or different events occurred at different centres. Calculations of cost per visit may have been more valid if the study had collected information on reason for visiting the centre over a longer time period, and for a time period after the centres had gone through an initial start-up phase.

**Cost per visit:** The cost of both clinical and reproductive health information/life skills visits was calculated by dividing the costs by the estimated number of clients that were estimated to use these services over a one-year period. For specific types of clinical visits, the cost of resources specific to that visit was determined. The register maintained by clinical personnel gave information on the actual length of clinical visits and the amount of contraceptives or drugs received by a visitor on each visit. Labour costs per visit were divided into those associated with the visit itself (i.e. time spent with clients) and those associated with time not spent with the client. For the reproductive health information/life skills programme, only the costs of resources

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<sup>4</sup> Because the one-week period may not be representative of the number of youth that seek reproductive health services, information from the clinic registers for visits made over a three-month period in 2000 were also considered, but these data proved difficult to interpret and were not used.

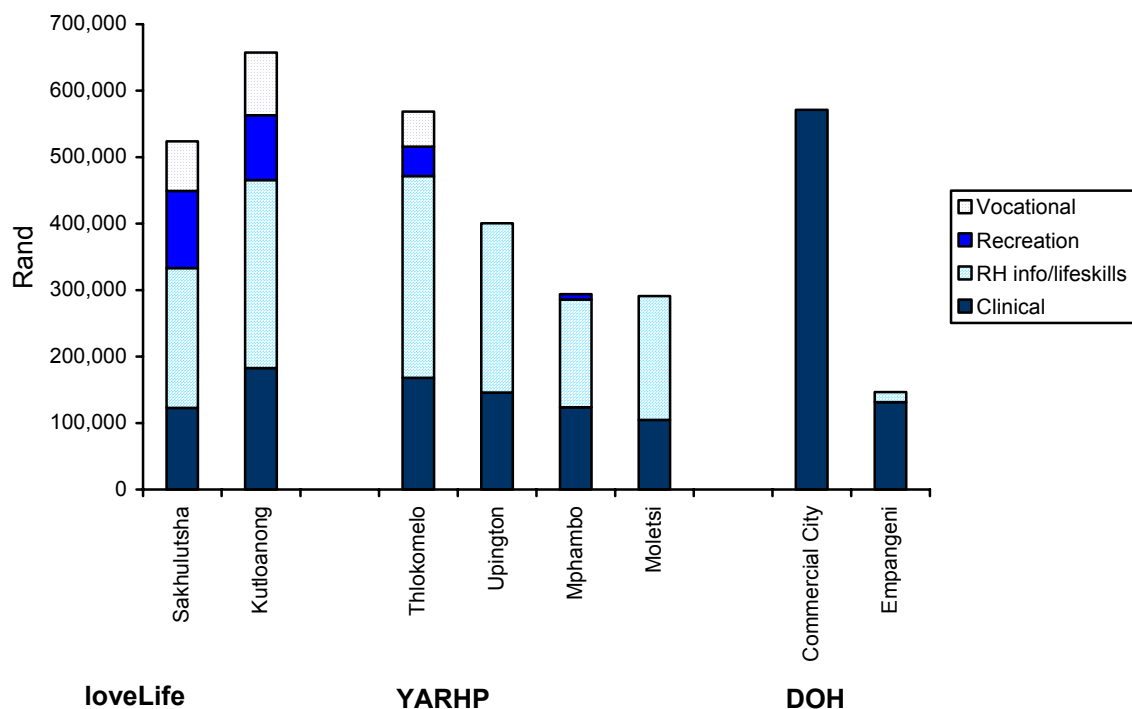
used to support the programme within the centre were calculated because data for activities outside the centre could not be obtained. Information on how peer educators said they spent their time was used to allocate costs between reproductive health programme activities within and outside the centre.

## RESULTS

### Costs

Figure 1 shows that there is considerable variation in annual costs among the centres, with the highest being the Kutloanong loveLife centre and the lowest being the KZN DOH centre at Empangeni. Four of the centres have annual costs greater than R500,000 (over \$62,500), including both loveLife centres. One KZN DOH centre has among the highest costs, while the other has the lowest costs. The other high cost centre is Thlokomelo, which is in the process of being converted into a loveLife Y-centre. The remaining YARHP centres have annual costs below R400,000 or \$50,000.

**Figure 1: Total and programme costs by centre**



There is also wide variation in the costs of different programmes. Reproductive health information/life skills programme in six of the seven centres have higher costs than for their clinical programme. The exception is Empangeni and its reproductive health information programme operates outside the centre. At the two loveLife centres and the YARHP Thlokomelo centre, the costs of running the recreation and computer programmes are at least as high as the cost of their clinical programmes.

