

Implementing Cervical Screening in South Africa

Cervical Health Implementation Project

National Department of Health

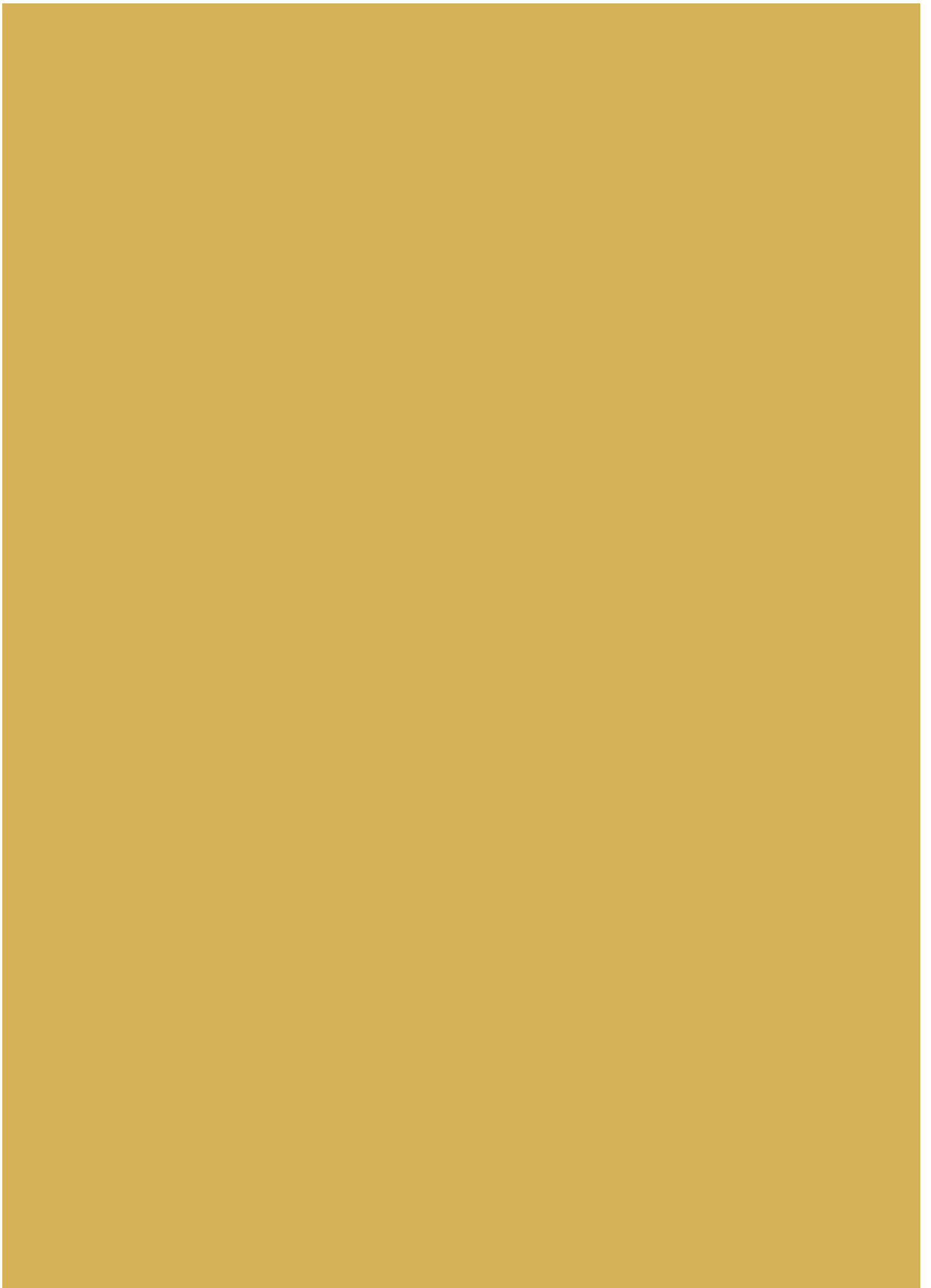
Women's Health Research Unit, University of Cape Town

Women's Health Project, University of the Witwatersrand

EngenderHealth, USA

Volume I: A Guide for Programme Managers





Implementing Cervical Screening in South Africa

Cervical Health Implementation Project

National Department of Health

Women's Health Research Unit, University of Cape Town

Women's Health Project, University of the Witwatersrand

EngenderHealth, USA

Volume I: A Guide for Programme Managers



Principal Authors

Mary Kawonga

Women's Health Project, School of Public Health, University of the Witwatersrand

Jennifer Moodley

*Women's Health Research Unit, School of Public Health and Family Medicine,
University of Cape Town*

Janet Bradley

EngenderHealth, USA

Margaret Hoffmann

*Women's Health Research Unit, School of Public Health and Family Medicine,
University of Cape Town*

Contributing Authors

Jamela Robertson

Women's Health Project, School of Public Health, University of the Witwatersrand

Pam Michelow

National Health Laboratory Services, Johannesburg Central

CHIP 2004. Implementing Cervical Screening in South Africa. Volume I: A Guide for Programme Managers. Cervical Health Implementation Project, South Africa. University of Cape Town, University of the Witwatersrand, EngenderHealth, 2004

CHIP 2004. Implementing Cervical Screening in South Africa. Volume II: A Guide for Trainers. Cervical Health Implementation Project, South Africa. University of Cape Town, University of the Witwatersrand, EngenderHealth, 2004

Material in these manuals may be freely reproduced or translated for educational or non-commercial purposes provided that the material is acknowledged.

Design and Typesetting: Walsh Design, Tel: 011 648-7644. Email: walsh-jb@iafrica.com



National Department of Health



ENGENDERHEALTH
Improving Women's Health Worldwide

Partners: National Department of Health, Women's Health Research Unit, University of Cape Town; Women's Health Project, University of the Witwatersrand; EngenderHealth, USA

Contents

Foreword	8
Acknowledgments	10
About This Guide	12
Background	12
Who Should Use This Guide?	13
Overview	13
Planning	13
Strengthening screening services	14
Strengthening cytology, colposcopy and treatment services	14
Client recruitment	15
Monitoring and evaluation	16
Introduction	8
Why We Need to Address Cervical Cancer	18
Natural History of Cervical Cancer	18
Prevention of Cervical Cancer	18
The National Guidelines for a Cervical Cancer Screening Programme	20
SECTION 1	
Planning for Cervical Screening Programmes	21
The Programme Manager's Role in Co-ordinating Services	22

Co-ordinating the components of a cervical screening programme	22
Ensuring linkages between the components of a cervical screening programme	23
Formulating a realistic and timely strategy for developing services	23
Supervision and monitoring of programme implementation	24
Stakeholder Involvement	24
Establishing an advisory committee	24
Establishing task teams	24
Rational Planning	25
Estimating annual screening goals	25
Identifying programme needs	27
Budgeting for Cervical Screening Programmes	30
Determining the resource implications of identified programme needs	30
Developing an implementation plan with a budget	33

SECTION 2

Screening Services	35
Barriers to Effective Implementation of Screening Services	36
Establishing a Task Team	36
Preparing Facilities for Cervical Screening	37
Setting screening targets at facility level	37
Using screening targets to determine staff workloads and equipment needs	38
Supplying tools and materials	39
Organisation of screening services at primary care level	39
Staff Training	40
Why train staff?	40
Planning the training	40
Implementing the training	42
Supervision and support	43

SECTION 3

Cytology Services	45
Barriers to Effective Cytology Services	46
Establishing a Task Team	47
Strengthening Communication Between Cytology and Screening Services	47
What should programme managers expect from the cytology laboratory?	47
What should the cytology laboratory expect from programme managers and clinic staff?	47
Cytology Reporting	48

The Bethesda System for reporting cervical cytology results	48
A proposed uniform cytology reporting system	49
Quality Assurance in Cytology	49
Why is quality assurance in cytology important?	49
The programme manager's role in ensuring quality assurance	50

SECTION 4

Client Management at Primary Care Level	51
Barriers to Clients Receiving Appropriate Management at Primary Care Level	52
Establishing a Task Team	52
Managing Clients after Cytology	52
Guidelines for client management at primary care level	52
Informing clients of results	53
Prioritising clients who need recall or referral	54
Record-keeping	54
Managing Clients Who Need Recall or Referral	54
A system for tracking clients who need recall or referral	55
Tracking clients who need recall	56
Tracking clients who need referral	56

SECTION 5

Colposcopy and Treatment Services	57
Barriers to Clients Receiving Colposcopy and Treatment for Pre-cancerous Lesions...	58
Establishing a Task Team.....	58
Referring Women to Colposcopy and Treatment Services	59
Defining referral pathways	59
Facilitating colposcopy clinic appointments.....	59
Referring Women for further Evaluation and Management	59
Treatment Options	59
Treatment for precursor lesions.....	59
Treatment for invasive cancer	60
Ensuring Feedback from Colposcopy and Treatment Services	60

SECTION 6

Client Recruitment	61
Barriers to Women's Participation in Cervical Screening.....	62
Establishing a Task Team.....	62
Setting Up an IEC Programme	62
Defining key messages for IEC programmes	63

Identifying information dissemination strategies	63
IEC materials	63
Client Recruitment in Health Facilities	65
Avoiding missed opportunities for cervical screening	65
Client counselling	65
Client Recruitment in the Community	65
Community launch	66
Distribution of IEC materials in the community	66
Information dissemination via the mass media	66
Peer education programmes	66
Cancer hotline	67
Timing of IEC Initiatives	67

SECTION 7

Monitoring and Evaluation	69
Barriers to Effective Monitoring and Evaluation of Cervical Screening Programmes	70
Information Required for Monitoring and Evaluating Cervical Screening Programmes ..	70
Establishing a Task Team	71
Setting Up a Cervical Screening HIS	71
Principles of the cervical screening HIS	72
Monitoring and evaluation indicators	72
Tools for collecting and collating data at health facility level	72
Other sources of cervical screening data	73
Using Information to Monitor and Evaluate Cervical Screening Programmes	75
Commonly Used Terms	78
Abbreviations	81
Appendices	83
Appendix A: Facility Planning Tool	84
Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes ...	87
Appendix C: Cytology Request and Report Forms	93
Appendix D: Client Management Guidelines	95
Appendix E: Letter Informing Client of the Need for Colposcopy	96
Appendix F: Client Tracking Cards	98
Appendix G: Feedback Letter Informing Staff at a Screening Facility About Clients Who did not Keep their Colposcopy Appointments	100
Appendix H: Feedback Letter Informing Staff at a Screening Facility of the Outcome of a Client's Visit to the Colposcopy Clinic	101

Appendix I: Process Indicators for Monitoring and Evaluating Cervical Screening Programmes	102
Appendix J: Pap Register	103
Appendix K: Tools for Collating Data from a Pap Register.....	104
Appendix L: Tool for Collating Data from a Special Annual Review to Assess Average Results Turn-around Time	106
Appendix M: Tools for Collecting and Collating Data for a Special Annual Review to Assess HSIL Treatment Rates	107

Foreword

Every year, in South Africa, many women die from cervical cancer. Though it is a preventable disease, sadly cervical cancer continues to cause needless suffering and death amongst women in the prime of their lives. We know from research and experience that well implemented organised national cervical screening programmes can significantly reduce the morbidity and mortality attributed to cervical cancer. However, previous cervical screening programmes have had little impact, largely due to inequitable access to health services.

Cervical cancer prevention is therefore a priority reproductive health intervention. To address this important public health problem, the National Department of Health approved the National Cancer Control Programme (NCCP) as South African health policy in 1999. We launched the National Guidelines for a Cervical Cancer Screening Programme in 2000. Every asymptomatic woman over the age of 30 should have 3 free Pap smears during her lifetime, with a 10 year interval between the Pap smears.

The challenge facing the Department is translating this policy into action. A cervical cancer national advisory committee was therefore established to develop a national strategy for the implementation of a national cervical cancer screening programme. All 9 provinces are represented on this inter-disciplinary committee, which includes reproductive health programme managers, academics, researchers, clinicians, laboratory personnel and relevant national NGOs. The advisory committee has been working very hard to develop an implementation strategy, which will provide a national framework for cervical screening implementation. The Cervical Health Implementation Project (CHIP), a national research initiative aimed at strengthening cervical screening services in this country, has also been working to develop relevant and context-specific recommendations to guide programme implementation.

The National Department of Health also welcomes publications that will help to bridge the gap between policy and programme development and implementation. These guides, if implemented accordingly, will result in improvement of women's health and reduction of suffering and isolation of many women in South Africa. Let us all work together in a co-ordinated manner to ultimately eradicate preventable reproductive health cancers, especially cancer of the uterine cervix.



Dr E Mhlanga

*Chief Director: Maternal, Child and Women's Health and Nutrition
National Department of Health, Pretoria*

31 March 2004

Acknowledgments

This guide is a product of the Cervical Health Implementation Project (CHIP), a collaborative project of the Women's Health Research Unit (WHRU) of the University of Cape Town, the Women's Health Project of the University of the Witwatersrand and EngenderHealth, USA. This project was undertaken as part of the Alliance for Cervical Cancer Prevention (ACCP), with funding from the Bill & Melinda Gates Foundation, and support from the South African National Department of Health.

Key personnel in the project are:

WHRU: Jennifer Moodley, Margaret Hoffman, Vanessa Daries

WHP: Mary Kawonga, Jamela Ellen Robertson

EngenderHealth: Janet Bradley, Mark Barone

We would like to acknowledge Sharon Fonn for her vision in initiating this project.

Our thanks go to the following: Pam Michelow of the National Health Laboratory Service (NHLS) for her guidance on cytology issues, and staff of the NHLS laboratories at Garankuwa, Johannesburg (Central) and Groote Schuur, Cape Town; Lynette Denny for her assistance and enthusiastic support; Dr Trudy Smith for her assistance; the Women's Health and Genetics Directorate of the national Department of Health; staff of the departments of Health in Western Cape, Limpopo and Gauteng Provinces; staff at the regional departments of Health, and staff of the district public health facilities of Mitchell's Plain, Brakpan and Waterberg Districts.

Finally to Beverly Arendse, Sharone Beatty, Martha Jacob, Michael Klitsch, Srinath Mallikarjuna Maddur, Eleanor Marks, Nanette Rowland, and Zanele Silo for their valuable contributions.

Women's Health Project

School of Public Health
University of the Witwatersrand
PO Box 1038, Johannesburg 2000, South Africa
Contact: Mary Kawonga
kawongam@sph.wits.ac.za

Women's Health Research Unit

School of Public Health and Family Medicine
University of Cape Town, Anzio Road, Observatory
Cape Town 7925, South Africa
Contact: Jennifer Moodley
jmoodley@cormack.uct.ac.za

EngenderHealth

440 Ninth Avenue
New York, NY 10001, USA
Contact: Janet Bradley
jbradley@engenderhealth.org

About This Guide

Background

This guide for programme managers is the first of a two-volume publication that is a result of the Cervical Health Implementation Project (CHIP). The second volume (CHIP 2004. Volume II: A Guide for Trainers), is a trainer's guide, providing modules for training health care workers and support staff. Partners in CHIP include the South African National Department of Health, the provincial health departments of Gauteng, Limpopo and Western Cape, the National Health Laboratory Services (NHLS), district health authorities of Brakpan, Waterberg and Mitchell's Plain, the Cancer Association of South Africa (CANSA), the Gender Advocacy Project (GAP) and Planned Parenthood Association of South Africa (PPASA).

CHIP was undertaken in 3 pilot districts in South Africa: in Gauteng (Brakpan), in the Western Cape (Mitchells Plain) and in Limpopo Province (Waterberg). In collaboration with its partners, CHIP developed, implemented, and evaluated interventions to strengthen cervical screening services in the 3 pilot districts. CHIP interventions focussed on staff training, community education and training, and health systems development. Drawing on CHIP experiences and needs identified through evaluation of the project interventions, this guide was developed to recommend to programme managers how to develop and/or strengthen cervical screening services.

Drawing on CHIP experiences and needs identified through evaluation of the project interventions, this guide was developed to recommend to programme managers how to develop and/or strengthen cervical screening services.

Who Should Use This Guide?

In view of the shift towards a decentralised health system in South Africa, it is envisaged that district health authorities will ultimately be responsible for the implementation and integration

... it is envisaged that district health authorities will ultimately be responsible for the implementation and integration of cervical screening within the district health system (DHS).

of cervical screening within the district health system (DHS). Decentralised decision-making in this regard involves planning, budgeting, implementing and monitoring and evaluating screening services locally, but in line with national Guidelines. This guide has been designed to help district managers to plan for and implement cervical screening services according to the national Guidelines. However, recognising that progress with DHS development is happening at different paces and with varying levels of success

across the country, and that in some settings the responsibility for budgeting and resource allocation has not yet devolved to district level, it is hoped that this guide will be utilised by the appropriate level/s of management responsible for implementing cervical screening services, whether at district, regional or provincial levels.

Overview

This guide has 7 Sections. Section 1 addresses how to plan for a screening programme, and Sections 2 to 7 each address how to establish or strengthen the various components of a cervical screening programme.

Planning

There are many aspects to be considered by managers when planning for cervical screening programmes in the context of the national Guidelines. The CHIP experience shows that starting or strengthening a cervical screening programme requires good planning and management. A successful programme entails co-ordination of many different components and resources, like a jigsaw puzzle where the pieces have to fit in a co-ordinated manner. Section 1 outlines the overall steps in programme planning and management and suggests how activities and processes might be synchronised for optimal effect. For these steps to be successfully implemented, a harmonised effort is required by the various stakeholders or interested parties. Thus, programme managers need to involve these stakeholders in programme design and management. Suggestions regarding who to involve, why and how are discussed in Section 1.

The planning of any health programme should be based on a sound assessment of anticipated demands and the strengths and weaknesses of existing services. Section 1 and Appendix A provide steps for projecting demands and setting targets as well as a suggested process for assessing existing services. Though research is a luxury for many settings, Appendix B provides some tools for undertaking rapid assessments of strengths and weaknesses of existing services.

Developing and/or strengthening services to cater for more clients may add an increased financial burden, particularly for equipping more clinics to provide services, implementing community education programmes, training staff, enhancing and expanding laboratory services, and treating pre-cancerous lesions. Suggestions for how managers can identify screening programme requirements (inputs) and determine their financial implications are also suggested in Section 1.

Strengthening screening services

The majority of Pap smears will be performed at primary care level (clinics and community health centres). Thus, an important aspect of strengthening screening services is preparing primary care level facilities to provide Pap smears. This includes ensuring availability of equipment, supplies, health education materials, cytology forms, client management protocols, and tools for record-keeping. Another important aspect of strengthening services is training or re-training health providers and support staff. Whether they are providers who screen and manage clients and organise referrals or support staff who perform administrative or clerical services, they all play an important role in supporting the screening services and need up-to-date and accurate information. Section 2 provides guidance on how managers can prepare facilities for screening and plan for staff training. In the CHIP project, various training formats and content were tested to inform the development of training modules. These are presented in Volume II: A Guide for Trainers.

An important aspect of strengthening screening services is preparing primary care level facilities to provide Pap smears. This includes ensuring availability of equipment, supplies, health education materials, cytology forms, client management protocols, and tools for record-keeping.