**Figure 2: Total and resource costs by centre**

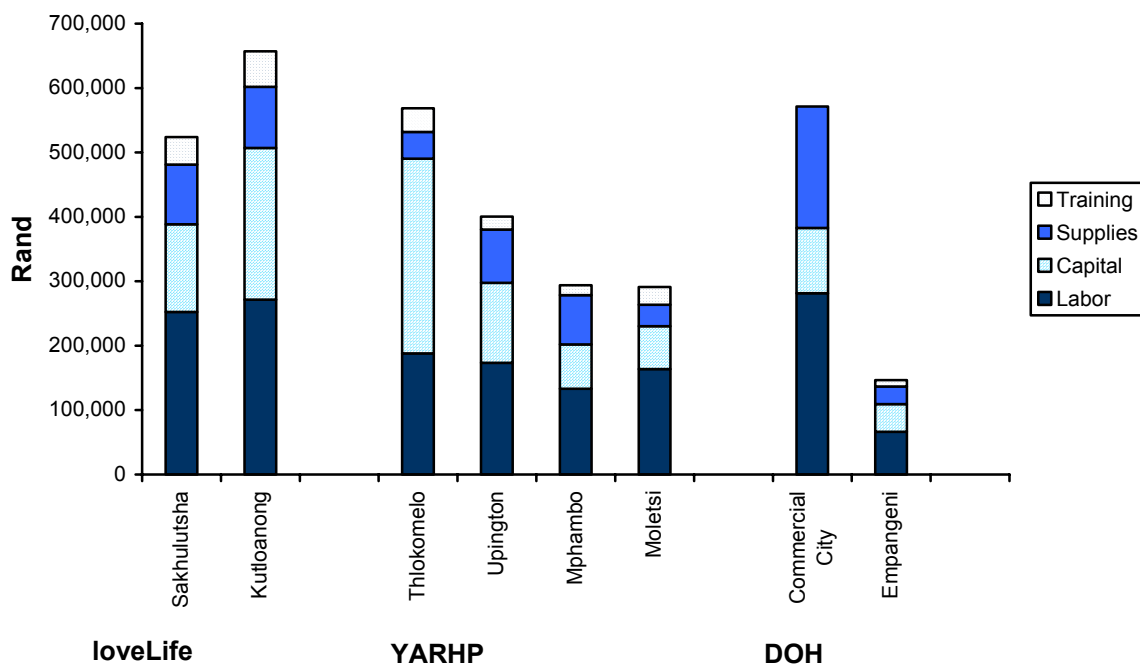


Figure 2 describes the total and resource costs for each centre. In seven of the eight centres, labour makes up the highest percentage of costs (see box 1 for the number and type of staff at each centre).

LoveLife centres have the largest number of staff. Empangeni has low labour costs because their nursing staff also provide services to older women and so not all of their labour costs are allocated to the youth centre. Capital generally accounts for the second highest costs. One reason for differences in capital costs across centres is the cost of the building, either because it is large (as is the case for Thlokomelo or Kutloanong), or because the rent is high (as is the case for Commercial City). Supply costs are also high at Commercial City because it provides many clinical visits, which include drugs and contraceptives.

## Visits for programme services

The number of youth that visit the centres and the reason for the visit varies widely, as shown in Figure 3. Youth visit the KZN DOH centres primarily to get clinic services, whereas they tend to visit the YARHP centres for both clinical and reproductive health information/life skills

(although only Mphambo has a large number of youth that come for this latter purpose<sup>5</sup>). Youth gave different reasons for visiting the two loveLife centres – they visited Sakhulutsha primarily for reproductive health information/life skills, whereas they visited Kutluanong mainly to participate in its recreation programme. Data from the other two loveLife centres also showed that youth primarily visited them for recreation purposes. It would appear, therefore, that Sakhulutsha has a very different visit pattern from that of the other loveLife centres<sup>6</sup>.

**Figure 3: Number of weekly visits for each centre from sign-out register**

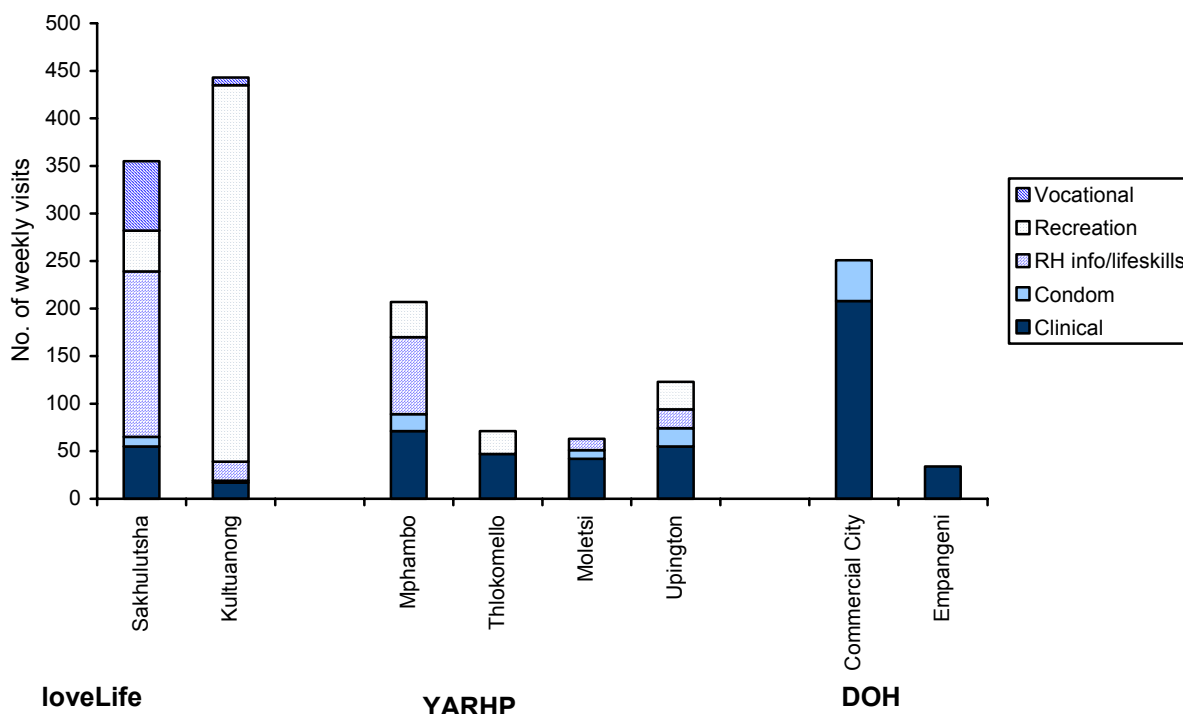


Table 1 describes estimates of the annual number of visits that were made to each centre to obtain clinical services or to participate in the reproductive health information/life skills program. These numbers become the denominators to calculate costs per visit. There are discrepancies between the nurse registers and the sign-out registers in the numbers that visited to obtain clinical services, with the number generally larger in the nurses' register than in the sign-out register. The difference is especially great for Kutluanong. Youth may have been reluctant to say that they visited a centre to get clinical services, but this does not explain the discrepancy for Empangeni, which provides only clinical services within the centre.

<sup>5</sup> Youth visiting centres to meet with friends are categorised as recreation visits; thus Upington has visits for recreation but does not have a recreation program. Coming to obtain condoms does not involve a visit to the clinic and so are not recorded.

<sup>6</sup> During the week of data collection, the number of youth reporting that they visited for life skills reasons was very high at two of the four loveLife centres (one of which was Sakhulutsha) and it is possible that these centres ran programs to train peer educators during this particular week.

**Table 1: Estimated annual visits by programme by centre**

	Clinical Services	Reproductive health information/lifeskills
<b>LOVELIFE</b>		
Sakhulutsha	3,225	9,200
Kutloanong	2,967	1,100
<b>YARHP</b>		
Thlokomelo	2,150	*
Upington	2,666	1,950
Mphambo	3,968	4,950
Moletsi	1,591	1,050
<b>DOH</b>		
Commercial City	10,950	NA
Empangeni	2,450	**
* Costs reported but no visits made for reproductive health information/lifeskills inside centre. ** Empangeni's programme is based outside of centre.		

Table 2 combines the data on visits and costs and shows the unit cost of clinical and reproductive health information/life skills visits for each centre<sup>7</sup>. The cost per clinical services visit varies from a high of R78 at Thlokomelo to a low of R33 at Mphambo or by a factor of about 2.5. Five of the eight centres have costs per visit within the range R52-R66.

**Table 2: Cost per visit for Clinical and reproductive health information/lifeskills programmes by centre**

	Clinical Services	Reproductive health information/lifeskills
<b>LOVELIFE</b>		
Sakhulutsha	38	11
Kutloanong	62	145
<b>YARHP</b>		
Thlokomelo	78	*
Upington	55	79
Mphambo	33	15
Moletsi	66	89
<b>DOH</b>		
Commercial City	52	NA
Empangeni	54	**
* Costs reported but no visits made for reproductive health information/lifeskills inside centre. ** Empangeni's programme is based outside of centre.		

<sup>7</sup> The percentage of visits estimated by peer educators to be outside the centre varied between 41-44% depending on type of centre. Therefore, up to 60% of the costs of the RH information programme are included in the estimate of costs per RH information visit to the centre.

The variation in the cost of visits for reproductive health information/life skills are greater, with lows of R11 and R15 per visit at Sakhulutsha and Mphambo respectively, and a high of R145 per visit at Kutloanong. (No calculations were made for Thlokomelo as activities in reproductive health information/life skills were just starting up at the time of this study.) While there is considerable variation in the costs of running the reproductive health programme in the centres (see Figure 1), the variation in the estimated numbers visiting the centre is much greater. These wide differences in reported numbers of visits primarily account for the variation in cost per visit. Thus, visits for reproductive health information/life skills are much higher at Mphambo and at Sakhulutsha (as shown in Table 1), but costs per visit are low because of the high number of annual visits.

It is interesting to note that in three of the five centres that have both clinical and reproductive health information/life skills programmes (excluding Thlokomelo), the cost of reproductive health information/life skills visits is higher than the cost of clinical visits. Since a clinical visit often entails getting a contraceptive method or drugs to treat STIs, it might be expected that the costs of clinical visits would have been higher. However, as noted previously, the costs associated with the reproductive health programmes are high, and in some cases the number of recorded visits was very low.