Strengthening cytology, colposcopy and treatment services

All Pap smear specimens need to undergo cytology testing and results reported to screening facilities. Good quality cytology services are therefore essential to screen Pap smears and provide accurate results within short turn-around times. Standardisation of terminology for reporting cytology results is also essential as it is easier for staff at screening facilities to understand the results, and to manage clients appropriately and uniformly throughout the service. Section 3 highlights the importance of addressing turn-around times and quality assurance in cytology. CHIP adapted¹ the New Bethesda System for reporting cytology results to develop and test cytology reporting forms that include recommendations for the management of clients after cytology. The suggested standardised cytology reporting format is discussed in Section 3.

Studies all over the world show that cytology-based screening services often fail to effectively prevent cervical cancer because:

¹ Bethesda system adapted to be consistent with South African National Guidelines

- the need for multiple visits discourages many women from returning for their results
- active steps are not taken to inform women with abnormal smears of their test results
- women may not know when they should next be screened, or more importantly if they need to be re-screened or treated
- there are many women with abnormal cytology results who, for a variety of reasons, do not receive the appropriate management.

Ensuring that women are appropriately managed after cytology and that those who require treatment of pre-cancerous lesions do indeed get it, requires a variety of interventions including improvement of: client information; staff knowledge on what results mean; mechanisms for getting results to women with abnormal smears; referral and feedback mechanisms between clinics, laboratories and hospitals; and record-keeping and monitoring. These issues are discussed in Sections 3, 4 and 5.

Client recruitment

Screening programmes need to achieve high coverage in order to reduce the impact of cervical cancer. Even if screening, cytology and treatment services run perfectly, a programme will fail to have an impact unless enough women in the target group use the services. Sadly, not many eligible South African women have ever had a Pap smear, and the few studies that have been done show that a large number of women who do get screened are below the age of 30 stipulated in the national Guidelines. This is partly because screening is done opportunistically (on younger women) as part of family planning or postnatal visits. Education campaigns are limited as they are usually undertaken at set times in the calendar year, with little sustained effort to raise awareness of the need for cervical screening in the community or in the health

services. Furthermore, there are limited educational materials for potential clients, and some that currently exist may even contradict the provisions of the national Guidelines.

Achieving a high coverage requires increased awareness about screening amongst communities and intensive active recruitment of women in health facilities, where health workers have access to numerous eligible women on a daily basis. Section 6 emphasises how health workers should use every

Achieving a high coverage requires increased awareness about screening amongst communities and intensive active recruitment of women in health facilities, where health workers have access to numerous eligible women on a daily basis.

consultation with a woman 30 years or older as an opportunity for screening by providing her with information and offering her a Pap smear. Section 6 also discusses the importance of distributing accurate health information messages and suggests ways in which health authorities might develop or strengthen community information, education and communication (IEC) programmes in their areas.

Monitoring and evaluation

One of the fundamental tenets of screening programmes is that treatment services must be available, effective and utilised by those who need them. An essential part of any screening programme is an effective health information system (HIS) that collects basic information to evaluate the success of a screening programme. Managers need accurate and relevant information to determine whether the screening programme is achieving good coverage of the target population and identifying, and treating women with precursors. Section 7 discusses the tools and other requirements for a cervical screening HIS, including suggested indicators for monitoring and evaluating cervical screening programmes.

Introduction

Why We Need to Address Cervical Cancer

Although it is a preventable disease, cervical cancer causes a significant amount of illness and death in women in developing countries. In South Africa, cytology-based cervical screening services have been available since the 1960s, yet cervical cancer is still a major public health

Cervical cancer is the commonest cancer in women, accounting for 18.5% of all cancers, with women over 40 years of age experiencing the highest crude incidence rates of the disease. It is the leading cause of cancer deaths in South African women.

problem. It is the commonest cancer in women, accounting for 18.5% of all cancers, with women over 40 years of age experiencing the highest crude incidence rates of the disease. Cervical cancer is the leading cause of cancer deaths in South African women. Mortality rates have historically been disproportionately higher in black and coloured populations (25, 18, 10, and 5 deaths per 100,000 black, coloured, Asian and white women, respectively). More recent data indicates

that these disparities persist, suggesting that screening has had a minor impact, if any, amongst populations with limited access to screening services. The reality is that for the vast majority of women in South Africa, screening services are either not available, or where available, either do not function effectively, or are not accessed by those who need them most. A recent national prevalence survey suggests that 80% of women have never had a Pap smear previously. There is clearly an urgent need to develop and/or strengthen existing screening services in the country.

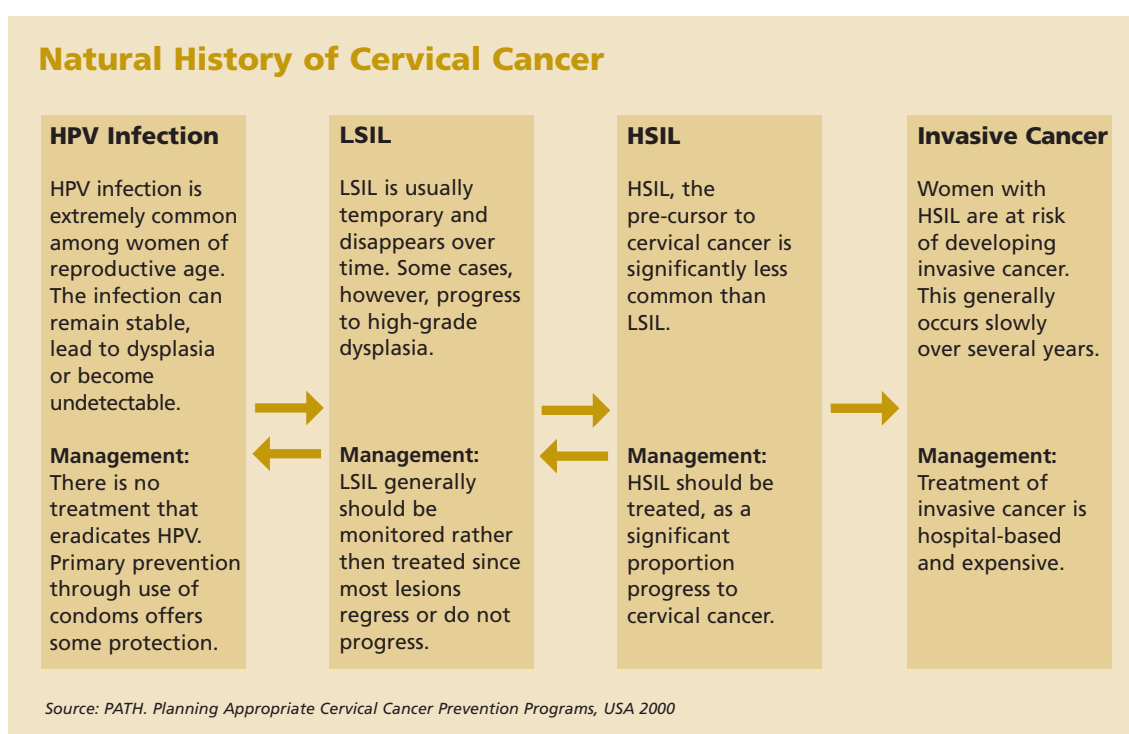
Natural History of Cervical Cancer

The primary underlying cause of cervical cancer is the human papillomavirus (HPV), a common sexually-transmitted organism that seldom causes symptomatic disease in infected individuals. Research shows that more than 97% of all cancers of the cervix are associated with persistent HPV infection. Women are most commonly infected with HPV in their teens, 20's or early 30's, but most HPV infections are transient, so not all women infected with HPV will get cervical cancer. As depicted below, should HPV infection persist, it progresses to a pre-invasive (or pre-cancerous) phase, characterised by the presence of pre-cancerous cells in the cervix (broadly called dysplasia). It may take as long as 10 to 15 years to progress through low-grade dysplasia (low-grade squamous intraepithelial lesions [LSIL] of the cervix), then high-grade dysplasia (high-grade squamous intraepithelial lesions [HSIL] of the cervix) and finally to cervical cancer. About two-thirds of cases of LSIL will regress spontaneously within 1 year, and about two-thirds of HSIL, the precursor for cervical cancer, will progress to cancer of the cervix within 10 years.

Cervical cancer is a preventable disease. The most effective and realistic prevention strategy is cervical screening, which is the early detection and treatment of pre-cancerous lesions of the cervix.

Prevention of Cervical Cancer

Cervical cancer is a preventable disease. The most effective and realistic prevention strategy is cervical screening, which is the early detection and treatment of pre-cancerous lesions of the cervix.



Studies from developed countries show that organised cervical cancer prevention programmes providing cervical screening and reliable treatment services for detected pre-cancerous lesions can significantly reduce the incidence of cervical cancer. The commonest and most well-established method for cervical screening is cervical cytology, which is currently the recommended practice in the South African public sector. Cervical cytology refers to the following process:

- Cells are gently scraped from the cervix by means of a device called a spatula.
- The cells are smeared and fixed onto a glass slide – the process of scraping cells from the cervix and smearing on the glass is called a Pap smear.
- The Pap smear is sent to a cytology laboratory to be examined under the microscope for pre-cancerous lesions.
- If identified, pre-cancerous lesions (may be of low-grade or high-grade) are reported. High-grade pre-cancerous lesions must be treated to prevent cervical cancer.

Cervical cancer is preventable because it has a long latent period and starts with a pre-invasive stage when the biological signs of pre-invasive disease are detectable by cytology and lesions are easily treated. Without early detection and treatment, 30-70% of women with high-grade pre-cancerous lesions will develop cervical cancer within 10 years.

Why Start Screening at Age 30?

1. The policy has been developed so that we can use our limited resources to get the maximum benefit for the whole population.
2. Cervical cancer is most common among women over the age of 50 years. HSIL (not yet cancer) usually starts to develop 10 years before a woman develops cervical cancer. So if we start to screen at age 30 we will pick up the majority of women with pre-cancerous lesions. These lesions can be treated and the women will not go on to develop cervical cancer.
3. As cervical cancer is not common in young women we would have to screen many young women before we find one with cervical cancer. It is better to spend our scarce resources screening those women with a much higher chance of getting cervical cancer, i.e. the older women.
4. In young women (less than 30) pre-cancerous lesions are often low-grade and get better without any treatment. If the lesions do not regress spontaneously it will still take many years before cervical cancer develops. So we will still, in most cases, be able to detect pre-cancerous lesions in these women (by screening with a Pap smear) before they go on to get cervical cancer.

The National Guidelines for a Cervical Cancer Screening Programme

The South African National Department of Health (NDOH) developed and adopted as policy the NCCP, which includes a national programme for cervical cancer screening. In 2000, the NDOH published the National Guidelines for a Cervical Cancer Screening Programme, which states that women attending the public sector services are entitled to **3 free Pap smears per lifetime starting at the age of 30 years or older, with a 10 year interval between each smear.** The goal of the national programme for Cervical Cancer Screening is: to screen at least 70% of women nationally, within the target age group, within ten years of initiating the programme. It is recommended that before embarking on any programme planning and implementation activities, managers should familiarise themselves with these Guidelines, and especially understand why the target age group for screening is 30 years or older, and why the screening interval is 10 years. The rationale for the national Guidelines is provided in the box on page 19, and below.

The national Guidelines are based on a sound understanding of the natural history of cervical cancer and on epidemiological evidence. By screening women over the age of 30 every 10 years, the screening programme aims to achieve as much reduction in cervical cancer disease and death as possible within the resources available in the country.

Why Screen Every 10 Years?

1. The policy has been developed so that we can use our limited resources to get the maximum benefit for the whole population.
2. Cervical cancer takes a long time to develop. In fact it takes 10 to 15 years to go from having a normal cervix to having cervical cancer. This means that we can screen for cervical cancer relatively infrequently and still reduce the amount of cervical cancer in the population by more than half!
3. As our resources improve we will be able to screen women attending the public health services in South Africa more frequently. The best would be to screen women every 3 years after they become sexually active.
4. Current evidence shows that the most successful programmes, i.e. those that have the greatest success in reducing disease, are those with the greatest population coverage. In South Africa, there has always been a small proportion of women (usually younger women who are at lower risk) who have had annual Pap smears, while the majority of the population has had none at all, resulting in persistently high rates of cervical cancer in the country. The policy attempts to redress this imbalance by urging health authorities to reduce the number and frequency of Pap smears per women and use available resources to increase population coverage.

Planning for Cervical Screening Programmes

SECTION 1

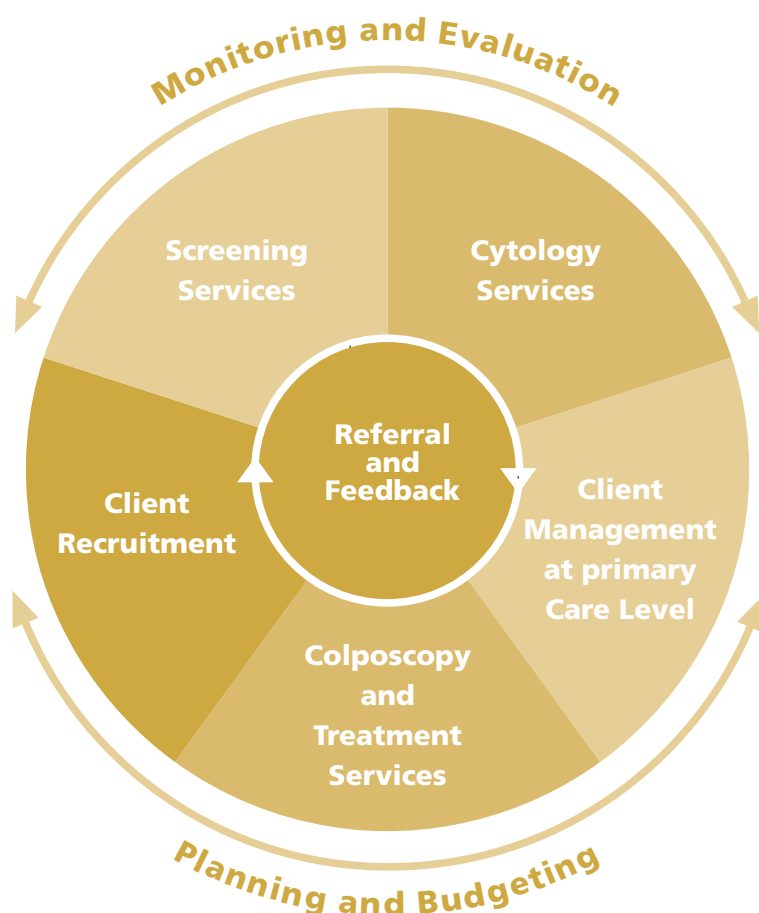


The Programme Manager's Role in Co-ordinating Services

Co-ordinating the components of a screening programme

The role of a manager in charge of cervical screening services includes co-ordinating activities and providing overall planning, management, budgetary and evaluation support to the programme. **Planning and co-ordination entails managing many different components of the screening programme at various levels of care.** Therefore, a manager must understand all the components of a cervical screening programme and how these interact. It is important to remember that a cervical screening programme requires more than just taking Pap smears (Figure 1.1).

Figure 1.1 Components of a Screening Programme



Experience has shown that for cytology-based screening programmes to function effectively, the following components should be in place, functioning and properly co-ordinated (Figure 1.1):

- Screening services – preparing health facilities for screening may include re-organising services, ensuring appropriate equipment and ensuring staff are trained to perform Pap smears
- Cytology services – addressing turn-around times, ensuring uniform cytology reporting terminology and establishing appropriate quality assurance mechanisms to optimise the quality of cytology results

- Client management at primary care level – implementing standardised guidelines for the management of all clients after cytology and establishing mechanisms for informing clients

Experience has shown that for cytology-based screening programmes to function effectively, certain components should be in place, functioning and properly co-ordinated

of results and for tracking clients who need recall for re-screening or referral for further management

- Colposcopy and treatment services – ensuring colposcopy and treatment services are available and accessible for women who need them, and establishing mechanisms for referral to and feedback from these services
- Client recruitment – creating demand for screening services by establishing an IEC programme to inform and educate men and women in communities about cervical cancer, and recruiting women in health facilities
- Monitoring and evaluation – ensuring mechanisms are in place to collect and analyse key cervical screening data for monitoring and evaluating the screening programme

Ensuring linkages between the components of a cervical screening programme

Referral and feedback linkages between screening services, cytology and colposcopy and treatment services are extremely important. Thus, even when the above components are in place, managers need to ensure that the following are developed or strengthened before screening is stepped up:

- Mechanisms for transporting specimens to cytology laboratories and reporting results back to health facilities
- Clearly defined referral pathways and mechanisms for tracking clients who require repeat smears or referral for further evaluation and/or treatment
- Feedback mechanisms to ensure primary care level facilities receive information on what happened to the clients they referred for further evaluation/treatment

Formulating a realistic and timely strategy for developing services

The timing of programme interventions is very important. **Many of the programme components can be implemented concurrently, but as a rule of thumb it is better to start with planning and budgeting, and then ensure that the systems components (screening, cytology, client management, colposcopy and treatment, referral and feedback, monitoring and evaluation) are in place before embarking on client recruitment.** There is little point in motivating women to come for screening if the staff at the health facility are not trained to take Pap smears, or if they do not have any equipment to perform Pap smears. Communities may rapidly become de-motivated when services are not available or are of poor quality. Equally, there is no point in training health workers to take Pap smears if the laboratory is

unable to process the additional smears, if there is no reliable system of sending smears to the laboratory or clinics are unable to inform women of their results in a timely manner. At the same time, it is important to ensure that equipment, referral and feedback mechanisms, monitoring and evaluation systems, client letters and client management guidelines are in place before staff are trained: it is important to conduct health worker training 'just in time'. This means that clients should be available to be served fairly soon after training lest skills be lost in the meantime. Furthermore, Pap smears should only be provided if colposcopy and treatment services are available and function effectively.

Supervision and monitoring of programme implementation

A good supervision and monitoring system must be in place to ensure programme implementation happens according to plan and in terms of the national Guidelines. Ideally, supervision systems should address services comprehensively and not focus only on one programme. Where supervision systems already exist, managers should check that they are working well and strengthen those that are not. Where no supervision systems exist, these should be established to oversee cervical screening as well as other health programmes. A supervisor's brief should include regular visits to facilities to support facility managers and staff, and to monitor implementation of screening programme components. Ideally, supervisors should have authority to make decisions to address problems identified at facility level, in consultation with facility managers and staff. Implementation problems beyond the facility level may be addressed through the relevant management structures discussed below.

Stakeholder Involvement

Because of the wide scope of cervical screening programmes, managers may have to involve various stakeholders in planning, implementation and evaluation. Stakeholders, representing all the components of a screening programme should be involved from the beginning to ensure their support and long-term sustainability of the programme.

Establishing an advisory committee

It is advisable to establish an advisory committee consisting of key stakeholders, including the following, or their representatives: reproductive health managers at district, regional and provincial levels, primary care level facility manager/s, clinician/s from referral hospital/s, cytology laboratory manager and technical staff, health promotion manager, national and local NGOs, health information systems manager, human resources or training department manager, and health providers. Ideally comprising 10 to 15 members, the committee may advise programme managers and assist in overseeing the programme. The advisory committee should preferably meet 2 or 3 times a year and report to the provincial Department of Health. Such a committee is particularly recommended where cervical screening services are weak or absent.