## Costs of visits for specific clinical services

Table 3 shows that there is considerable variation across centres for the cost per visit for injectable, pill and STI services. For example, a visit for an injectable costs R32 at Sakhulutsha and R73 at Thlokomelo, and the cost for a pill visit varies from R45 at Commercial City to R79 at Thlokomelo. As would be expected, STI visits are the most costly because of the drug Ciprofloxacin, which is generally provided to all STI clients.

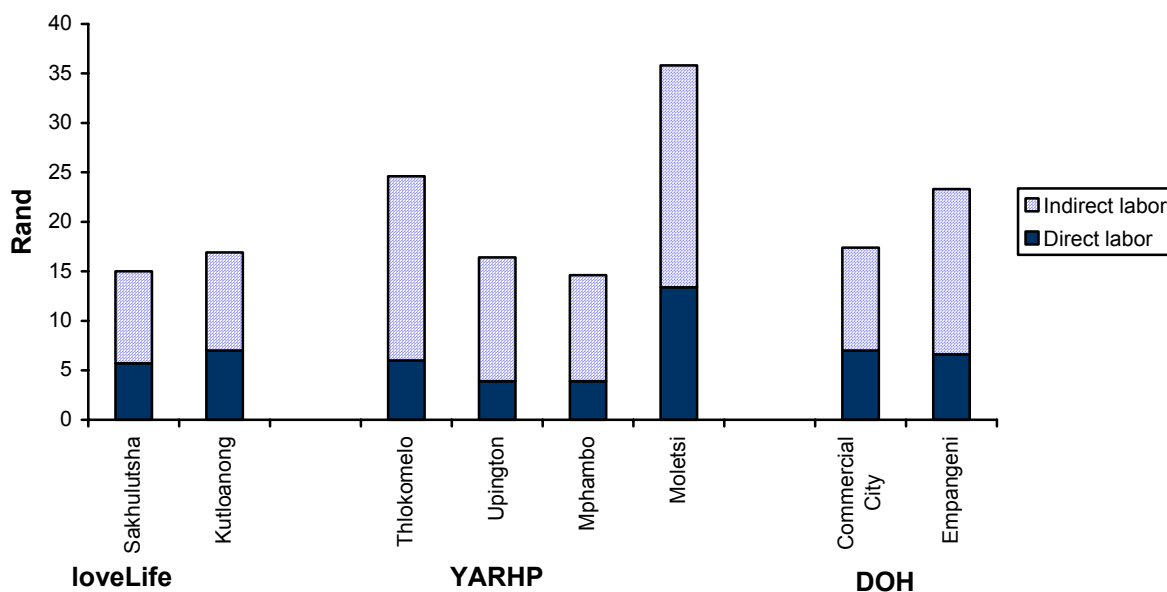
**Table 3: Estimated cost for various types of clinical visits by centre**

	Oral Contraceptive	Injectable	STI
<b>LOVELIFE</b>			
Sakhulutsha	*	32	98
Kutloanong	*	52	112
<b>YARHP</b>			
Thlokomelo	79	73	151
Upington	47	46	108
Mphambo	*	34	102
Moletsi	58	63	111
<b>DOH</b>			
Commercial City	45	44	103
Empangeni	53	51	*
* ≤2 visits during week of data collection			

Another important reason for variations in the cost of clinical visits is differences in the clinical labour cost of visits (Figure 4). Clinical labour costs per visit vary by a factor of about three,

with the lowest costs at Sakhulutsha and Mphambo and the highest costs at Moletsi. The direct clinical labour cost is the cost of time spent in contact with a client. The indirect labour cost is the cost of time associated with supporting activities, general administrative activities, and waiting time.

**Figure 4: Labour cost per clinical visit by centre**



Indirect labour costs are dependent on how services are used. Providers are paid whether or not they are busy, and if they are not busy, indirect labour costs will be high. At one extreme, if nurses spent all of their time with clients, then all clinical labour costs would be direct costs. But since indirect labour costs are high it is apparent that nurses spend a considerable percentage of clinical service time doing something other than seeing clients. For example, in no clinic are direct clinical labour costs more than 50 percent of clinical labour costs, which means that less than half of clinical labour time is spent with clients.

**Table 4: Average number of clients per day per provider by centre**

Centre	Number
Sakhulutsha	15
Kutluanong	14
Thlokomelo	10
Upington	12
Mphambo	17
Moletsi	7
Commercial City	15
Empangeni*	5

\* Providers also see older clients  
Source: Nurse register

Table 4 shows the average number of clients seen per nurse per day. Clinics in which providers see few clients per day are those in which providers have a lot of non-contact time, and so indirect labour costs are high<sup>8</sup>.