Establishing task teams

Smaller task groups, meeting more regularly, may be established, each addressing a specific component of the programme. For example, a cytology services task group could investigate turn-around times and laboratory quality assurance, develop and ensure implementation of

interventions for addressing any problems identified, and give feedback to the advisory committee at regular intervals. Suggested members of the various task teams are highlighted in the relevant sections of this guide.

Rational Planning

To achieve the effective programme co-ordination described above, a manager (with the involvement of the advisory committee and task teams) needs to plan rationally. Rational planning includes undertaking a number of steps, as described below.

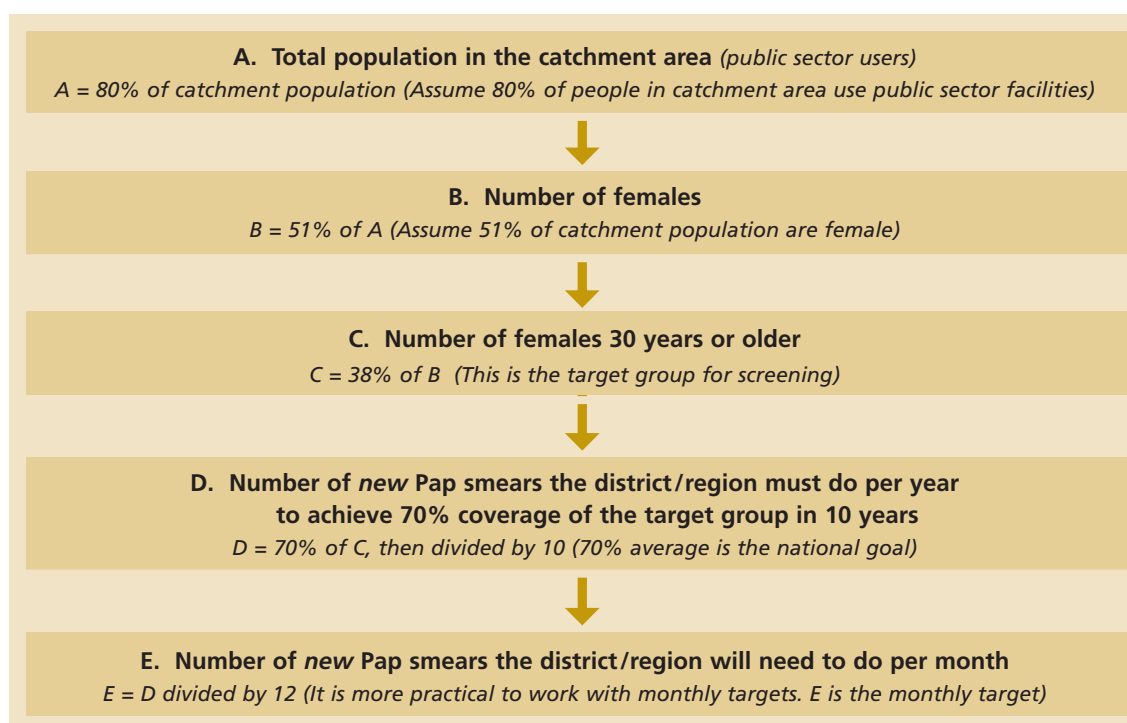
Estimating annual screening goals

A key element in planning is setting goals for the programme, specifically in terms of who the programme should screen (the target group), what proportion of the target group should be screened (the coverage goal), and how often (the screening interval).

The goal for the national cervical screening programme is to achieve **70% coverage of women 30 years or older within the first 10 years of implementation**. Thus, programme managers need to ensure that by the end of the 10th year, at least 70% of, but preferably all, women 30 years or older in their respective areas of jurisdiction have at least one screening Pap smear. At the start of the programme, managers need to estimate the number of women 30 years or older in their area of jurisdiction, and screen 70% of these women over the subsequent 10 years. During the 10 years, managers will need to regularly monitor progress towards achieving 70% coverage of the target population. An annual screening goal is required to monitor progress. The procedure for determining annual screening goals for a district or region is outlined in Figure 1.2.

Figure 1.2 Estimating Screening Goals for a Cervical Screening Programme

Using reliable data sources (e.g. census), calculate the annual screening goal for your district/region as follows:



The annual screening goal is the number of new screening Pap smears the district/region needs to do every year in women 30 or older. Every district/region should aim to achieve or exceed this number. If this annual screening goal is achieved or exceeded every year for 10 years, by the end of the 10th year, 70% or more women 30 years or older in the district/region will have been screened (the annual screening goal is approximately equivalent to an annual coverage of 7%). The box below shows how managers can use the annual screening goal to monitor progress towards achieving 70% coverage of their respective target populations.

District X has 7 primary care level facilities that provide screening. The district started its screening programme in 2001. At the beginning of 2001, the annual screening goal was set as follows, using the tool in Figure 1.2:

Total district population:	233,337
A: Public sector users	186,670
B: Number of females	95,202
C: Number of females 30 or older	36,177
D: Number of new smears must do per year in women 30 or older	2,532

Monitoring the annual screening goal:

New Pap smears **must do** on women 30 or older = 2,532

	New Pap smears done on women 30 years or older	New Pap smears done (cumulative)	New Pap smears must do (cumulative)
Year 1: 2001	400	400	2,532
Year 2: 2002	1,000	1,400	5,064
Year 3: 2003	2,600	4,000	7,596

NB:

- District X needs to perform 2,532 new smears (= 7% coverage of target group) every year in order to attain 70% coverage in 10 years.
- In year 1, district X did not meet the goal of 2,532 new Pap smears. They did only 400 new smears, which is 2,132 smears less than the annual goal. So, in year 2 they will have to perform 2,532 smears + an additional number of smears (as many as possible to reduce the shortfall).
- In year 2, the number of new smears done had more than doubled, but the district had still not achieved its annual screening goal. By the end of year 2, district X should have done 5,064 new smears, but had only done 1,400, which is 4,064 smears short of the goal.
- In year 3, district X exceeded the annual screening goal. However, by the end of year 3, the number of new smears the district had done (4,000 smears) was 3,596 smears less than they should have done by year 3. Though the goal was achieved in year 3, because of the shortfall from years 1 and 2, over the next 1 or 2 years, the district needs to exceed its annual screening goal to 'catch up'.

Identifying programme needs

It is important to identify the programme needs before implementing any interventions. Understanding the strengths and weaknesses of the existing screening programme helps to identify what interventions are required, and provides benchmarks on which to measure change. Table 1.1 suggests some issues programme managers could examine about each programme component. These are based on CHIP experiences, but there may be other issues. Depending on the setting and availability of reliable health information, the answers to these questions may already be known. Otherwise, managers may learn from other programmes or pilot projects where possible.

It may be very tempting to collect information by means of surveys. However, undertaking surveys, particularly questionnaire surveys, can be time consuming and costly, and if not done correctly, can produce information that is not very useful, and ultimately a waste of resources. Should managers decide to undertake rapid surveys to get a better picture of what is going on and to establish baseline indicators, they should do so judiciously, seeking professional or technical advice. Appendix B provides some examples of rapid survey tools that can be used for baseline assessments. These include a provider knowledge, attitude and practice (KAP) questionnaire; a health facility audit checklist and key informant interview to assess screening services at primary care level facilities; key informant interview schedules for managers of cytology and colposcopy and treatment services; and a client KAP questionnaire.

Table 1.1 Programmatic Issues to Examine in an Existing Screening Programme

Programme Component	Issues to Examine
Screening services	<ul style="list-style-type: none"> • Are services available at primary care level?² • How are services organised? • Do the services target the appropriate age for screening? • How many Pap smears per month are currently being done and how does this number compare to the monthly target? • Are there sufficient nurses properly trained to do Pap smears? • Do staff know and understand the rationale for the national Guidelines? • Are all clinics sufficiently and effectively supplied with all necessary equipment? • Are mechanisms in place to transport specimens to the laboratory? • Are there supervisors to support screening services, and are they trained to provide this support?

² Primary care level = clinic and community health centre

Programme Component	Issues to Examine
Cytology services	<ul style="list-style-type: none"> • Is there a laboratory to provide cytology services? • Do laboratories have effective quality assurance mechanisms? • Are laboratories adequately staffed? • Do laboratories use a uniform request and reporting format? • Are laboratory data capturing systems efficient? • Are means of informing clients and clinics of results effective? • Are cytology result turn-around times acceptable? • Are laboratory data usable for planning and monitoring purposes?
Client management at primary care level	<ul style="list-style-type: none"> • Are there standardised guidelines for the clinical management of screened women? • Do laboratories, clinics and treatment facilities agree on these guidelines? • Do nurses understand these clinical management guidelines? • Is there an effective system for informing women of their results? • Is there an effective system for tracking and recalling or referring women with inadequate or abnormal Pap smears?
Colposcopy and treatment services	<ul style="list-style-type: none"> • Are referral guidelines in place? • Are colposcopy and treatment services available? • Are these colposcopy and treatment services adequately staffed? • Are colposcopy and treatment services accessible (location, cost and hours of operation)? • Is the interval between smear result and colposcopy acceptable? • Are means of informing clients about colposcopy appointments effective? • Are there mechanisms for colposcopy and treatment facilities to provide feedback to screening facilities?

Programme Component	Issues to Examine
<p>Client recruitment</p>	<ul style="list-style-type: none"> • Are sufficient, good quality IEC materials available? • Do health workers in clinics and hospital out-patient departments make an effort to inform women 30 years and older about screening? • Is there a community cervical screening education strategy in place? • Are women in the community well informed about screening and cervical cancer?
<p>Monitoring and evaluation</p>	<ul style="list-style-type: none"> • Are record-keeping systems efficient and informative? • Do clinics have adequate record-keeping tools? • Are existing health information systems able to determine: <ul style="list-style-type: none"> • How many women are screened in each clinic? • Whether services are screening women of the appropriate age? • Proportion of smears deemed adequate by the laboratories? • The proportion of smears with an endocervical component? • What proportion of smears is abnormal? • What proportion of women receives their smear results? • What proportion of women referred for colposcopy actually attends? • What proportion of women needing treatment for pre-cancerous lesions gets it? • The screening coverage for the district (or area)?

As overall co-ordinator, the programme manager is responsible for ensuring that where problems are identified, the relevant task teams develop interventions to address them. The manager should ensure that interventions are implemented in line with the national Guidelines, are well co-ordinated, and that resources are available for implementation.

Budgeting for Cervical Screening Programmes

Developing or strengthening a cervical screening programme may require additional finances. Budgeting for cervical screening services is therefore another important programme management function. Depending on the setting, some programme managers may be responsible for developing their own programme budgets and allocating resources, while others may be responsible only for developing implementation plans and advocating for funds from higher levels of management. However, regardless of whether the manager is actually budgeting or merely submitting plans for funding, resource-allocation decisions must have a rational basis (based on goals and programme needs).

Determining the resource implications of identified programme needs

After identifying programme needs, managers need to determine the resource implications of addressing these needs, and assess whether what is planned is achievable with existing resources. If existing resources are insufficient, they should determine what additional resources are required and then budget or advocate for funding. However, not all programme strengthening activities require additional funding as health services may already have some human or material resources in place. Thus, only the new or additional requirements should be considered. For example, if trainers whose job descriptions include conducting in-service training are available, there would not be a need for additional funds for staff training. Other interventions that can be implemented without additional funds include guidelines for client management, improving referral and feedback mechanisms, client recruitment in health facilities, and improving record-keeping. **In many instances it may be possible to start the programme with existing resources and expand services over time – addressing priority needs first.** Table 1.2 provides a guide for how to determine additional requirements for various components of a screening programme.

Table 1.2 Determining the Cost Implications of Identified Programme Needs

<p>1. Screening services</p>
<p>Equipment and supplies – quantify and determine the cost of additional equipment and supplies required:</p> <ul style="list-style-type: none"> • Capital items <ul style="list-style-type: none"> • Examination couch • Examination light • Vaginal speculum • Steriliser (boiler or autoclave) • Swab holding forceps • Container for soiled instruments • Consumables <ul style="list-style-type: none"> • Aylesbury spatula • Glass slides • Fixative • Decontamination fluid • Gloves • Linen savers • Slide mailer • Slide marker <p>Staff training – for each cadre of staff required to provide screening services at primary care level (clinical, management and support staff) determine the number that need training (how many now and how many later) and the cost of training. Depending on the type of training and length, costs may include:</p> <ul style="list-style-type: none"> • Venue hire • Refreshments for participants • Transport and accommodation for participants • Trainer fee, transport and accommodation for trainer <p>Note:</p> <ul style="list-style-type: none"> • Where required, include the cost of recruiting additional staff to provide screening services and client management. • Most primary level facilities will already have the basic capital items required. • Determine the additional equipment needs after estimating the potential increase in client recruitment. • Ensure purchasing and delivery systems are in place to meet a potential increase in orders for consumable items.
<p>2. Cytology services</p>
<p>Cytology laboratory fee – for reading and reporting specimens. The cost per smear should be obtained from the relevant laboratory. Estimate annual laboratory fee as follows: = Cost per smear X total number of smears expect to perform</p> <p>Cytology request and report forms – quantify the number required and determine cost of printing cytology request and report forms.</p> <p>Transport – determine the cost of collecting specimens from facilities and returning results.</p> <p>Other cytology service needs – the following may not be within the programme manager's jurisdiction, but must be considered and discussed with the laboratories:</p> <ul style="list-style-type: none"> • Cost of recruiting additional laboratory personnel • Cost of additional equipment where required • Cost of implementing quality assurance mechanisms <p>Note:</p> <ul style="list-style-type: none"> • All public sector and academic institution laboratories are part of the National Health Laboratory Services and charge a fee per specimen. • Request and report forms may be included in the laboratory fee. • Where the laboratory does not have a courier service, managers need to budget for transport costs.

3. Client management at primary care level

Management guidelines posters – quantify the number of posters required and determine cost of printing and distributing these to facilities.

Transport and communication – transport may be needed for home visits to follow-up clients with abnormal smears. Communication systems such as telephone (for client follow-up) and fax (to relay results) may require additional funds.

Client referral and recall – quantify the number required and determine the cost of printing and supplying the following to clinics: client referral letters; client tracking cards; tickler boxes

Note:

- Transport and communications may be catered for within existing health budgets.

4. Colposcopy and treatment services

Colposcopy and treatment – quantify the number required and determine the cost of colposcopes, LLETZ machines and cryoprobes:

- Cost of purchasing
- Maintenance costs – include in the recurrent budget
- Cost of training providers to provide colposcopy and treatment services
- Cost of hiring additional staff to provide colposcopy and treatment services

Feedback after colposcopy and treatment – quantify number required and determine the cost of printing and supplying client feedback letters to referral facilities.

Note:

- Longer-term planning is generally required for colposcopy and treatment services.
- In the short-term, programmes may have to utilise existing staff and facilities, where available, and expand in the medium to long-term.

5. Client recruitment

IEC materials – quantify number required and cost of printing and distributing:

- Posters
- Pamphlets

Other IEC mechanisms – determine the cost of:

- Radio slots
- Training peer educators
- Purchasing peer educator manuals³
- Additional staff to act as client recruiters and health promoters

Note:

- Cervical cancer IEC materials are available from various organisations in the country.
- To save on the cost of developing new materials, managers can purchase or re-print these existing IEC materials when required.

6. Monitoring and evaluation

Data recording tools – quantify number required and cost of printing and distributing the following:

- Pap registers
- Data collation tools

Note:

- Where no HIS exists at all, it will have to be established (see Section 7).

³ Available from Women's Health Project

Table 1.2 identifies additional requirements per programme component. In order to implement an organised cervical screening programme, managers may need to consider hiring a staff member devoted to the management of all programme components. The cost of hiring such personnel needs to be included in the budget.

Developing an implementation plan with a budget

After identifying the resource implications of identified programme needs, the next step is developing an implementation plan that justifies how the requirements were worked out. For example, if the plan states 25 additional specula are required, it should also indicate the basis for this (ideally should be based on the screening goal [targets]).

- Where the manager is responsible for developing the budget, s/he can allocate a cost to the additional requirements and include that in the budget.
- Where the manager is not responsible for developing the budget, s/he can present the implementation plan with the additional requirements clearly articulated, and advocate to higher levels of management for funds.

This section highlighted the role of a programme manager in planning and budgeting for services and the importance of co-ordinating the various components of the screening programme. The most important overall principle this section addressed is that of rational planning. Programme managers are urged to actively integrate rational processes (determining goal and programme needs) into their programme planning.



Screening Services

SECTION 2



In South Africa, it is envisaged that nurses and generalist doctors will provide most Pap smears at primary care level. Programme managers are responsible for ensuring that primary level facilities are prepared to provide screening services. Preparing facilities entails working closely with primary level facility managers to: supply facilities with sufficient quantities of equipment for screening and infection prevention, IEC materials, record-keeping tools, cytology request forms, standardised client management guidelines; re-organise services to facilitate provision of Pap smears; and train staff.

Barriers to Effective Implementation of Screening Services

Studies in South Africa show that screening services are often implemented without much preparation or planning at the facility level and that many primary level facilities have limited capacity to provide screening services. Some of the barriers identified are indicated below.

Some Common Barriers to Effective Implementation of Screening Services at Primary Care Level

- No goals or targets are set, thus facility managers and staff are unaware of how many Pap smears they should be doing
- No mechanisms for identifying the appropriate equipment for screening and infection prevention
- Lack of guidelines for determining the amount of equipment and staffing required for screening services
- Insufficient equipment and supplies for screening and infection prevention
- Inadequate number of consulting rooms designated to provide Pap smears
- Clients unaware that screening services are available at facilities
- Screening services provided at set times on certain days of the week, thus limiting access to the service

Other studies conducted in South Africa identified that a lack of trained health care providers is also an important barrier to the successful implementation of screening services. The major health care provider barriers are highlighted in the box on page 37.

These barriers emphasise the importance of planning for screening services at facility level. Though facility managers are likely to take the leading role in planning at facility level, the programme manager is expected to monitor progress and provide guidance and support.

Establishing a Task Team

A screening services task team may have to be established to address the barriers highlighted above, and to support facility managers. This team, comprising facility manager representatives, procurement officers, trainers (district, regional, provincial), staff representatives, a representative from the human resource department and supervisors or local area managers, is primarily responsible for ensuring that primary level facilities are ready to provide screening services and that sufficient staff are trained.

Health Care Provider Barriers to Implementing Cervical Screening Services

- Poor provider understanding of the rationale for the national screening Guidelines, resulting in negative attitudes and reluctance to provide the service, perceiving it as 'extra work'
- Passive attitude to recruitment of older women who attend health facilities, resulting in missed opportunities for screening
- Poor provider knowledge and understanding of concepts of screening, the epidemiology and natural history of cervical cancer, and cytology results
- Few providers are trained to perform Pap smears, or the training is inadequate, resulting in a high rate of repeat smears
- Poor provider understanding of the importance of the various components of a screening service, resulting in services being poorly co-ordinated and not achieving their intended goal

Preparing Facilities for Cervical Screening

One of the first activities primary care level facility managers need to undertake in facility planning is to work out the monthly screening target for their respective facilities. Facility managers may then determine how many staff and how much equipment their respective facilities require to achieve this monthly target. A facility planning tool has been developed to assist facility managers to undertake these activities (Appendix A). Programme managers need to ensure that facility managers in their areas of jurisdiction are trained to use this facility planning tool.⁴

Setting screening targets at facility level

As mentioned previously, the National Department of Health has set a national coverage goal as: **70% coverage of the target age group within the first 10 years of implementing** the programme. Section 1 provides a tool for determining annual screening goals and monthly targets for districts or regions. For example, if the monthly screening target for district X is 300 Pap smears, the screening health facilities in that district need to collectively perform 300 new adequate Pap smears in women aged 30 or older. However, due to differences between facilities in size, staffing and equipment availability, some facilities contribute more smears than others to the total district monthly smears. Thus, a mechanism to determine a monthly screening target for each facility is required.