## Costs of recreational and job skills programmes

Two of the centres have significant recreation and job skills programmes while a third centre is increasing the size of these programmes. Given the discussion earlier about the ways in which these visits are expected to be associated with visits for clinical or reproductive health services, the costs of clinical and reproductive health visits were calculated under three assumptions:

- 1) The purpose of computer and recreation visits has a direct effect on improving adolescent reproductive health and is not dependent on increasing the motivation to seek out clinical and reproductive health services. In this scenario, only clinical and reproductive health costs per visit are given (as shown in Table 2).
- 2) The purpose of computer and recreation visits is two-fold: to increase reproductive health directly and to increase reproductive health indirectly by motivating adolescents to seek out clinical and reproductive health services. In this scenario, half of recreation and computer programme costs are allocated to clinical and reproductive health visits.
- 3) The purpose of computer and recreation visits is to motivate adolescents to seek out clinical and reproductive health services. In this scenario, all of these costs are allocated to clinical and reproductive health visits.<sup>9</sup>

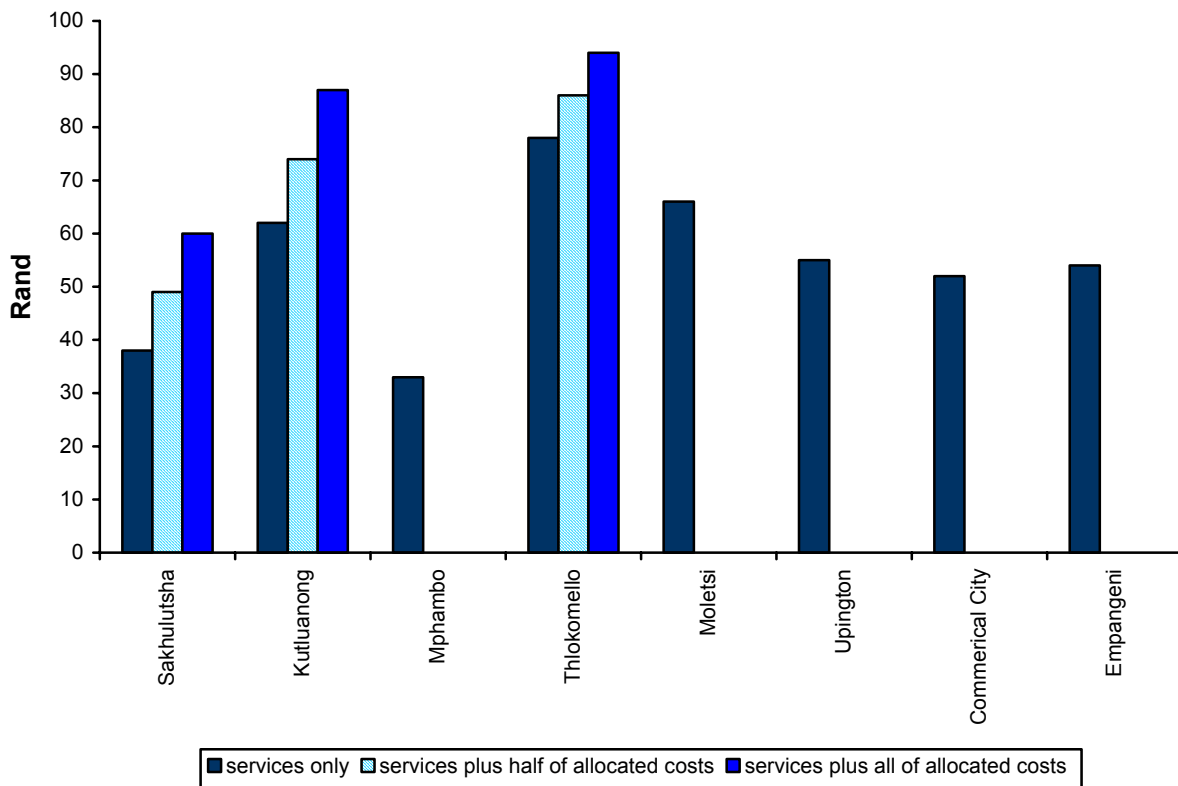
Figures 5 and 6 show the results of modelling the costs based on these three scenarios. All centres are included for ease of comparison. As shown in Figure 5, even if half of the recreation and computer programme visit costs are treated as motivation costs for reproductive health services, the Sakhulutsha loveLife centre still has low costs per visit. Under the second scenario, the cost per clinical visit for Kutluanong is now the second instead of the third highest and these costs in Thlokomello YARHP centre remain the highest. However, for reproductive health information/life skills (figure 6), the relative position of the centres remains unchanged with the second scenario.