The facility planning tool in Appendix A has detailed explanations for working out monthly screening targets for primary level facilities. Facility managers can use the facility planning tool to determine the monthly screening target for their respective clinic catchment populations. The monthly screening target refers to the number of new Pap smears the facility needs to perform each month to ensure 70% coverage of women 30 or older in the clinic catchment population, in 10 years.

⁴ CHIP 2004. Volume II: A Guide for Trainers provides a training session on how to use the facility planning tool

Using screening targets to determine staff workloads and equipment needs

The monthly screening target is also used as the rational basis for facility planning. This means, facility managers need to first establish how many Pap smears their facility needs to perform monthly (the target) before they can determine how much equipment and staff they need. Every month, in addition to new smears, most screening facilities also perform repeat Pap smears (for various reasons, some Pap smears may have to be repeated). So, when determining equipment and staff needs, facility managers should use the total number of Pap smears (new and repeat smears). The total number (new and repeat smears) is a good indication of the anticipated monthly screening workload for a facility. Appendix A provides instructions for determining staffing workloads and equipment needs.

Determining staff workloads: Facility managers need to first establish whether there are sufficient trained staff to perform the number of Pap smears required to meet the anticipated monthly screening workload. The facility planning tool enables facility managers to work out the number of Pap smears each trained staff member must perform per month to meet the workload. After working this out, facility managers need to assess whether the existing trained staff are sufficient (for example, if the number of smears per trained staff is excessive, this indicates that there are insufficient trained staff). If the number of staff is sufficient but they are not trained, the manager should develop a plan for staff training (staff training is discussed later in this section). If the number of staff is insufficient, then the facility manager should ensure that those that are available are all trained, while trying to address any staff shortage issues through existing channels and processes. The approach should be to start with existing human resources and not wait until the 'ideal' number is available in the facility.

Facility managers need to first establish whether there are sufficient trained staff to perform the number of Pap smears required to meet the anticipated monthly screening workload.

Determining equipment needs: Facility managers also need to ensure that their facilities have the right equipment for screening and infection prevention, in sufficient quantities to meet the anticipated monthly workload. The facility planning tool described above (see Appendix A) includes an equipment and supplies audit form, which facility managers can use to conduct equipment audits in their facilities. The form helps to firstly determine whether the facility has the equipment and supplies required to

Facility managers also need to ensure that their facilities have the right equipment for screening and infection prevention, in sufficient quantities to meet the anticipated monthly workload.

provide screening, and secondly to determine whether the available equipment is adequate to meet the anticipated workload. The audit form compares the quantities of equipment available against the quantities required to cater for the anticipated workload. Where there is a shortfall, the manager needs to take action, such as requesting more stocks from higher authorities, or where applicable, purchasing additional equipment. However, while waiting for further stocks, screening services should be provided using existing equipment.

These staffing workloads and equipment needs are worked out based on an assumption that the health facilities make an effort to recruit more women for screening to meet the monthly target. Though facility managers are encouraged to aim to achieve the monthly target as soon as possible, they also need to be realistic about what is achievable. If it is unlikely that the target number of smears will be achievable in the immediate to short-term, managers need to ensure that the current staff complement and equipment are working optimally before requesting for additional staff or equipment. The idea is to avoid requesting more staff or equipment than are actually required.

Supplying tools and materials

Primary care level facilities need sufficient materials and tools to provide screening services. These materials and tools, discussed in greater detail in the relevant sections of this manual, include:

- Cytology request forms – managers may have to obtain these from their designated cytology laboratory
- Infection prevention guidelines – posters depicting these may be displayed in every consulting room where Pap smears are provided
- Client management guidelines – posters directing staff how to manage clients after cytology results should ideally be displayed in every consulting room where Pap smears are provided
- Client recall and referral tracking cards and referral letters
- IEC materials – posters providing cervical screening information and others informing users of the availability of screening services are required, as well as pamphlets for distributing to clients
- Record-keeping materials – Pap registers and data collation sheets for monitoring and evaluation systems

Organisation of screening services at primary care level

Screening services must be accessible to women in the target age group. Facility managers should look into the organisation of their existing services and see what more can be done to enhance access for women. Re-organisation of services may be required, as follows:

- Clearly define the times and days on which Pap smears will be provided and communicate this to all staff and clients (for example ensure signs in the facility display this information). Screening should preferably be integrated within regular health service provision at the facility. Whether services are provided on all days or only on certain days of the week, it is recommended that no client requesting a Pap smear should be turned away because 'it is

not the Pap smear day'. This is very important to avoid missed opportunities to screen women. Flexibility should be allowed to accommodate women seeking Pap smears on what are considered 'wrong days'.

- Decide in how many rooms Pap smears will be provided, ensuring that these rooms are appropriately equipped, and that triage and queuing systems facilitate access to them. For example, if the facility has a designated Pap smear room, all women requesting a Pap smear should be informed to join the queue for the Pap smear room. In addition, staff should also refer women who came for other health problems but also want a Pap smear to the appropriate queue.
- It is also important to ensure clients returning for results have access to the appropriate staff who can explain their results. It may be necessary to establish a queue for women who are returning for their results so they do not have to wait in various other queues in the clinic. This may be a way of encouraging women to return for their results.

Facility managers should look into the organisation of their existing services and see what more can be done to enhance access for women.

Staff Training

Why train staff?

One of the responsibilities of programme managers is to ensure that staff are well trained to provide cervical screening services. The provision of effective cervical screening services at primary care level requires training of the following cadres of staff:

- Facility managers: need training to co-ordinate, manage and monitor the screening services at their facilities.
- Health care providers: need training to perform the day-to-day tasks of screening services, including: recruiting women, performing Pap smears, counselling clients, recalling and referring screened clients, sterilising/disinfecting equipment and maintaining patient records.
- Support staff: need training in maintaining appointment registers, storing client records and advocating for screening services.

Planning the training

A large amount of training may be required, especially in settings where screening services have never been provided before. It may be necessary to establish a smaller training team within the screening services task team to oversee staff training. This may not be necessary where a provincial, regional or district training unit already exists. For sustainability, it is better to work with existing training structures, and ensure that cervical cancer training is incorporated into whatever training is being developed and implemented for the area.

The task team should start by defining what type of training is required for various cadres of staff working in cervical screening services (see Table 2.1). The team should broadly define the topics on which each cadre will be trained, including:

- The epidemiology and natural history of cervical cancer

- The national Guidelines
- How to set screening targets
- How to take Pap smears
- Understanding cytology results
- The importance of communicating results to clients with abnormal smears
- Management of clients with abnormal smears
- Referral and feedback systems
- Record-keeping

Planning also includes determining the number of staff to be trained per cadre, per health facility or district. A balanced distribution of trained staff across the district, region or province is essential.

Table 2.1 Defining the Cadres of Staff to Train and the Type of Training

Target Group	Relevant Training Topics ⁵
<p>All doctors and nurses involved in cervical screening services</p>	<p>These cadres of health care worker may perform Pap smears and are responsible for all aspects of client management. They will need an orientation to the national screening Guidelines and training on the theory of cervical cancer and screening.</p> <p>Some of these will need practical training on how to perform a Pap smear and interpret cytology results; and training to understand the components of a cervical screening programme.</p>
<p>Support staff: health promoters and other auxiliary health workers, clerical staff and general assistants</p>	<p>Although these cadres of staff do not normally perform Pap smears, they are part of the service and need to understand the importance of screening. They regularly come into contact with clients, may be involved in client recruitment and patient follow-up, file client results and in some cases are responsible for record-keeping. They require an introduction to cervical screening and orientation to the national screening guidelines because they need to understand the importance of cervical screening and may support the service in their facilities.</p>

⁵ CHIP 2004. Volume II: A Guide for Trainers, a companion volume to this guide, provides detailed content of training modules for different cadres of staff, and illustrates the important training issues for each target audience. It is essential for managers to familiarise themselves with the training modules provided therein.

Timing is a very important consideration as training must run in sequence with the other components of the programme. For example, **training of staff on how to take a Pap smear should happen only after they have had orientation to the policy, and only once the other programme requirements have been put in place** (i.e. management guidelines, record-keeping system, follow-up mechanisms, referral pathways, etc).

Logistical considerations are crucial when planning the training programme. The training plan should identify where and when the various training sessions will occur and who will do the training. The training team should ensure that manuals and training materials are made available to trainers and trainees, venues are identified and booked beforehand, workshop refreshments are arranged and paid for in good time, and transport is provided should participants be required to travel to a central training venue. Where required, managers should make the necessary resources available to the training team.

Implementing the training

The training team should select an approach to the training that is most appropriate to their situation (see box below). The approach selected depends on the availability of human resources, how soon the training must occur, how many people are to be trained, and whether or not management can afford to bring in an external person to provide the training.

Approaches to Implementing Staff Training

- Option 1:** Cascading approach – ‘train-the-trainer’. Select one master trainer from each clinic or 2 or 3 master trainers per district or defined area. This group of selected individuals will be trained as master trainers by an external trainer or a provincial/regional/district trainer. Master trainers will be required to train other staff in their district (using Volume II: A Guide for Trainers). This option allows for building of training capacity within the district.
- Option 2:** A district, regional or provincial trainer utilises existing material (for example, CHIP Volume II: A Guide for Trainers) to train other providers in the district. The benefit of this approach is that all providers are trained by the same person at a similar standard. However, if this option is adopted, it will take a longer time to cover all staff in the defined area.
- Option 3:** The district contracts a training organisation to train all its providers. While this option ensures standardised training, it does not enable building of training capacity in the district.

Supervision and support

Regardless of the approach adopted, mechanisms must be in place for supervising, supporting and monitoring the trainees once they have been trained. **Supervision is essential to ensure good quality Pap smears and appropriate clinical practices.** It is recommended that supervisors also attend the training so that they are able to supervise staff adequately.

It is beneficial to have a designated person responsible for supervision to ensure it gets done. A range of approaches are workable. During CHIP, in some sites a few master trainers were responsible for supervision of other staff and monitoring the screening services at facility level. Another approach is to use existing clinic supervision systems to supervise and monitor staff providing Pap smears. Supervisors need to monitor whether providers are:

- implementing the service according to standard guidelines
- performing smears in the appropriate age group
- performing good quality smears
- utilising correct techniques
- managing clients according to standard guidelines.

Supervision and support mechanisms are established mainly to promote and ensure maintenance of good practice and quality services. The supervisor's role thus includes supporting staff and managers of health facilities so that they are able to provide a quality service. The idea is not to wait for problems to arise, but to identify potential problems and address them as early as possible to avoid a breakdown in service provision. However, where problems have already occurred, the supervisor may be required to support personnel to identify solutions and rectify the problems.

Caution is advised because supervision and monitoring systems may tend to focus on monitoring targets to ensure adequate numbers of Pap smears are being performed. While it is important for supervisors to ensure that health care providers meet the screening target, it is even more important to ensure that all screening smears are taken for the right age group and are of good quality (are adequate).

This section addressed the importance of preparing primary care level facilities to provide screening services and has provided recommendations for how programme managers can strengthen screening services. Screening services are, however, only one component of a screening programme, so it is essential to ensure that referral and feedback linkages with higher levels of care, including cytology and colposcopy and treatment services, are established and sustained.



Cytology Services

SECTION 3



Cervical screening in the South African public health sector is cytology-based. Thus, all Pap smear specimens require cytology testing for the presence of pre-cancerous lesions. The Pap smear is only a screening test for cervical cancer, which means women identified with precursor lesions on cytological examination will have to undergo further testing (colposcopy and biopsy) to confirm the abnormality. Therefore, cytology services must perform optimally to identify correctly women with cervical abnormalities and relay the results to health care providers for appropriate action.

Barriers to Effective Cytology Services

The NHLS laboratories perform all public sector cytology testing in South Africa. As highlighted below, barriers to the effective provision of cytology services may undermine the success of the cervical screening programme in South Africa.

Barriers to Effective Cytology Services

Shortages of existing personnel

- There is a severe shortage of cytology staff including technicians, technologists and pathologists. Many have left the public sector for better remuneration and working conditions in the private sector in South Africa, or overseas, while many others have left cytology altogether seeking employment in an alternative field.
- As more health care workers leave the public sector, the working conditions of those remaining become even worse until they too leave. It is essential that all stakeholders involved address this issue.

Inadequate training of new personnel

- The training of cytotechnologists and cytotechnicians varies and many are not able to pass the board examinations.
- Medical doctors (registrars) specialising in anatomical pathology are required to become proficient in cytology. However, given the severe shortage of cytology personnel, training of registrars in cytology is compromised or non-existent in some centres.

Poor reporting of cytology results

- Reporting of cytology results is not standardised: various reporting formats and terminologies are in use, thus undermining client management.
- Long turn-around times undermine staff morale at primary care level facility and discourage women from returning for their cytology results.

Lack of quality assurance

- Some cytology laboratories are of a very poor standard and lack quality assurance mechanisms, thus undermining optimal performance of cytology services.

Establishing a Task Team

It is a good idea for programme managers to establish a task team to work collaboratively to strengthen cytology services. The team should include: cytology laboratory staff and management; colposcopy and treatment services managers and clinicians; screening facility providers and managers; and district, regional and provincial reproductive health managers. As a priority, this task team should assist cytology and health service managers to address the major challenges highlighted above.

Strengthening Communication Between Cytology and Screening Services

Promoting good communication between health facility staff, cytology laboratories and programme managers is a way of ensuring optimal performance of the cytology services.

What should programme managers expect from the cytology laboratory?

Cytology personnel, health programme managers and clinic staff must forge a good working relationship to ensure optimum client management. The cytology laboratory can contribute to this partnership by providing an accurate and efficient cytology service. This should include:

- Designated cytology staff members attending advisory committee and task team meetings to ensure correct procedures that are beneficial to both screening facilities and cytology laboratories are put in place
- Good communication with, and feedback to, clinic staff and programme managers
- Uniform cytology reporting and standardised recommendations for client management
- Laboratory results reaching the relevant clinics within acceptable laboratory turn-around times
- Stringent laboratory quality assurance
- Regular statistics being sent to facilities and programme managers, including number of smears taken, number of inadequate smears, and number and types of cytological abnormalities

What should the cytology laboratory expect from programme managers and clinic staff?

The cytology laboratory should be involved in all stages of the cervical screening programme, including planning, implementation and on-going monitoring and evaluation. The cytology laboratory should also expect clinic staff to submit well-taken, representative and properly fixed cervical smears accompanied by cytology request forms that are completed correctly. The cytology laboratories should also expect to receive feedback on the quality of statistics they provide to managers.

Furthermore, to ensure better cytology services, clinic staff should regularly communicate with cytology laboratory staff on various matters, including:

- **Notifying the laboratory in case of mismatches:** For example, cervix looks suspicious but

the cervical smear is reported as normal or cervical biopsy results are not in agreement with cervical cytology findings.

- **Turn-around times:** Any complaints such as results take too long to return to the screening facility, are lost or are sent to the wrong facilities, should be communicated to the laboratory so that problems can be addressed.

These issues ought to be discussed and addressed collectively by the cytology services and screening programme managers. Task team meetings are good forums for such discussions.

Cytology Reporting

For a screening programme to be effective, cytology laboratories must report cervical smear results to clinic staff in a clear, concise and standardised manner to ensure that health care providers are consistent in providing the appropriate management to clients. Standardised cytology reporting terminology is therefore very important. A wide range of terminology has been used to describe the cytological changes of cervical dysplasia. In 1988 cytopathologists met in Bethesda to develop universal and standard terminology that is now referred to as the Bethesda System. The Bethesda terminology was revised in 1991 and 2001 (Bethesda 2001), replacing the previous Cervical Intraepithelial Neoplasia (CIN) terminology.

For a screening programme to be effective, cytology laboratories must report cervical smear results to clinic staff in a clear, concise and standardised manner to ensure that health care providers are consistent in providing the appropriate management to clients.

The Bethesda System for reporting cervical cytology results

The Bethesda System was developed specifically to provide uniform terminology for reporting cervical cytology results to health care workers. Other terminology systems do exist, but since its inception, the Bethesda System has received widespread support and is by far the most common cervical cytology reporting system globally. The Bethesda 2001 reporting system is relevant and applicable in the South African context, and has been endorsed by the South African Society for Clinical Cytology. However, very few public sector laboratories in South Africa have implemented Bethesda 2001. The unresolved matter regarding application of Bethesda 2001 in South Africa is that it does not consider the lack of endocervical component as an indication for an immediate repeat Pap smear. This is a valid consideration in developed countries where women undergo cervical screening annually or every 2 to 3 years. However, in South Africa where cervical smears are done at longer intervals (every 10 years), some experts feel that every screening smear must contain an endocervical component to be deemed adequate, and that if endocervical cells are not present, the smear should be repeated immediately (after 6 weeks) to ensure accurate reporting. It is evident that there is a need to adapt Bethesda 2001 to suit the South African context and comply with national screening Guidelines.

A proposed uniform cytology reporting format

As highlighted above, there is an urgent need for uniform cytology reporting and appropriate standardised guidelines for the management of abnormal cervical cytology within the context of a South African cervical screening programme. In an attempt to address this need, CHIP adapted Bethesda 2001 as follows:

- Unlike in Bethesda 2001, recommendations for client management are included on the CHIP cytology report form.
- Unlike in Bethesda 2001, the CHIP form reports the lack of endocervical cells as an 'inadequate' Pap smear, which must be repeated.

With these adaptations, CHIP developed and implemented cytology request and report forms (see Appendix C), which were monitored for their use and acceptability during the CHIP pilot project. Nursing staff perform the vast majority of Pap smears in South Africa, and those who were consulted in the CHIP pilot sites reported that including recommendations for client management on the cytology report was very useful. Thus, CHIP proposes that recommendations for client management remain an integral part of the cytology report. Future nationwide adoption of this cytology reporting format will however require discussion at the national level with the NDOH, NHLS and other key stakeholders.

Quality Assurance in Cytology

Why is quality assurance in cytology important?

The quality of cytology laboratories is a crucial consideration in a cytology-based cervical screening programme. Cytology testing can detect some but not all pre-cancerous lesions. Cytology laboratories may sometimes report Pap smear specimens with an epithelial cell abnormality as normal (false negative results), or may report normal Pap smear as having epithelial cell abnormalities (false positive results). False negative reports may be due to:

- *Incorrect smear-taking technique:* This accounts for two-thirds of all false negative cervical smears. Examples of incorrect technique include inadequate visualisation and sampling of the cervix, poor preparation and spray fixing of the cervical smear, and cells discarded with the smear collection device.
- *Laboratory errors in screening and interpretation:* Laboratory (human) errors account for one-third of false negative cytology results.

Appropriate quality assurance (QA) needs to be implemented rigorously within all public sector cytology laboratories to ensure optimal performance of cytology services.