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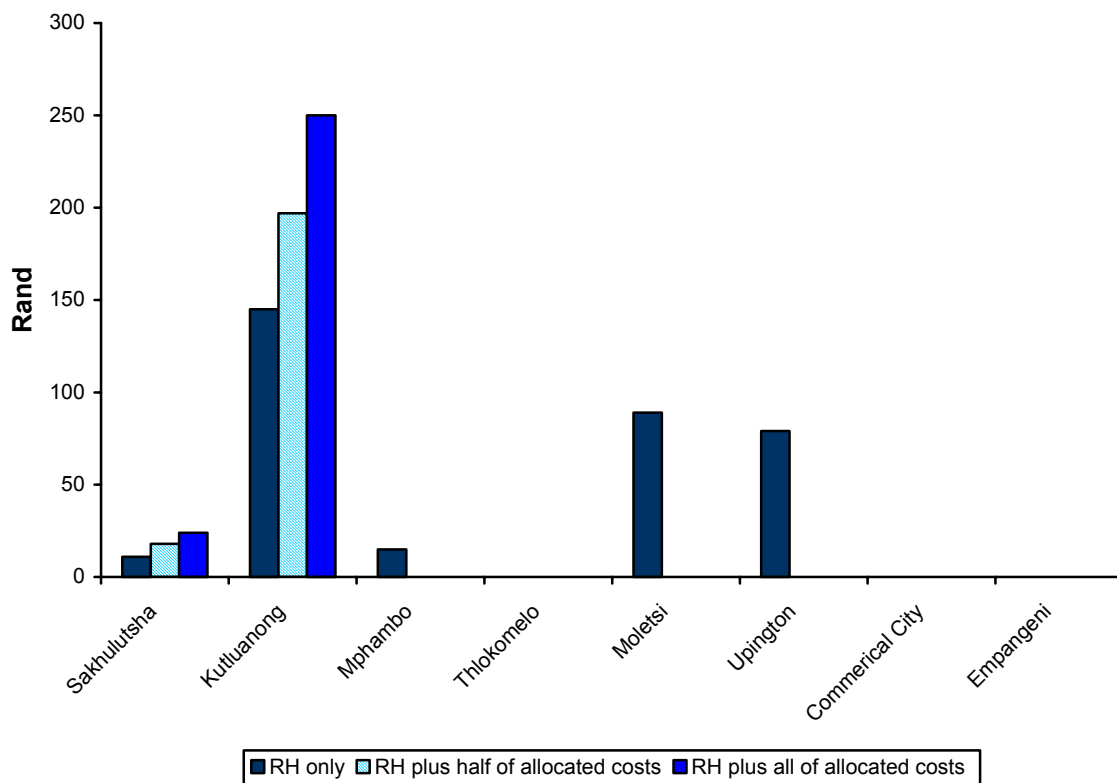
<sup>8</sup> Even if a provider sees 17 clients per day (the highest recorded), since the time spent with a client rarely exceeds 15 minutes, the total time spent with clients would be just over 4 hours. No provider spends this much time with clients, and many spend far less time with clients.

<sup>9</sup> The share of costs supported by the out-of-centre peer education programme is omitted in these calculations.

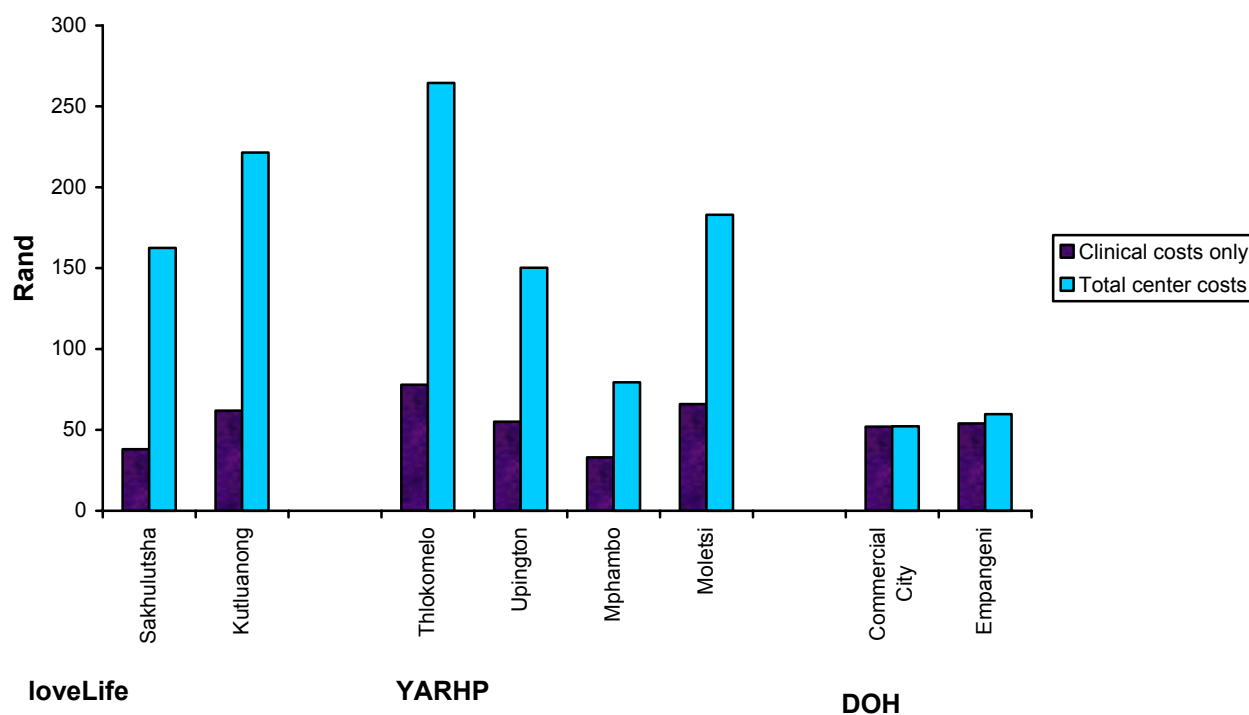
**Figure 5: Cost per clinical visit under scenarios for all centres**