Appropriate quality assurance (QA) needs to be implemented rigorously within all public sector cytology laboratories to ensure optimal performance of cytology services. QA mechanisms are essential to minimise false positive and false negative reporting and optimise quality. For example, false positive reporting can be monitored by comparing Pap smear results with histology results. False negative reporting can be addressed by ensuring that health workers

taking Pap smears are well trained in the smear taking technique and that the training of cytotechnologists and cytotechnicians is optimal and standardised.

The programme manager's role in ensuring quality assurance

Though QA is time consuming and may increase laboratory turn-around times in understaffed laboratories, the South African Society for Clinical Cytology (SASCC) recommends that QA must be an integral part of any cytology laboratory. The SASCC feels that most of the numerous QA modalities available are suitable, relevant and can be achieved within the current structure of public sector cytology laboratories.

Implementing cytology QA systems is the responsibility of laboratory management. However, programme managers need to be involved in the process because of the pivotal role cytology laboratories play in a cervical screening programme. It is recommended that programme managers familiarise themselves with the status of QA systems in the laboratories serving their area/s of jurisdiction and collaborate with laboratory management and technical staff to ensure QA mechanisms are implemented to enhance the accuracy of cytology results.

This section addressed the important role of the cytology laboratory in a cytology-based cervical screening programme. It emphasised the importance of close collaboration between staff and managers of cytology services and health services to ensure short turn-around times, uniform and good quality cytology reporting, and optimal client management following cytology.

Client Management at Primary Care Level

SECTION 4



The purpose of a cervical screening programme is to identify and treat women with pre-cancerous lesions early to prevent cervical cancer. The vast majority of Pap smears performed yield normal results (there is no epithelial cell abnormality) on cytological examination. But, since cervical screening is the only way of knowing which women have epithelial cell abnormalities of the cervix and which women do not, all women in the target age group must be screened in order to detect the few who have abnormalities.

Barriers to Clients Receiving Appropriate Management at Primary Care Level

A health care provider must appropriately manage all clients who have had a Pap smear, according to their individual cytology results. However, as indicated below, there are several barriers to the appropriate management of clients at the screening facility.

Barriers to Appropriate Management of Clients

- Client anxiety about an abnormal Pap smear, especially the possibility of cancer
- Clients not understanding the importance of returning for results or attending referral centres for further evaluation and/or treatment
- Cervical smear results not received by screening facility
- Lack of standardised client management guidelines or protocols, thus staff do not understand what action is required following cytology result
- Lack of mechanisms to inform clients of their results

Establishing a Task Team

It is useful to establish a task team with representatives from the primary level facilities, cytology laboratories and colposcopy and treatment services to ensure that the necessary systems and mechanisms are developed and implemented to address the barriers highlighted above. This is the same task team that is responsible for addressing cytology services and colposcopy and treatment services. The task team should consider several key elements discussed below.

Managing Clients after Cytology

Guidelines for client management at primary care level

To ensure appropriate management of a client, the health worker providing screening must know what action to take for each smear result. For example, amongst clients with epithelial cell abnormalities, some may have an abnormality that just needs to be monitored, while others may have abnormalities that need further assessment and management at higher levels of care. Standardised guidelines for the management of cervical screening clients are therefore essential in a screening service. The CHIP project developed client management guidelines (Appendix D), in accordance with the National Guidelines for a Cervical Cancer Screening Programme. The

client management guidelines were tested with health workers, and were found to be useful. Using simple algorithms, the client management guidelines recommend the appropriate management for each smear result (for normal and abnormal smears). It is useful to display posters depicting these client management guidelines in consulting rooms at all primary care level facilities providing Pap smears so that health workers who manage clients after cytology may regularly refer to them.

Informing clients of results

After a Pap smear, every client should be given a date when to contact or return to the health facility for her smear result. Clients can be informed of their Pap smear results through various means including:

- Verbally
 - At the return clinic visit. To avoid clients returning too early for results, staff need to be aware of the average time that it takes to get a result back from the laboratory
 - By a telephone call
 - By staff who conduct home visits
- By means of a letter/note from the health facility.

Direct verbal communications of the result is preferable for clients who need a repeat smear and for clients with epithelial cell abnormalities. Ideally, the letter from the health facility should inform the client that she needs to return to the facility for her results. The return visit is an opportunity for the health worker to explain the results, discuss their implications, and counsel clients about the importance of adherence to follow-up and other recommended management. In some settings it may be more feasible to inform clients that they need referral and that an appointment has been made for them at the referral centre. An example of a letter that can be used to inform a woman that she has an abnormal smear and needs referral is provided in Appendix E.

Women with normal Pap smears need to be informed of their result and of the need to return for another Pap smear after 10 years. Women with unsatisfactory smears and smears

with no endocervical cells need to be informed that they must have a repeat smear as soon as possible. Women with epithelial cell abnormalities need to be informed of the abnormality and the management required.

Ideally, a system should be in place to remind and call back women with normal pap smears for another Pap smear in 10 years, as many may forget to return. In the absence of such call back systems, health providers must ensure to tell clients who are returning to the 10-yearly screening pool that the facility will not recall them for their smear in 10 years, so they must remember to return. The

Women with normal Pap smears need to be informed of their result and of the need to return for another Pap smear after 10 years. Women with unsatisfactory smears and smears with no endocervical cells need to be informed that they must have a repeat smear as soon as possible. Women with epithelial cell abnormalities need to be informed of the abnormality and the management required.

women's health card (WHC) may help women to remember when to return for their 10-yearly Pap smears. For the WHC to be effective in this regard: every woman should have a WHC and should take it with her to every contact with the health service; a health worker should record details of every Pap smear on the WHC; and a health worker should check the WHC at each consultation to determine whether the woman is on track with her screening and to remind her about her screening dates where necessary.

Prioritising clients who need recall or referral

The health worker must ideally inform every woman who has a screening Pap smear of her result and what action is required, according to the client management guidelines. However, due to resource constraints, it may not be feasible to inform every client who has a Pap smear of her result. **It is particularly important that all clients with a cytology result indicating an unsatisfactory specimen or a lack of endocervical cells (those who need to be recalled for re-screening) or epithelial cell abnormality (those who need to be recalled for re-screening or referred) are informed of their results and the management required.** Primary care level facilities should prioritise these clients, especially those who require referral for colposcopy. All clients with HSIL (who require referral for colposcopy) must be informed of their results and referred as soon as possible.

All clients with HSIL (who require referral for colposcopy) must be informed of their results and referred as soon as possible.

Record-keeping

Record-keeping is crucial to enable staff to monitor women who have had Pap smears.

Information on clients must be recorded such that staff can track an individual woman over time. One way of doing this is to set up a Pap smear register. The register should capture data including client identification and contact details, date the smear was taken, the smear results, whether the client has been informed of the result and management provided. This information is filled into the Pap register when a client has a Pap smear, when cytology reports are received at the clinic and when clients are contacted with the results or return to the clinic for results. It is important that administrative staff do not file cytology reports until the staff in charge of Pap smears reviews them and captures them in the Pap register. Staff must also fill in the appropriate client tracking cards where necessary to have a complete record of all screening clients. Client tracking cards are discussed below, while the Pap register is discussed in more detail in Section 7.

Managing Clients who need Recall or Referral

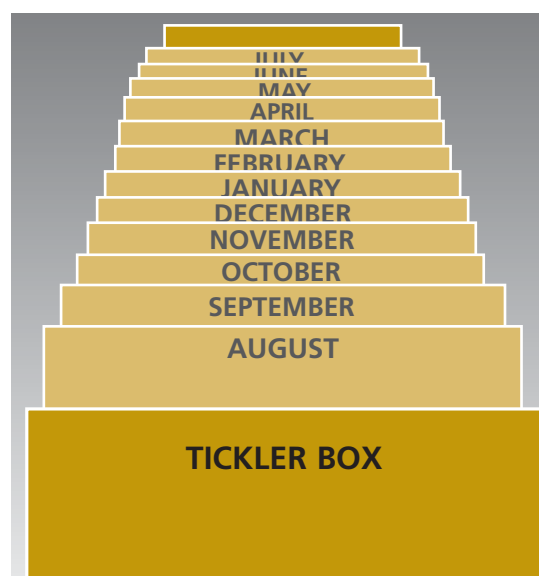
Providers must manage appropriately and keep track of clients with unsatisfactory smears and abnormal cervical cytology results. Clients with unsatisfactory smears (including those lacking endocervical cells) must be recalled for a repeat smear because they are considered to be unscreened, while clients with abnormal cytology need either to be recalled for re-screening or referred for colposcopy or further evaluation and management. Table 4.1 summarises the type of management and tracking required for clients who need recall or referral.

Table 4.1 Tracking Clients Who Need Recall or Referral

Cytology Result	Type of Tracking Required
Unsatisfactory specimen and specimens that lack endocervical cells	Recall for immediate re-screening: these clients need immediate re-screening. If they do not return to the screening facility for a repeat smear, they must be traced and recalled to the facility for re-screening.
ASC-US LSIL	Recall for re-screening after 1 year: clients with these results should be informed that they need to have a repeat smear after 1 year. If they do not return after 1 year, they must be traced and recalled for a repeat Pap smear (if clients have the same result or worse on second screening, see below).
HSIL ASC-H Second LSIL or ASC-US	Referral for colposcopy: clients with these cytology results must be immediately traced and informed of their results as a priority and referred to an appropriate referral centre for colposcopy (see Appendix E for an example of a letter informing the client of the need for colposcopy). If a client fails to attend the referral centre, she must be traced by the screening facility and referred again.
Squamous carcinoma Adenocarcinoma AGC	Referral for further investigation and management: clients with these cytology results must be traced, informed of their results, and referred to a referral centre (usually a gynaecology department at a referral hospital) for further investigation and appropriate management. If a client fails to attend the referral centre, she must be traced by the screening facility and referred again.

A system for tracking clients who need recall or referral

It is useful to implement a system that enables health providers to keep track of clients who need recall for a repeat Pap smear or referral for further investigation and treatment. The tickler box is an example of such a system. It consists of a box with client recall tracking cards and client referral tracking cards (see Appendix F), in 2 different colours. The client recall tracking cards are kept in the tickler box in monthly order (according to the month the clients should return), and in alphabetical order for each month according to the surnames of the clients. The client referral



tracking cards are kept in the front part of the tickler box in monthly order (according to the month the Pap smear was done). The referral cards are red to emphasise that these clients must be especially prioritised, contacted, informed that they need to be referred, and subsequently tracked to ensure they attend the appointment at the referral centre.

Tracking clients who need recall

Each time a client has a Pap smear result indicating the need for a repeat Pap smear, the health provider should fill in a client recall tracking card for the client. The card should then be slotted into the tickler box in the month that the client should return for the repeat smear. For example, if the client needs to return for a repeat smear in August then her card is slotted into the August section of the box. When the client returns for the repeat Pap smear, details of the visit are recorded on the card, and once the repeat smear is done, the tracking is completed and the card is filed in the client's folder/file. Every month, health providers must check the tickler box for whether clients who were meant to return that month did indeed return and did have a repeat smear. Those who did not return will have to be contacted by the health provider.

Tracking clients who need referral

Each time a client has a Pap smear result indicating the need for referral to a colposcopy or gynaecology clinic, the health provider should fill in a client referral tracking card for the client. The card should then be slotted into the front part of the tickler box in the month the Pap smear was done. The card remains there until the health provider receives feedback from the referral facility indicating that the client attended her referral appointment. If no feedback is received from the referral facility, staff at the primary level facility should contact the referral centre to establish what happened to their client. Alternatively, they can try to trace the client and establish whether she had attended the referral facility for her appointment. Should a feedback letter from the referral centre be received documenting that the client was seen and the outcome of the visit, this must be recorded on the client referral tracking card and then placed in the client's folder.

All efforts should be made, in consultation with the referral centre, to trace these clients because this is the most important aspect of cervical cancer prevention services. If women with HSIL do not receive treatment, they may go on to develop cervical cancer, and all screening efforts will have been wasted. Should the health providers fail to trace the client, they should indicate this on the client referral tracking card.

If women with HSIL do not receive treatment, they may go on to develop cervical cancer, and all screening efforts will have been wasted.

Cervical cancer cannot be prevented unless women with precursor lesions are identified early and treated. This section addressed the importance of establishing guidelines and systems for the appropriate management and follow-up of cervical screening clients after cytology. Screening facilities are urged to make the extra effort to ensure all clients, especially those with precursor lesions, are appropriately managed.

Colposcopy and Treatment Services

SECTION 5



Services for the treatment of pre-cancerous lesions play a vital role in the screening programme because unless clients with precursors get treated, implementing all the programme strengthening activities described in preceding sections will be in vain. The national Guidelines recommend that clients with HSIL, a second LSIL or second ASC-US must have a colposcopy and biopsy of the cervix. Colposcopy refers to visualisation of the cervix with an instrument called a colposcope that magnifies the cervix so the clinician can select the best site for a biopsy. The biopsy specimen undergoes histological examination, and if HSIL is confirmed by histology, the client must be treated accordingly.

Barriers to Clients Receiving Colposcopy and Treatment for Pre-cancerous Lesions

Colposcopic biopsy and treatment of pre-cursor lesions are generally performed at hospital level, so all clients requiring these procedures need to be referred to the appropriate level of care. In South Africa, many women with HSIL never receive colposcopy and treatment because these services are not well developed or widely distributed in most provinces. Other barriers to women accessing these important services are highlighted in the box below.

Barriers to Clients Receiving Colposcopy and Treatment for Pre-cancerous Lesions

- Lack of standardised client management guidelines or protocols, thus staff do not understand what action is required following a cytology result
- Poor communication between screening facility and colposcopy/treatment services:
 - Referral pathways from screening facilities to referral centres are ill-defined or poorly communicated to staff
 - Mechanisms for referral from screening facilities to referral centres not well implemented
 - Lack of feedback from referral centres – because screening staff are unaware of whether a client has attended a referral centre, no further client-tracing action is taken
- Colposcopy and treatment centres not accessible – especially in rural areas where women's access is limited due to distance, transportation costs, hospital fees, and other constraints
- Colposcopy and treatment services are not available at all – due to lack of colposcopes and/or lack of trained colposcopists

Establishing a Task Team

Ideally, the same task team that addresses cytology services and client management at primary care level should also address the establishment or strengthening of colposcopy and treatment services. This team should particularly strive to address the barriers highlighted above to facilitate women's access to colposcopy and treatment services.

Referring Women to Colposcopy and Treatment Services

Clients need to be referred to the closest referral centre for colposcopy and treatment. However, colposcopy and treatment services are usually available only at tertiary and academic hospitals and rarely at secondary level hospitals, so access is limited for many women. Except

To ease the burden on women, communication between primary care level facilities and referral centres needs to be improved.

in the major cities, it is common for women to travel fairly long distances to access these services. To ease the burden on women, communication between primary care level facilities and referral centres needs to be improved. The mechanisms described below are recommended to facilitate access for women.

Defining referral pathways

Ideally, clients should be referred with a referral letter that at least states the Pap smear result, the date the Pap smear was done, and the name of the facility where the Pap smear was done. Referral protocols should be clearly defined and disseminated to both screening facilities and referral centres, to ensure health providers refer clients to the appropriate centre. If possible, clients who require colposcopy and biopsy should be referred directly to a health facility with a colposcopy clinic. This avoids clients being sent through various levels of care in the health system only to reach the colposcopy clinic several months and health care visits later. Such direct referral routes are in place in some centres around the country and are very beneficial for clients.

Facilitating colposcopy clinic appointments

Clients should not be expected to make repeated visits to referral centres. For example, a client should not have to travel to a referral hospital with a referral note in hand, only to be given an appointment to return at a much later date. To avoid such situations, screening facility staff or cytology laboratory staff should be able to contact referral centres to make appointments for their clients.

Referring Women for further Evaluation and Management

Clients with malignant cells of squamous carcinoma on a Pap smear need to be referred to a hospital gynaecology department, and not necessarily a colposcopy clinic, for further evaluation and management. Thus, referral links with hospital gynaecology department are also crucial in a screening programme. Performing a Pap smear for a client with clinically suspected cervical cancer is not recommended. Thus, referral mechanisms should also allow for clients with clinically suspected cervical cancer to be referred immediately to a hospital for confirmation of the diagnosis and further management.

Treatment Options

Treatment for precursor lesions

Various options are available for the treatment of precursor lesions of cervical cancer. To enhance effectiveness of the treatment methods, all staff must be trained on how to apply them. Treatment methods commonly used include:

Excision methods: Excision is the preferred method for treatment. Doctors usually provide excision treatment methods, which involve cutting off the part of the cervix that is affected, under colposcopic guidance. The loop electrosurgical excision procedure (LEEP), also called the large-loop excision of the transformation zone (LLETZ), is highly recommended as it can be performed as an out-patient procedure, reducing costs to the health service. Conisation of the cervix is still used in some settings, but this requires in-patient care and has significant side effects.

Ablative methods: These methods involve destroying abnormal cervical tissue, ideally after visualisation with a colposcope. Cells are destroyed by cryotherapy (freezes the abnormal cells), cold coagulation, electrosurgical cauterisation or vaporisation with a laser beam.

Treatment for invasive cancer

It is inevitable that in a cervical cancer screening programme women with invasive cancer will be identified. Invasive cervical cancer may be treated by surgery and/or radiotherapy with or without chemotherapy.

Ensuring Feedback from Colposcopy and Treatment Services

Referral and feedback systems are essential for effective communication between screening facilities and colposcopy and treatment centres. Experience shows that health providers at screening facilities rarely know whether the clients they referred attended the referral centres, how their clients were managed at the referral centre, or the outcome of referral visits. To rectify this, staff at colposcopy and treatment facilities should be encouraged to provide feedback to screening facilities. Staff at screening facilities are often better able to contact clients who have not kept colposcopy clinic appointments; they can only do this if they are informed that their clients did not attend the referral centre. Examples of simple feedback letters that can be used to inform staff at the referring facility of the outcome of their client's visit, or the fact that their client did not show up for the appointment are shown in Appendix F.

Staff at colposcopy and treatment facilities also need to inform staff at the referring facility if their clients do not show up for their colposcopy clinic appointments. Appendix G is an example of a feedback letter that can be used to inform staff at the referring facility that their client did not show up for her appointment. For this feedback mechanism to work, all colposcopy clinics appointment books should indicate from which facility each client has been referred. In this way, colposcopy clinic staff are able to identify the facilities to which they must send the feedback letter in Appendix G.

This section highlighted the importance of establishing colposcopy and treatment services and setting up mechanisms to ensure women's access to these services in a screening programme. Well-functioning colposcopy and treatment services are the mainstay of a cervical screening programme. Setting up screening services and colposcopy services is of no value if women with precursor lesions cannot access treatment to prevent cancer.

Client Recruitment

SECTION 6



An IEC programme that provides information to women and men in health facilities and in the community is an important component of a cervical screening programme. The purpose of an IEC programme is to encourage women to participate in the screening programme, thus increasing demand for the service.

Barriers to Women's Participation in Cervical Screening

Various studies locally and internationally have shown that many women have limited knowledge and awareness about cervical cancer and screening services. In addition, it has been shown that even when services are provided women do not attend. Barriers to women's participation in screening programmes are highlighted below.

Barriers to Women's Participation in Cervical Screening

- Limited knowledge regarding:
 - the cervical screening service
 - the national policy including appropriate age to attend and time interval between smears
 - the procedure involved
 - the reason for taking a Pap smear
 - their reproductive anatomy
 - cancer and in particular cervical cancer
 - the treatment for pre-cancerous lesions
- Lack of understanding of the concept of preventive care
- Fear and embarrassment concerning the procedure
- Fear of cancer and inevitability of death
- Beliefs and perceptions
- Partner attitudes

Establishing a Task Team

A task team may be established to strengthen and co-ordinate IEC activities to address the barriers identified above. This team could include health worker representatives, provincial and regional health promotion departments, representatives of relevant national and local NGOs and community-based organisations (CBOs), and community members. The NGOs involved in health education are extremely valuable partners in developing, supporting and sustaining community-based IEC programmes.

Setting Up an IEC Programme

Setting up an IEC programme includes: defining key health education messages; implementing information dissemination strategies at facility level (one-on-one and group information sharing to recruit women attending health facilities); and implementing information dissemination

strategies at community level (distributing IEC materials, working with the media and running peer education workshops in the community). While it is ideal to implement a community-based campaign concurrently with facility-based client recruitment, the task team needs to bear in mind that implementing and sustaining an effective community-based IEC programme requires time, resources and a great deal of commitment and effort from health authorities and stakeholders. Furthermore, the impact of a community-based IEC programme on community knowledge and behaviour is often only seen in the long term. Therefore, in the short-term, within the context of limited resources, a high IEC coverage may be more realistically achieved by prioritising a facility-based IEC programme to recruit clients who are already in health facilities.

Defining key messages for IEC programmes

Although all members of the community can benefit from an IEC programme, women at highest risk (i.e. women age 30 years or older) should be particularly targeted. In order to reach these older women with the educational messages, IEC materials should be distributed to them at curative services or special clinics (such as diabetes or hypertensive clinics) where they may be found, as well as in the community. Key messages that may be included in cervical screening IEC programmes are depicted below.

Key Cervical Screening IEC Messages

- Cervical cancer can be prevented
- The procedure involved in taking a Pap smear is relatively simple and quick and should not be painful
- Women over 30 should be screened (have a Pap smear) every 10 years
- Screening can detect treatable, pre-cancerous lesions before they progress to cancer
- It is important to return for results
- The small proportion of women who need treatment after screening can receive a simple procedure to remove the lesion

Identifying information dissemination strategies

Various information dissemination strategies can be implemented. The task team needs to identify which strategies will be included in the IEC programme. Managers need to prioritise and implement strategies that are most feasible, taking into account the available financial and human resources. Various strategies are described below.

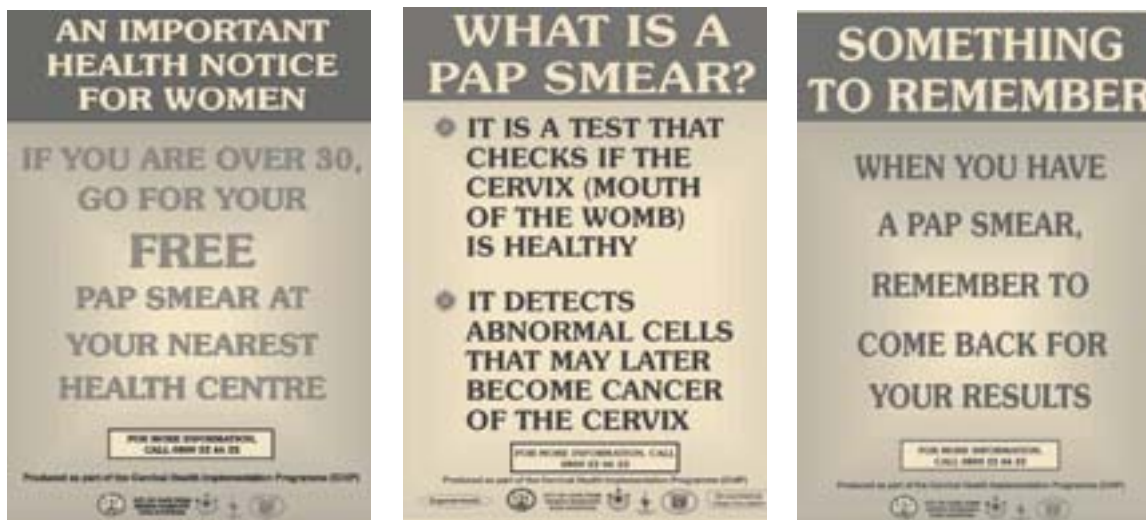
IEC materials

Developing new IEC materials is a costly venture, so programme managers should utilise existing IEC materials as well as materials available from various national NGOs where possible. For example, a pamphlet and a series of 3 posters developed by CHIP are available in English, Afrikaans, IsiXhosa, SiPedi and SeTswana on a diskette accompanying this manual. **When using existing IEC materials, managers should ensure that these are appropriate for**

local use, are evaluated by service providers and community members, and are translated into the local language/s where applicable.

The CHIP posters have a few catchy phrases, describing:

- A Pap smear
- When and how frequently to have one
- The need to return for results



The pamphlets developed by CHIP are more detailed than the poster, and include information on:

- Women's reproductive anatomy
- The procedure involved in taking a Pap smear
- The national Guidelines on screening age and frequency
- Cervical cancer and the pre-cancerous phase
- The fact that cervical cancer can be prevented and pre-cancerous lesions can be successfully treated
- The importance of returning for results
- The need for management of abnormal smears



Client Recruitment in Health Facilities

Various activities can be undertaken within health facilities to recruit clients for screening. For example, health talks, video shows (where available), and sketches and role-plays on cervical screening can be provided to users while they are waiting to be attended to in health facilities. Also, pamphlets and posters can be displayed in health facilities and distributed to men and women attending fixed and mobile health facilities.

Avoiding missed opportunities for cervical screening

Many women over the age of 30 attend primary care level facilities for various health care needs, including primary medical care, chronic medical care, collection of medications, or to accompany children, spouses or others. However, there are numerous missed opportunities for

Health care providers must be encouraged to make use of women's contacts with the health service as opportunities to recruit them for screening.

cervical screening within health facilities as very few eligible women are ever offered a Pap smear. Health care providers must be encouraged to make use of women's contacts with the health service as opportunities to recruit them for screening. Active client recruitment in health facilities should be promoted because it is less costly than community campaigns. In addition, health providers have

access on a daily basis to numerous eligible women who have never been screened. Health care workers are urged to be pro-active rather than wait for women to request a Pap smear. This means every contact with a woman aged 30 years or older (regardless of whether or not she is the patient) should be used as an opportunity to offer her a Pap smear and perform the smear either immediately or later if she chooses.

Client counselling

Counselling of women by health providers and peer educators is essential. Counselling should provide clear simple messages that address barriers such as fear and anxiety and help to change attitudes about cervical screening. Staff are advised to answer all questions directly in a reassuring manner, and where appropriate to remind the woman of any instructions. Sensitivity to cultural and religious considerations is important. The quality of the counselling can have a major impact on the use of services. If women are content with the interaction, they are more likely to follow through and participate fully in screening services. They are also more likely to be advocates for the screening programme and encourage friends and relatives to attend.

Client Recruitment in the Community

Though this manual recommends prioritising facility-based client recruitment, it is recognised that there are many women who do not regularly attend health care facilities who may only be reached by community-based IEC campaigns. In addition, once the programme has achieved

high coverage and many clinic attendees have already been screened, it will be necessary to cast the net wider into the community. Community IEC campaigns can be costly and require a great deal of sustained effort. Thus, where IEC campaigns are undertaken, it is advisable for programme managers to involve NGOs, local and national women's groups and CBOs to assist in co-ordinating and supporting IEC campaign activities. Various information dissemination strategies may be utilised, as discussed below. The mass media (radio and television) and peer education programmes are particularly useful approaches for reaching low literacy populations that cannot utilise print media.

Community launch

A community launch of the cervical screening programme provides an excellent venue for publicising the availability of screening services. Charismatic speakers, as well as attractive booths and displays can be used to motivate women to seek information and attend services. Loud hailers are another way of publicising and launching the service. A vehicle displaying banners promoting Pap smears can travel throughout the community broadcasting recorded information about the services. This has the advantage that men will hear the messages at the same time as women and this should promote discussion on cervical screening amongst them. This is particularly important for encouraging men to support their spouses / partners going for screening, and for understanding the need for sexual abstinence after treatment.

Distribution of IEC materials in the community

Display and distribution of posters and pamphlets is the easiest and least costly venture. IEC materials can be distributed and displayed in shops, shopping centres, libraries, crèches, taxi ranks, churches, and at places employing large numbers of women, such as factories.

Information dissemination via the mass media

One of the best ways to reach large numbers of women in the community with screening messages is by broadcasting messages on the radio (particularly local radio) or placing advertisements in local newspapers. Health promotion units in the health services can assist in accessing the media and suggest how health services can work with the media. Fact sheets on cervical screening may be developed for the media to ensure they have the correct information.

Peer education programmes

Health committees, church groups or other community organisations may identify suitable male and female members of the community to be trained as peer educators. Their main tasks include raising awareness about cervical cancer and screening by giving health talks in the community and at health facilities, conducting peer educator workshops in the community, and distributing IEC materials. A workshop manual that peer educators can use to conduct workshops on cervical screening is available (Women's Health Project, *Cervical Cancer Workshop Manual*, Johannesburg 2000). However, managers who wish to establish peer

education should note that such programmes require a great deal of support and supervision, and as with most volunteer programmes sustainability is a problem. Thus, it is recommended that programme managers approach local and national NGOs as they may be in a better position to provide necessary support and on-going supervision to peer educators.

Cancer hotline

The CANSA national hotline is available for women to phone and receive advice on various issues, including cervical screening. This is suitable for women who have difficulty accessing print materials, or who prefer the anonymity of the telephone call. The telephone number, which is 0 800 22 66 22, should be posted in public places.

Timing of IEC Initiatives

It is most important that IEC initiatives aimed at inviting women to use the service begin immediately after the cervical screening programme has been established or strengthened.

Experience has shown that negative attitudes can develop if demand for a service is created prior to the service being available or if the service is unable to cope with increasing numbers. A sudden surge in client numbers can result in the health service being overwhelmed and both providers and clients becoming frustrated and discouraged. For greater effect, once the screening services are launched, IEC initiatives should be sustained to ensure that the messages continue to reach the target population. One way of ensuring a sustained presence of IEC messages is to undertake focused IEC campaigns repeatedly, for example every few months, perhaps coinciding with specific national events such as Cancer Awareness Week.

This section emphasised the importance of raising community awareness about cervical screening programmes to increase demand for the service. While community-based IEC programmes are useful for raising awareness, health care providers are also urged to actively recruit cervical screening clients from within the health facilities.



Monitoring and Evaluation

SECTION 7



The ultimate goal of a cervical screening programme is to reduce the number of deaths and new cases of cervical cancer. To achieve this, a cervical screening programme must comprise all the components described in the previous sections. Programme managers have to assess continuously whether the various components are in place and functioning, and whether the programme goal is being achieved. This process of monitoring and evaluation can only be done effectively with accurate and relevant health information. Thus, a well-functioning cervical screening HIS is essential to a screening programme.

Barriers to Effective Monitoring and Evaluation of Cervical Screening Programmes

Cervical screening programmes are often implemented without systems in place to monitor and evaluate their performance. Barriers to effective monitoring and evaluation of cervical screening programmes are highlighted in the box below.

Barriers to Effective Monitoring and Evaluation of Cervical Screening Programmes in South Africa

- Staff and management have a poor understanding of the importance of monitoring and evaluation of health programmes
- Limitations of existing HIS:
 - Lack of tools for collecting cervical screening data at facility level
 - Indicators for monitoring cervical screening programme not identified
 - Where available, routine data on cervical screening are not useful or sufficient for proper monitoring and evaluation of the cervical screening programme
 - Data are not collated and used for decision-making at the point of collection
- Inadequate utilisation of available data sources such as cytology laboratory records

Information Required for Monitoring and Evaluating Cervical Screening Programmes

Health facility managers and programme managers need information to monitor and evaluate the cervical screening programme at their respective levels. They need information to monitor the performance of a cervical screening programme and its impact on health status (see box on page 71). Systems must be in place to provide this information for managers. Most of the information in the box can be provided by a good HIS that routinely collects and analyses relevant cervical screening data.

However, not all of the information required for monitoring programme performance has to be collected routinely through an HIS. A supervision system is another mechanism for obtaining information to monitor some aspects of a screening programme. Supervisors monitor programme implementation by regularly visiting facilities to review records, talk to staff and observe activities; and by documenting these visits. Whether they get the information for monitoring and evaluation from an HIS or through supervision systems, managers must use it to identify problems and take corrective action where necessary.

Information Managers Need to Monitor and Evaluate Cervical Screening Programmes

Managers need information to assess programme performance

Screening services

- Is the appropriate target age group being screened?
- Is the programme achieving adequate coverage of the target group?
- Are staff taking good quality (adequate) Pap smears?
- Are staff managing clients with abnormal smears appropriately?

Cytology services

- Are cytology results being received by screening facilities?
- Is the time period between taking a Pap smear and receiving the result reasonably short?
- Are adequacy rates acceptable?

Client management at primary care level

- Are clients informed of their Pap smear results?
- Are clients managed appropriately according to national Guidelines?
- Are clients with abnormal smears that need follow-up being identified and traced?

Colposcopy and treatment services

- Are clients with abnormal smears being referred appropriately?
- Do clients with HSIL receive treatment?
- Do HSIL clients receive treatment within a reasonable period of time?
- Do referral facilities provide feedback to screening facilities?

Managers need information to assess the impact on health status

Has the screening programme reduced:

- the number of new cases of cervical cancer?
- the number of deaths due to cervical cancer?

Establishing a Task Team

An HIS task team may be established to oversee and co-ordinate the development or strengthening of a cervical screening HIS. This team may comprise representatives of district, regional and provincial management, facility managers, health information officers and health providers. It is not necessary to establish a separate cervical screening HIS task team where a health information team or committee already exists. Rather, the existing structure should be improved where necessary and given responsibility for ensuring that essential cervical screening data are incorporated into the existing HIS.

Setting Up a Cervical Screening HIS

An HIS for cervical screening is necessary because cervical screening in many areas of the country is a relatively new programme that needs to be closely monitored to assess regularly whether it is being well implemented. Close monitoring requires information that is currently not readily available in the National Health Information System of South Africa.

Principles of the cervical screening HIS

- Keep it simple – collect only essential data that will be used for monitoring and management of the screening programme
- Ensure good quality data – train staff in the collection and analysis of cervical screening data
- Link outputs to planning – take action where problems are identified
- Integrate into routine services – to ensure sustainability, make the HIS for cervical cancer screening part of routine service provision

Programme managers need to check from time to time that the HIS is performing well. This includes checking that the right information is being provided, the data are accurate and complete, and that management at various levels reviews the information and uses it for decision-making.

Monitoring and evaluation indicators

Appropriate indicators are required to monitor and evaluate the screening programme according to the information needs identified in the box on page 71. Indicators are data that are used to measure a component of a screening programme.

The important point to consider when selecting indicators is not how many are selected, but how useful they are and how feasible it is to collect them in the South African context. Based on CHIP project experience and an understanding of what information is most relevant and feasible to collect, the indicators in Table 7.1 (also see Appendix I) are

The important point to consider when selecting indicators is not how many are selected, but how useful they are and how feasible it is to collect them in the South African context.

recommended for monitoring and evaluating the cervical screening programme in South Africa. These are process indicators, meaning they measure how well a screening programme is being implemented. Appendix I provides definitions and formulae for these process indicators.

Due to limitations of existing systems for reporting new cases and deaths from cervical cancer, it is not feasible to monitor whether the programme is reducing cancer incidence and mortality (impact indicators) at regional, district or provincial levels. The National Cancer Registry in South Africa collates incidence data for the country as a whole and not by region or province. National Cancer Registry data are therefore useful for evaluating impact at the national level. This is appropriate for South Africa because our biggest priority in the short- to medium-term is to ensure effective programme implementation (process indicators are adequate to monitor implementation).

Tools for collecting and collating data at health facility level

Appropriate tools must be in place to collect the data required for monitoring and evaluation. Suggested tools for collecting and collating data at facility levels, developed and tested during CHIP, include:

- A Pap register to collect data about each Pap smear performed (Appendix J). This is a very important tool for collecting data at facility level.

- Data collation sheets to summarise Pap register data monthly or quarterly (Appendix K). Facility managers may use the collated data to monitor and evaluate the programme at their facility level. They also need to submit the collation sheets to district or regional levels (at intervals determined by the district and/or region).
- Tools to collect and collate data from special annual reviews (Appendices L and M). Special reviews may be done annually to collect some of the data required for monitoring and evaluation. Sources of data for these reviews include client tracking cards from the tickler box system (discussed in Section 4) and client folders.

Staff should be trained to use these data collection and collation tools and to identify which data to collate monthly, quarterly, annually, or by special review.

Other sources of cervical screening data

Cytology laboratory records: Cytology laboratory records are another source of cervical screening data. Table 7.1 highlights which data can be collected and collated from cytology laboratory records. In settings where a cytology laboratory has a computerised data system that can easily provide screening data, managers should obtain these data from the laboratory and so clinic staff need not manually collate them from the Pap register.

Supervision systems: Facility managers may be interested in monitoring other aspects of the cervical screening programme that are not highlighted in Table 7.1. They may want to obtain the information highlighted in the box below, especially where they suspect a problem. This information may be obtained through the supervision system.

Data Collected Through Supervision Systems

- **% of results received by screening facility:** this is the proportion of all Pap smears performed for which a result is received by the screening facility. It may indicate a problem with mechanisms for transporting results to facilities.
- **Management of abnormal smears:** this is the proportion of abnormal smears (by type of abnormality) that are managed appropriately by health providers, i.e. according to national Guidelines. This tells the managers whether staff knowledge and practices are good or need to be improved.
- **Feedback rate:** this is the proportion of all clients referred for whom feedback was received by the screening facility. This measures how well the linkages between screening and referral facilities are working.

Table 7.1 Indicators for Monitoring and Evaluating Cervical Screening Programmes

Indicator	Description	Source of data	Frequency of collation at facility level
Screening services			
Appropriate age for screening	The % of all new smears performed that are on women ≥ 30 years. This measures whether providers doing Pap smears are adhering to the national Guidelines regarding screening age group.	Pap register or cytology laboratory records	Monthly
Coverage	The % of target population screened. This indicator shows how well the programme is doing at screening the target population (all women ≥ 30 who attend public sector facilities).	Pap register	Annually
Smear adequacy	The % of all smears that are identified by the laboratory as having endocervical cells. The presence of endocervical cells, a proxy for adequacy, is an indicator of the competence of providers in taking Pap smears.	Pap register or cytology laboratory records	Quarterly
Smear abnormality rate	The % of all smears that are abnormal (by type). This measures trends in abnormal results over time.	Pap register or cytology laboratory records	Quarterly
Cytology services			
Average results turn-around time	Turn-around time, the duration from the date a Pap smear is done to the date the cytology result is received by the screening facility, indicates how well the system for transporting specimens and results between the screening facility and the laboratory is working, or problems at the laboratory, e.g. staff shortages.	Pap register (special review)*	Annually

*See Appendix L for tools that can be used to conduct these special annual reviews

Table 7.1 Indicators for Monitoring and Evaluating Cervical Screening Programmes *continued ...*

Indicator	Description	Source of data	Frequency of collation at facility level
Client management at primary care level			
% clients with abnormal smears informed of their results	This is an indication of how well the programme is doing at informing women with abnormal smears of their results.	Pap register	Quarterly
Colposcopy and treatment services			
HSIL treatment rate	The % of women with HSIL who are treated (it may be within a defined time, e.g. within 6 months of Pap result). This indicates whether the programme will effectively prevent cervical cancer, as HSIL is the precursor for cervical cancer.	Pap register and client folders (special review)*	Annually

*See Appendix L for tools that can be used to conduct these special annual reviews

Using Information to Monitor and Evaluate Cervical Screening Programmes

Monitoring and evaluation systems are beneficial only if the information they provide is used by management to improve the co-ordination and performance of the screening programme. It is the programme manager's role to ensure that the cervical screening information provided by the HIS and supervision systems is utilised for programme improvement at various levels. At screening facility level, facility managers may review this information during meetings with staff, at intervals suggested in Table 7.1. At district and regional levels, appropriate structures that include programme managers, HIS task team members and supervisors, should review the information at regular intervals. Table 7.2 presents examples of problems that may be identified during a review meeting, and suggests the corrective action to be taken where a problem is identified.