**Figure 6: Cost per reproductive health information/lifeskills visits in five centres**



**Figure 7: Clinical costs per clinical visit and total centre costs per clinical visit**



As can be seen in Figure 7, if the ultimate purpose of the youth centres is to increase the number of visits for clinical services, then the total costs per clinical visit for each centre are considerably raised when a high percentage of resources are devoted to purposes other than providing clinical services. As a consequence the total centre costs per clinical visit in the non-DOH centres are much higher than the clinical costs per clinical visit.

## DISCUSSION

These results point to a number of areas that should be addressed to lower costs or increase service use in established or in new youth centres. These include changes in the reproductive health information/life skills programmes and in computer and recreation programmes, as well as better use of clinical staff.

- **The reproductive health information/life skills programme accounts for the highest percentage of centre costs for six of the eight centres (excluding the two KZN DOH centres), and most centres with these programmes have high costs per visit because few youth seek out these services.**

Reproductive health information/life skills programmes occupy a considerable amount of space in the centres and have high labour costs. While training accounts for only about 10 percent of the costs, this is probably underestimated because only the cost of the second stage of training was included. Anecdotal evidence suggests, moreover, that retention rates of peer educators are low and frequent trainings of new replacement peer educators drive costs higher.

While it may be difficult to quickly reduce some costs, for example, those for space and staff, it is possible to reduce other costs. It is recommended that training costs be reduced by more careful selection of candidates for peer educators so that the large number of training sessions

used to select educators for advanced training could be reduced. Attention should also be directed to ways of encouraging peer educators to continue participation for a minimum length of time in order to make the investment in training worthwhile and reduce the need for frequent training of replacements.

The number of visits for reproductive health information/life skills is generally low and little is known about the content of these visits. Do peer educators mainly meet with youth to encourage them to use clinic services or do they answer questions about reproductive health? Is the information that they impart to their peers about reproductive health of a high enough quality to justify the expenditures that so many of the centres are making on training peer educators and to provide reproductive health information/life skills training? As noted in the previous report (Erulkar et al, 2001) the performance of peer educators was highly variable and the information they give to young people was not consistent in terms of quality of information. The personal biases of some peer educators potentially create barriers to the provision of information and services.

Research is needed to investigate the role of peer educators both within and outside the centres, including how long they work, and the factors that affect their willingness to continue as peer educators. The programmes at Mphambo and Sakhulutsha could be contrasted with the apparently less successful ones at Kutluanong and Moletsi in order to understand the factors associated with visits to get reproductive health information/life skills.

- **Three centres, including the two lovelife centres and a YARHP centre that is being converted into a lovelife centre, have high costs for recreation and computer training programmes.**

If the primary purpose of these programmes is to attract youth into the centres and to motivate them to use clinical services or to get reproductive health information, then it is apparent that this is not happening. The centres with recreation activities attracted many repeat visitors, mainly young males. However, most clients coming for clinical services were female. Thus, the two programmes apparently serve different groups.

In only one of the four lovelife centres (cost data were collected for only two of the four centres) are there many visits for reasons other than recreation. However, it should be kept in mind that this study was carried out after some loveLife centres had been in operation for only a short time and so the number of clinical and reproductive health information/life skills visits may have increased. Research is needed to determine why the youth visit one but not the other three lovelife centres for reproductive health information/life skills.

Although the resources used to provide recreation and computer services did not appear to increase the number of adolescents coming for reproductive health information/life skills and clinical services, it is not clear how these resources could have been better used to accomplish this purpose. For example, what would be the effect if these resources had been used instead to make services at integrated clinics more youth friendly? Although it should be noted that Empangeni, the only integrated facility, did not have a high number of clients for clinical services. Perhaps more attention needs to be paid to making all clinical services youth friendly.

Given the significant costs associated with recreational and computer programmes, additional follow-up is needed to determine whether they can prove successful in drawing in youth to obtain reproductive health services. Alternatively, if the recreation and vocational programmes are expected to have a direct effect on adolescent reproductive health, then research is needed to determine how such pathways operate. If, however, the programmes are mainly viewed as meeting the developmental and job skill needs of adolescents, then the costs of these

programmes should be compared with those of other organizations that have similar objectives; for example the costs and impact of computer training programmes of loveLife and of those in the commercial sector could be compared.

- **Providers have a lot of unused time; there are periods during the day that few youth seek clinical services.**

Centres could make more efficient use of their clinical labour as much time is spent not providing clinical services. They should examine the time pattern of visits and consider finding other activities for providers during slack demand periods. For example, since this study was carried out, Commercial City Clinic has reduced the number of its nursing staff from three to two. Such a change will reduce the costs of providing clinical visits as well as the overall costs of running the youth centre.