Table 7.2 Corrective Actions for Problems Identified During Monitoring and Evaluation

Screening information	Action that must be taken when a problem is identified
Appropriate age of screening	If low, staff will need to be trained on the rationale for the policy and the appropriate age group to screen.
Coverage	If lower than target for the year, investigate why. Are the population data correct? Is the appropriate age being screened? Are older women not requesting Pap smears? May need to step-up active recruitment of women.
Smear adequacy	If smears with endocervical cells are <80% or >95%, investigate and discuss with the laboratory. The problem may be poor skills among staff who perform smears or laboratory staff who screen smears. To correct this, staff may need to be (re)trained.
% of results received by screening facility	If screening facility is not receiving results, supervisors should investigate the transport system. Problems could be either the cytology laboratory is not receiving the specimens, or the results are not getting to the screening facility (because they are lost or sent to the wrong facility). Address the problem with the appropriate stakeholders.
Average results turn-around time	If too long (>4 weeks), investigate. Determine whether it is because specimens are held up at the laboratory or because there are delays during transport to and/or from the laboratory. Address the problem with the appropriate stakeholders.
% of women with abnormal smears informed of their results	If low, supervisors may need to determine whether there are problems with mechanisms for informing clients of their results, and check whether clients are being counselled on the importance of returning for results.
Management of abnormal smears	If few smears are appropriately managed, then staff will need to be trained on clinical management guidelines, and supervisors should ensure all staff performing smears have a copy of the management guidelines to refer to.
HSIL treatment rate	If women with HSIL are not receiving treatment, investigate and determine why. Supervisors may have to check that the data are correct. If data are correct, then check the following:

Table 7.2 Corrective Actions for Problems Identified During Monitoring and Evaluation *continued ...*

	<ul style="list-style-type: none"> • Are the women receiving their results? • Are counselling and information adequate and appropriate? • Are clients being referred to the appropriate facility? • Are clients getting lost in the system between clinic and referral facility?
Feedback rate	<p>If feedback is poor, discuss importance of feedback with referral centres – may need advocacy for buy-in from staff and management of referral centres. May also have to educate and train staff at referral centres.</p>

This section highlighted the requirements for setting up an HIS for monitoring and evaluating cervical screening programmes. It also highlighted that reviewing cervical screening information is valuable because it allows managers to assess progress, identify problems, and emphasise the components of the programme that need greater attention. However, managers must follow up and ensure that any problems identified are really addressed, in order to improve the programme.

Commonly Used Terms

Adenocarcinoma: A malignant neoplasm of the glandular epithelium of the cervix arising mainly in the endocervical canal. If the neoplasm does not extend beyond the basement membrane it is referred to as adenocarcinoma in-situ (AIS)

Atypical glandular cells (AGC): A glandular cell abnormality less severe than the precursor lesion adenocarcinoma in situ

Atypical squamous cells of undetermined significance (ASC-US): Cellular abnormalities that are more marked than reactive changes but that quantitatively or qualitatively fall short of a definitive diagnosis of a squamous intraepithelial lesion. Where high-grade squamous intraepithelial lesions cannot be excluded the abnormality is referred to as ASC-H

Bethesda classification system: A system of reporting cervical cytology results. It is aimed at producing more effective communication of cervical cytology from the laboratory to clinicians. The system includes a descriptive diagnosis and an evaluation of specimen adequacy

Carcinoma in situ (CIS): Early changes of cervical cancer involving the full thickness of the epithelium, but not extending through the basement membrane. This is recognised as the precursor of squamous carcinoma of the cervix

Cervical Intraepithelial Neoplasia (CIN) classification system: This system grades the severity of cervical lesions. According to the system, mild cervical dysplasia is classified as CIN I, moderate dysplasia as CIN II and severe dysplasia and carcinoma in situ as CIN III. It has now been replaced by the Bethesda classification system

Colposcopy: Examination of the vagina and cervix using an instrument (colposcope) that magnifies the vaginal and cervical tissue

Columnar epithelium: This is a single layer of tall glandular cells (secretes mucus) that line the endocervix

Cone biopsy: A surgical procedure involving the removal of a cone shaped section of the cervix using a 'cold knife' (scalpel). This procedure is done either under regional or general anaesthesia. The excised tissue is available for histopathology

Cryotherapy: An outpatient treatment that uses extremely low temperatures to freeze and destroy abnormal tissue

Cytology: The scientific study of cells, using a microscope

Dysplasia of the cervix: An older term used to describe abnormality of the cervical squamous epithelium

Epidemiology: The study of the distribution and determinants of disease, health states and events in populations and the application of this study to control health problems

High-grade squamous epithelial lesion (HSIL): A term used in the Bethesda classification system to describe cervical epithelial abnormalities that have a high likelihood of progressing to cervical cancer if not treated. Includes CIN II and CIN III

Histology: The scientific study of tissue (obtained during biopsy) using a microscope

Hysterectomy: Surgical removal of the uterus including the cervix

Hysteroscopy: A procedure that allows a clinician to inspect the cavity of the uterus using a hysteroscope (an instrument similar to a telescope). The hysteroscope is introduced through the vagina

Incidence: Incidence is the number of new cases arising in a given period in a specified population. It is usually expressed as the number of cases per 100,000 people

Large loop excision of the transformation zone (LLETZ): Also called loop electro-surgical excision procedure (LEEP). This is a procedure in which a thin wire electrode is used to remove the entire transformation zone. Excised tissue is available for histo-pathological examination

Low-grade squamous intraepithelial lesion (LSIL): A term used in the Bethesda classification system to describe mild cervical cellular abnormalities. LSIL is likely to spontaneously regress to normal. It includes CIN I lesions

Metaplasia: This refers to a normal process by which one type of normal cells change into another type of normal cells. Transformation of endocervical cells into squamous cells (squamous metaplasia) occurs at the transition zone of the cervix

Microinvasive cancer: Presence of cancer in the stromal tissue immediately adjacent to the epithelium, usually to a depth of no more than a few millimetres; the earliest stage of malignant neoplastic invasion

Pap smear: A test in which a sample of cervical cells is examined to detect abnormalities

Pathology: The study of disease and its effect on body tissue

Prevalence: The prevalence of a disease is the total number of cases in a defined population at a specific point in time. It is usually expressed as a percentage of population

Squamocolumnar junction: The area at which the endocervical columnar cells meet ectocervical squamous cells on the cervix. This junction marks the inner extent of the transformation zone

Squamous epithelium of the cervix: This consists of multiple layers of thin flat irregular shaped cells, which covers the outer cervix

Squamous carcinoma: A malignancy of squamous cells

Transformation zone (T-zone): This area is located on the surface of the cervix. In this area the columnar cells are constantly changing into squamous cells. Cervical cancer generally originates in the transformation zone close to the squamocolumnar junction and a Pap smear picks up cell abnormalities from this area

Vault smear: A smear taken from the top of the vagina in women who have had a hysterectomy

Abbreviations

AGC	Atypical glandular cells
AIS	Adenocarcinoma in situ
ASC	Atypical squamous cells
ASC-H	Atypical squamous cells where HSIL cannot be excluded
ASC-US	Atypical squamous cells of undetermined significance
CANSA	The Cancer Association of South Africa
CHIP	Cervical Health Implementation Project
CIN	Cervical intraepithelial neoplasia
HIS	Health information system
HLD	High-level disinfection
HPV	Human papillomavirus
HSIL	High-grade squamous intraepithelial lesion
IEC	Information, education and communication
LEEP	Loop electro-surgical excision procedure
LLETZ	Large loop excision of the transformation zone
LSIL	Low-grade squamous intraepithelial lesion
NCCP	National Cancer Control Programme
NDOH	National Department of Health
NHLS	National Health Laboratory Services
Pap	Papanicolaou
QA	Quality assurance
SASCC	South African Society for Clinical Cytology



Appendices



Appendix A: Facility Planning Tool

Clinic nameProvince

Catchment population for clinicDate.....

Determine the following for your clinic catchment area

A. Total population (public sector users)	<input type="text"/>	A = 80% of catchment population (Assume 80% of people in catchment area use public sector facilities)
---	----------------------	---



B. Number of females	<input type="text"/>	B = 51% of A (Assume 51% of catchment population are female)
----------------------	----------------------	--



C. Number of females 30 years or older	<input type="text"/>	C = 38% of B (This is the target group for screening)
--	----------------------	---



D. Number of new Pap smears the clinic must do per year to achieve 70% coverage of target group in 10 years	<input type="text"/>	D = 70% of C, then divided by 10 (70% coverage is the national goal)
---	----------------------	--



E. Number of new Pap smears the clinic will need to do per month	<input type="text"/>	E = D divided by 12 (It is more practical to work with monthly targets. E is the monthly target)
--	----------------------	--



F. Number of repeat Pap smears the clinic is estimated to do per month	<input type="text"/>	F = 15% of E (Assume 15% of Pap smears done per month will need to be repeated)
--	----------------------	---



G. Total number of Pap smears per month (new and repeat)	<input type="text"/>	G = E + F (This is the total number of Pap smears a clinic should do per month)
--	----------------------	---



H. Number of Pap smears each trained nurse will need to do per month	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">H1. Number of trained nurses:</td> <td style="width: 50%;">H1 = number of nurses trained in taking Pap smears</td> </tr> <tr> <td>H2. Number of smears per nurse:</td> <td>H2 = G divided by H1 (This is the workload per trained nurse)</td> </tr> </table>	H1. Number of trained nurses:	H1 = number of nurses trained in taking Pap smears	H2. Number of smears per nurse:	H2 = G divided by H1 (This is the workload per trained nurse)	
H1. Number of trained nurses:	H1 = number of nurses trained in taking Pap smears					
H2. Number of smears per nurse:	H2 = G divided by H1 (This is the workload per trained nurse)					



Conduct an audit to determine the quantity of equipment and supplies available to perform the number of smears in G above (use the equipment and supplies audit form provided).

Appendix A: Facility Planning Tool *continued ...***Explanations for Using the Facility Planning Tool****Clinic catchment population**

Get clinic catchment population data from your district office or local Statistics South Africa office.

Step A. Total population that use the public sector

Not everyone in your catchment area uses public sector facilities. Your clinic will cater only for those that use the public sector. Assume 80% of your catchment population use public sector facilities (on average, 80% of the national population use the public sector).

Step B. Number of females

If you don't have the statistics for the number of women in your catchment area, assume 51% of your catchment population are female (51% of national population are female).

Step C. Number of females 30 years or older

The target group for Pap smears is women 30 years old or older. If the number of women over the age of 30 years old is unknown, assume that approximately 38% of the females in your catchment area are in this age group (38% of the national female population is 30 years or older).

Step D. Number of new Pap smears the clinic must do per year to achieve 70% coverage of target group in 10 years

The national goal for cervical screening programme is: 70% coverage of the target group in 10 years. This means 70% of the females 30 years or older (70% of C) must be screened in the first 10 years of setting up the cervical screening programme. However, to work out the annual target divide this number by 10 (assume the number of women who need to be screened is spread equally per year over the 10 year period).

Step E. Number of new Pap smears the clinic will need to do per month

At a clinic level, it is more practical to work with a monthly than an annual target. So, to find the number of Pap smears the clinic should do per month to achieve 70% coverage, divide the annual target (number in D) by 12.

Step F. Number of repeat Pap smears the clinic is estimated to do per month

Every month, a proportion of new Pap smears done will be repeated due to inadequate specimens, lost specimens, etc. If this proportion is unknown, assume 15% of Pap smears done per month will need to be repeated.

Step G. Total number of Pap smears per month (new and repeat)

The number of repeat smears must be added to the number of new smears (F + E) to determine the total number of smears the clinic must do per month to achieve the coverage goal and cater for repeats. This number is also used to determine the staffing workloads and equipment needs for the clinic.

Step H. Number of Pap smears each trained nurse will need to do per month

This is the Pap smear workload per nurse. To work this out, 2 steps are involved:

- H1: Count all nurses in your clinic who are trained in taking Pap smears (this includes formal courses, in-service training, refresher courses, etc – any training that equips a nurse with skills for taking Pap smears).
- H2: Work out how many Pap smears each trained nurse should perform per month by dividing the total number of Pap smears the clinic should do per month by the number of trained nurses.

Appendix A: Facility Planning Tool *continued ...***Cervical Screening Equipment and Supplies Audit Form**

Clinic name Date

District Province

Name of staff Signature

Goal total number of Pap smears per month

Type of equipment and supplies	Quantity available in clinic	Quantity required to achieve goal	Shortfall	Action taken and outcome
Capital equipment				
Examination couch				
Examination light (working)				
Vaginal speculum				
Steriliser/autoclave				
Swab holding forceps				
Container for soiled instruments				
Consumables				
Order periodically (specify period)				
Aylesbury spatula				
Glass slide				
Fixative				
Decontamination fluid				
Gloves				
Linen Saver				
Cytology request forms				
IEC materials (pamphlets)				
Slide mailer (container for transporting slides)				
Slide marker				
Pap smear record book/sheet				

Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes

Rapid Survey 1: Health worker knowledge, attitudes and practices (KAP)

Interviewer: Please interview all nurses at the health centre and say: *'Hello, we are here representing We are planning to improve services for cervical screening and would like some information and ideas from you. Do you mind if I ask you a few questions? Thank you'*

Clinic Name **Date**

1. Are you aware that there is a South African cervical screening policy? Yes No

2. At what age does the policy state that women should begin screening?
Instruction to interviewer: Do not read the list of options. Circle the response given
 - i. Under 30
 - ii. 30 years and over
 - iii. Don't know

3. How often does the policy state that women should be screened?
Instruction to interviewer: Do not read the list of options. Circle the response given
 - i. Every year
 - ii. Every 2-5 years
 - iii. Every 6-9 years
 - iv. Every 10 years
 - v. Other
 - vi. Don't know

4. The policy states that a woman is entitled to 1 free screening Pap smear every 10 years starting at age 30 or older. Do you agree with this policy? Yes No Not sure

5. Have you ever been trained to take a Pap smear? Yes No

6. When was the last time you did one? In the last month More than 1 month ago

7. What action should you take if the Pap result for a new (not repeat) screen is:

HSIL

LSIL

ASC-US

No malignant cells

8. Do you have any ideas for how we could improve the cervical cancer screening services?

Thank you for your help

Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes *continued ...*

Rapid Survey 2: Screening services facility audit and key informant interview

Interviewer: Please interview the person in charge at the health facility and say: *'Hello, we are here representing We are planning to improve services for cervical cancer screening and would like some information and ideas from you. Do you mind if I ask you a few questions? Thank you'*

Clinic Name **Date**

1. How many days of the week do you offer Pap smear services?
2. How many professional nurses do you have at this clinic?
3. How many of these professional nurses are trained to take Pap smears?
4. How many professional nurses actually perform at least 1 Pap smear per month?
5. On average, how long does it take for cytology results to return from the laboratory (in weeks)?
6. Do you have a system to keep track of clients with inadequate or abnormal results? Yes No
7. What proportion of clients return for their results (%)?
8. Do you get feedback on the outcomes of referrals? Always Sometimes Rarely Never
9. Do you give health talks on cervical cancer at least once a month? Yes No
10. Do you do anything specifically to encourage older women to have Pap smears? Yes No
If yes, give details:
11. Do you have a Pap register? Yes No
12. Do you produce monthly/quarterly reports on cervical screening? Yes No
13. How many Paps did you do in the last quarter?
14. How many of these were: new smears (.....), repeat smears (.....)?
15. How many of these were: on women under 30 (.....), on women 30 or older (.....)?

Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes *continued ...*

Rapid Survey 2 *continued ...*

Equipment and supplies available at the facility

16. Total number of rooms used for providing Pap smears

Item	Number available
Examination couch	
Examination light (working)	
Vaginal speculum	
Steriliser/autoclave	
Swab holding forceps	
Container for soiled instruments	
Aylesbury spatula	
Glass slide	
Fixative	
Decontamination fluid	
Gloves	
Linen Saver	
Cytology request forms	
IEC materials (pamphlets)	
Slide mailer (container for transporting slides)	
Slide marker	
Pap smear record book/sheet	

Thank you for your help

Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes *continued ...*

Rapid Survey 3: Cytology services key informant interview

Interviewer: Please interview the person in charge of the laboratory in your area of jurisdiction and say: *'Hello, we are here representing We are planning to improve services for cervical cancer screening and would like some information and ideas from you. Do you mind if I ask you a few questions? Thank you'*

Laboratory name..... **Date**

1. How many staff do you have who read Pap smear slides?
2. How many Pap smear slides are read in the laboratory per month?
3. Do you have enough staff to meet current workloads? Yes No
- 3.1. If No, how many additional staff do you need at current workloads?
4. On average, how long does it take you to return Pap smear results (in weeks)?
5. How is a client informed of a positive result?
-
6. How is the referring clinic informed of a positive result?
-
7. Do you use the New Bethesda System for reporting cytology results? Yes No
- 7.1. If No, what reporting system do you use?
8. Do you have a quality assurance system(s) in place? Yes No
- 8.1 If Yes, please describe it
9. What % of Pap slides were unsatisfactory for evaluation in the last month of complete records fordistrict / region?%
10. What % of Pap slides had no endocervical component in the last month of complete records for..... district / region?%
11. What are some of the constraints you face in this laboratory, with respect to cytology?
.....
.....

Thank you for your help

Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes *continued ...*

Rapid Survey 4: Colposcopy and treatment services key informant interview

Interviewer: Please interview the person in charge of the colposcopy clinic in your area and say: *'Hello, we are here representing..... We are planning to improve services for cervical cancer screening and would like some information and ideas from you. Do you mind if I ask you a few questions? Thank you.'*

Colposcopy clinic name **Date**.....

1. How many staff do you have to perform colposcopy?
2. On how many days per week do you offer colposcopy services?
3. On average, how long does a client wait between cytology result and colposcopy appointment (in weeks)?
4. How many clients are referred here for colposcopy per month?
5. What % of referred clients actually keep their colposcopy appointments?
6. How are clients who do not keep their appointments subsequently contacted?
.....
.....
7. How consistent are histology results for HSIL consistent with cytology results?
 - i. Very consistent >90%
 - ii. Consistent 75-90%
 - iii. Somewhat consistent 50-74%
 - iv. Not consistent <50%
8. How are referring clinics informed of the colposcopy results?
.....
9. After seeing you, how long do women have to wait for:
 - i. Cryotherapy (weeks)
 - ii. LEEP/LLETZ (weeks)
 - iii. Radiotherapy (weeks)
 - iv. Chemotherapy (weeks)
 - v. Surgery (weeks)
10. What are some of the constraints you face in this colposcopy clinic?