## **CONCLUSION**

Additional research is needed to determine the most appropriate youth centre model to improve reproductive health. This study provides information on costs and productivity but does not provide information on effectiveness. Therefore, research is needed to examine the cost effectiveness of youth centres. However, obtaining information on effectiveness would require community surveys conducted within the framework of an experimental design, and such a study is expensive.

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## **APPENDIX: DETAILED DISCUSSION OF THE METHODOLOGY**

### **Costs of resources**

**Capital.** An inventory of items specific to different areas of the centre was developed and used as a guide to determine whether a centre had a particular item. For shared items, the researchers discussed with the programme manager how these items were allocated to different programmes. Items were valued using either the purchase price, if the item was purchased in 2000, or the replacement cost, if the purchase was made earlier. It was assumed that all capital goods had a life of five years and information on the discount rate at the time of data collection (10.5%) was used to reflect depreciation and the cost of tying up money (South African Reserve Bank, 2001).

The annualised value of the building was obtained in a number of different ways. Some centres rented the premises, and in those cases, the rental payment was used. Other centres used donated facilities, and a rental payment was imputed using information on rents paid for comparable space and the estimated size of the building. Space was allocated to the various programmes and to overhead using information provided by the office manager on the percentage distribution of space. Some centres upgraded, renovated, or repaired their facilities. Information was obtained on the costs of these renovations or repairs as to whether they were general (for the benefit of the total facility) or whether they were specific to one part of the facility, and used this information to allocate costs. For facilities in which some space was shared with other programmes, only an estimate of the percentage used for youth programmes was allocated to the youth centre costs. The costs of the various renovations and repairs were annualised.

**Supplies.** These fall into two categories. Some supplies (drugs and contraceptives) are specifically linked to the provision of particular services. Other supplies are for overhead, such as payments for utilities.

**Labour.** Each person working at each centre was listed and information obtained either from him or her or from the programme manager on how they allocated their time across different programmes, including overhead. We also obtained information on the salaries and benefits of each staff member. Using the information on distribution of staff time by programme and salaries and benefits, labour costs were distributed across the programmes including overhead. For one KZN DOH centre that provided integrated services to adults and youth, information on the distribution of visits across age groups was used to allocate costs specific to the youth centre programme.

**Training.** Most training programmes for peer educators (with the exception of the KZN DOH Empangeni centre) use a two-stage process; potential peer educators receive a week of training in life skills, and then the most promising candidates are selected for a second ‘advanced’ training. Planned Parenthood Association of South Africa (PPASA) provided information on the number of peer educators trained. Unfortunately, they provided information only on the numbers that completed the second stage of training, so the estimate of training costs excludes the costs associated with the initial stage. Moreover, although other costs are for 2000, PPASA provided information on numbers trained for 2001, so estimates of training costs are for a year different than estimates of other costs. The costs of other specialized trainings that occurred in 2000 were included, including that for training of peer educators in computer skills, basketball, motivational skills, and a special programme called “a million voices.”

Included in costs were those associated with per diems, food, and supplies. The costs associated with the trainer in the peer educator training programme is the youth educator at the centres, and

the cost of her time is included in the labour costs for service delivery. For other specialized training sessions, either someone from PPASA conducted the training, in which case a cost for that person was imputed, or the services of that person were contracted, in which case the payment made to that person were used. The costs of each training session were allocated to the specific programme that was expected to benefit from the training; for example, training in computers is included in computer services. Costs were assigned to each centre based on the number of persons from that centre who attended the training. The opportunity costs of the trainees were not included on the assumption that the centres could not afford this programme if peer educators were paid.

A decision was needed as to whether to treat training costs as a capital or a recurrent cost, which required information on how long trained peer educators continue working. However, this information was not available and so anecdotal information was used which indicated that peer educators generally did not work more than one year, and so training was treated as a recurrent cost.

## **Direct and indirect labour costs**

The labour cost per clinical visit was calculated by dividing total clinical labour costs by the number of visits for clinical services. Clinical labour costs were further divided into time spent with the client and time spent supporting activities or waiting for clients. Information on salaries and benefits and average work time (allowing for holidays and leave time and adjusting for daily work hours) were used to compute the cost per minute of service delivery time. This was then multiplied by the average length of a visit to obtain direct clinical labour costs. The direct clinical labour cost was then subtracted from the total clinical labour cost for a visit to give the indirect labour cost, or that part of clinical labour costs not directly linked to the provision of service.

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*The aim of the Reproductive Health Research Unit is to help develop reproductive health services as an integral part of primary health care.*

*To achieve this, the unit will:*

- *Develop models of quality reproductive health care in the primary care setting which can be reproduced in health services throughout the country;*
- *Develop appropriate training in reproductive health for all categories of health care workers, including nurses, doctors, medical students, post-graduate students and community health workers;*
- *Develop research capacity in the field of reproductive health;*
- *Use biomedical, health systems and social science research to inform the development of all aspects of reproductive health which responds to community and provider needs;*
- *Contribute to national and international policy development;*
- *Network locally, regionally and internationally and work collaboratively on a range of programmes with partners inside and outside South Africa.*