Thank you for your help

Appendix B: Rapid Survey Tools for Assessment of Cervical Screening Programmes *continued ...*

Rapid Survey 5: Client knowledge, attitudes and practices

Interviewer: Please interview a sample of women over 30 years old at the health facility and say: 'Hello, we are here representing
We are planning to improve services for cervical cancer screening and would like some information and ideas from you. Do you mind if I ask you a few questions? Thank you.'

Clinic name **Date**

1. Can I ask how old you are? **Interviewer, exclude any women under 30**

2. Have you ever heard of a Pap smear?

If No or Don't know, skip to Question 9

Yes

No

Don't know

3. What part of the body is examined during a Pap smear?

Instruction to interviewer: Do not read the list of options. Circle the response given

i. Cervix (correct)

ii. Vagina, uterus, or female private parts (semi-correct)

iii. Other response (specify)..... (incorrect)

iv. Don't know

4. At what age should a woman have her first Pap smear?

Instruction to interviewer: Do not read the list of options. Circle the response given

i. Under 30

ii. 30 years and older

iii. Don't know

5. How often does the government say a woman can have a free Pap smear?

Instruction to interviewer: Do not read the list of options. Circle the response given

i. Every year

ii. Every 2-5 years

iii. Every 6-9 years

iv. Every 10 years

v. Other

vi. Don't know

6. Have you ever had a Pap smear?

Yes

No

Not sure

6.1 If yes, have you had a Pap smear in the last 10 years?

Yes

No

Not sure

7. In your opinion, do the following need to have Pap smears:

Instruction to interviewer: Read the list of options and circle the response given

i. Women who have finished having children

Yes

No

Don't know

ii. Women who are no longer having sex

Yes

No

Don't know

iii. Women after menopause

Yes

No

Don't know

8. Have you heard of cervical cancer?

Yes

No

Don't know

9. Can cervical cancer be prevented?

Yes

No

Don't know

Thank you for your help

Appendix C: Cytology Request and Report Forms

Cervical Screening: Cytology Request Form

Name															Race	B	C	I	W
Surname															D.O.B.	dd/mm/yyyy			
ID no.															Age (if no D.O.B) years			

Patient number		Client's address	
Client's tel no.			
()			
Clinic telephone number		Clinic name and address	
()			

Date of smear	dd/mm/yyyy	Smear taken by	Name
Smear type	Screening		Designation
	Symptomatic		

CLINICAL DETAILS

LMP	dd/mm/yyyy	Post-menopausal?	yes	no	Currently pregnant?	yes	no
-----	------------	------------------	-----	----	---------------------	-----	----

Hormone use (in the last 6 months)

Combined oral contraceptive pill	yes	no	Other (specify)
Progesterone (e.g. injectable)	yes	no	
Hormone replacement therapy	yes	no	

CLINICAL HISTORY

Cervical smear history

Previous cervical smear?	yes	no	unsure	Result of previous cervical smear
Laboratory no. & year of previous smear	Lab No year			
Clinic/hospital where previous smear done				

Previous histology

Previous histology?	yes	no	unsure	Diagnosis of previous histology
Laboratory no. & date of previous histology	Lab No year			
Clinic/hospital where previous biopsy done				

Previous therapy

Previous treatment for pre-cancerous lesions?	yes	no	unsure	Type of treatment for pre-cancerous lesions (if known)	LLETZ	Cryotherapy	Conisation
Previous treatment for cervical cancer?	yes	no	unsure	Type of treatment for cervical cancer (if known)	Radiotherapy	Hysterectomy	Chemotherapy

CURRENT SMEAR

Source of specimen	cervix	vaginal vault	Bleeding from cervix?	yes	no
Method of cervical smear collection	spatula	cytobrush	IUCD in situ?	yes	no
Appearance of cervix	normal	discharge	abnormal red area	abnormal white area	
	Other genital abnormality (please specify):				

Appendix C: Cytology Request and Report Forms *continued ...*

Cervical Screening: Cytology Report Form

1. SPECIMEN ADEQUACY

RECOMMENDATION FOR MANAGEMENT OF CLIENT

1.1. Unsatisfactory for evaluation due to:		Repeat smear, correcting the problem:
Sparse cellular material		Visualise cervix and scrape firmly for representative specimen
Obscured by blood		Gently wipe blood off cervix before taking the smear
Obscured by inflammation		Gently wipe discharge off cervix before taking the smear
Absence of endocervical cells		Repeat cervical smear – try using cytobrush to collect representative specimen
Specimen too degenerate		Ensure fixative is not expired. Spray fix the specimen immediately
Other (specify)		
1.2. Satisfactory for evaluation		
Presence of endocervical cells		Manage according to result below

2. RESULT

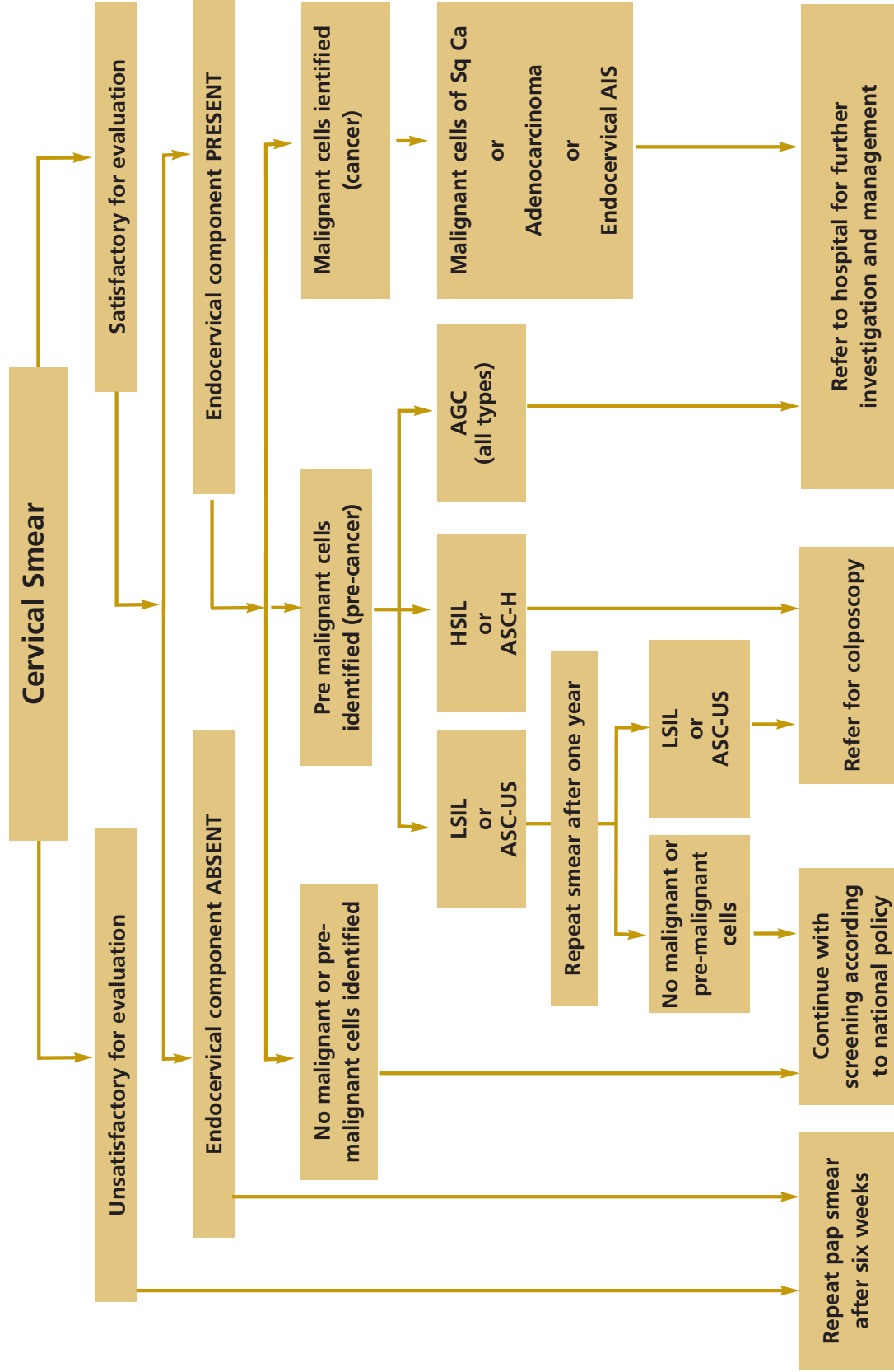
2.1. Epithelial cell results		
No pre-malignant or malignant cells		Continue with screening according to national policy
ASC-US		Repeat cervical smear in 1 year
LSIL		Repeat cervical smear in 1 year
ASC-H (cannot exclude HSIL)		Refer for colposcopy
HSIL		Refer for colposcopy
2nd LSIL or ASC-US after previous LSIL or ASC-US		Refer for colposcopy
Malignant cells of squamous carcinoma		Refer for further investigation and management
AGC (specify type)		Refer for further investigation and management
Adenocarcinoma in situ (AIS)		Refer for further investigation and management
Adenocarcinoma		Refer for further investigation and management
2.2. Organisms		
Candida		Treat client accordingly
Bacterial vaginosis		
Trichomonas vaginalis		
Herpes simplex virus		
Actinomyces		
Other (specify)		

Examined by(name)(designation) Date.....

Authorised by(name).....(designation) Date

Appendix D: Client Management Guidelines

Recommendations for Management of Cervical Screening Clients at Primary Care level



AGC: Atypical Glandular Cells. AIS: Adenocarcinoma-in-situ ASC-H: Atypical Squamous Cells – cannot rule out HSIL ASC-US: Atypical Squamous Cells of Undetermined Significance LSIL = Low Grade Squamous Intraepithelial Lesions HSIL: High Grade Squamous Intraepithelial Lesions Sq Ca: Squamous Carcinoma Where presence of organisms is noted, treat client accordingly

Appendix E: Letter Informing Client of the Need for Colposcopy

Page 1 of 2

Date

Dear (client name)

The results of your recent Pap smear (test of the cells of the mouth of the womb/cervix) show that there are some abnormal changes in your cervix. This abnormality is not cancer, but if left untreated may develop into cancer in the future. It is important that you have these abnormalities checked now, with a colposcopy examination (see over).

An appointment has been made for you at (colposcopy clinic name and address):

.....
.....

on (date) at (time)

If:

- The above appointment does not suit you OR
- You will be menstruating on the above date OR
- You have any further questions or concerns

Please contact us at

Yours sincerely,

Appendix E: Letter Informing Client of the Need for Colposcopy *continued ...**Page 2 of 2***Information about the colposcopy examination****What is a colposcopy?**

A colposcopy is an examination using a colposcope. A colposcope is a type of magnifying glass that allows a doctor to examine the cervix (mouth of the womb) more closely.

What happens during the colposcopy examination?

The first part of the colposcopy examination is very much like having a Pap smear. As with the smear, the doctor will gently insert an instrument (speculum) into the vagina. The doctor will then use the colposcope to examine the mouth of the womb (cervix). The colposcope never actually touches you. If necessary, a tiny piece of tissue will be taken from the cervix. This is not painful but you may feel a slight discomfort. The piece of tissue will be sent off to the laboratory for further examination. You might be offered treatment immediately or called back for further follow-up and treatment.

Why should I go for a colposcopy examination?

Your Pap smear showed that there are some abnormal changes in your cervix. It is likely that these changes can easily be treated. This treatment can prevent you getting cancer, so it is important that you attend the colposcopy clinic.

Appendix F: Client Tracking Cards

Below is an example of a card that can be used as part of the tickler box system to track clients who require recall to a primary level facility for a repeat Pap smear.

<p>Cervical Screening Tracking Card: Client Recall</p> <p>Name</p> <p>ID number or date of birth</p> <p>Home address</p> <p>Telephone number</p> <p>Client folder number</p> <p>Date Pap smear done</p> <p>Pap smear result</p> <p>Date when client must return</p> <p>Follow-up record</p> <p>Date of repeat smear</p> <p>Action taken if client has not returned</p>
--

Appendix F: Client Tracking Cards *continued ...*

Below is an example of a card that can be used as part of the tickler box system to track clients who require referral for colposcopy or further investigation and management.

Cervical Screening Tracking Card: Client Referral

Name

ID number or date of birth

Home address

Telephone number

Client folder number

Date Pap smear done

Pap smear result

Appointment for referral at (name of referral centre)

on (dd/mm/yy)

Tracking record

Date client informed of Pap result and need for referral (dd/mm/yy)

Outcome of referral

Appendix H: Feedback Letter Informing Staff at the Screening Facility of the Outcome of a Client's Visit to the Colposcopy Clinic

To (name of clinic)

Thank you for referring (name of client)

..... (your client folder number)

To (name of colposcopy clinic)

Colposcopy and biopsy were performed on (date)

Final histological diagnosis (tick):

Normal cervix	
CIN 1	
CIN 11	
CIN 111	
Microinvasive cancer	
Malignant (invasive disease)	
Other (specify)	

The client was managed as follows at this clinic (tick):

Date	Management	
	LLETZ	
	Cone biopsy	
	Laser	
	Total abdominal hysterectomy	
	Oncology referral	
	Other (specify)	

Recommended follow-up management

.....

Thank you for your referral. Please contact this colposcopy clinic should further information be required.

Yours sincerely,

NameSignatureDate

Adapted from a feedback letter developed by Professor L. Denny and used at the Colposcopy Clinic, Groote Schuur Hospital, Provincial Administration of the Western Cape, with inputs from Dr T. Smith, Department of Obstetrics and Gynaecology, Johannesburg Hospital, Gauteng Department of Health.

Appendix I: Process Indicators for Monitoring and Evaluating Cervical Screening Programmes

Indicator	Definition	Source of data	Frequency of collation at facility level
Screening services			
Appropriate age for screening	<u>No. of new smears done on women ≥ 30 years</u> x 100 Total no. of new smears	Pap register or cytology laboratory records	Monthly
Coverage	<u>No. of new smears in women ≥ 30 years</u> x 100 Total target population	Pap register	Annually
Smear adequacy	<u>No. of smears with endocervical component</u> x 100 Total no. of smears	Pap register or cytology laboratory records	Quarterly
Smear abnormality rate	<u>No. of abnormal smears (specify type) in time period</u> x 100 Total no. of smears done in the same time period	Pap register or cytology laboratory records	Quarterly
Cytology services			
Average results turn-around time	See Appendix L	Pap register (special review)**	Annually
Client management at primary care level			
Clients with abnormal smears informed of their results	<u>No. of women with abnormal smears informed of results</u> x 100 Total no. of women with abnormal smears	Pap register	Quarterly
Colposcopy and treatment services			
HSIL treatment rate	<u>No. of women with HSIL that receive treatment</u> x 100 Total no. of women with HSIL	Pap register and client folders (special review)**	Annually

**See Appendix L

Appendix J: Pap Register for recording patient information at primary care level

	Date Pap done	Pap done by	Name of Client	ID No. / D.O.B	Physical Address	Tel No.	Client folder No.	New Smear <30 yrs ≥30 yrs	Repeat Smear <30 yrs ≥30 yrs	EC* Present		Pap Smear Result	Action Needed**	Results Given***
										Yes	No			
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

* EC = endocervical component
 ** Refer to management guidelines for appropriate action. Where client requires recall or referral, fill in a tracking card in the tickler box
 *** Tick if clients has been informed of results

Appendix K: Tools for Collating Data from a Pap Register

Pap Register Data Collation Sheet: Monthly Collation

Clinic name

Month Year.....

Data item	Number
A. New Pap smears	
In women less than 30 years	
In women 30 years or older	
B. Repeat Pap smears	
C. Total Pap smears (A + B)	

Notes for user

- Use the Pap register data to fill in this collation sheet at the end of every month.
- Submit this sheet to the district/regional office when requested.
- Indicators that can be calculated with this collated data include (see Appendix I for formulae):
 - **Appropriate age for screening**
 - **Coverage:** This is determined annually. Every month, submit *no. of new smears in women 30 or older* to the district or regional levels, where coverage is worked out at the end of the year.

Appendix K: Tools for Collating Data from a Pap Register *continued ...*

Pap Register Data Collation Sheet: Quarterly Collation

Clinic name

Reporting Period Year

Data item	Number
A. Total Pap smears performed during this period	
B. Pap smears with endocervical component present	
C. Total abnormal smears	
ASC-US	
LSIL	
ASC-H (cannot exclude HSIL)	
HSIL	
Squamous carcinoma	
AGC	
Adenocarcinoma in situ	
Adenocarcinoma	
D. Clients with abnormal smears informed of their results	

Notes for user

- Use the Pap register data to fill in this collation sheet for a 3 month period. To allow time for Pap smear results to be received at the facility, fill in the sheet 3 months after the end of the reporting period. For example, for the reporting period ending March 2003, fill in the sheet at the end of June 2003.
- Indicators that can be calculated with this collated data include (see Appendix I for formulae):
 - **Smear adequacy**
 - **Smear abnormality rates** (total and by type)
 - **Clients with abnormal smears informed of their results**

Appendix L: Tools for Collating Data from a Special Annual Review to Assess Average Results Turn-around Time

A special annual review can be undertaken to assess average turn-around times at facility level.

Select one month in the year and calculate the average turn-around time for that month. The tool for collating turn-around time data is as follows:

Data Collation Tool for Assessing Turn-around Times		
Total number of days (A) (sum of all turn-around times)	Total smears for which there is a result (B)	Average turn-around time (A/B) (days)

Instructions for data collector

Look at the Pap register and for each Pap smear entered during the selected month, work out the turn-around time (the number of days it took for the result to get back to the clinic). This is done as follows:

- 1) For each Pap smear recorded in the register, calculate the number of days from 'date smear done' to 'date result received'. This is the results turn-around time for each Pap smear^{*}
- 2) Add up the total turn-around times for all Pap smears performed in the selected month (total for all smears worked out in 1) above) and enter this number in column A
- 3) Divide the figure worked out in 2) by the total number of smears performed during the selected month^{**}

Notes for user

* There is no provision for 'date smear result received' on the suggested Pap register in Appendix J. Therefore, for the selected month of the review only, create an extra column at the end of the Pap register to record these dates. Record the individual turn-around times calculated for each Pap smear with a result in this extra column at the end of the register. Add the turn-around times: the total of these turn-around times should then be entered in column A on the collation sheet.

** To calculate the turn-around time, use only those Pap smears for which 'date smear results received' is available and entered in the Pap register. Enter the total number of smears with a result in column B on the collation sheet.

Appendix M: Tools for Collecting and Collating Data for a Special Annual Review to Assess HSIL Treatment Rates

Data Sheet for Collecting Data on HSIL Clients from Colposcopy Clinic

Name of clinic where Pap smears done

	Name of client	Age of client (yrs)	Date Pap smear done	Date seen at colposcopy clinic*	Name of facility where colposcopy done	HSIL confirmed by histology? (Y/N)	Treatment provided (tick appropriate column)		
							Yes	No	N/A: not HSIL on histology
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

* If client did not attend the clinic, write DNA (did not attend) in this column

Instructions for data collector

- Look at the Pap register and identify all clients who had a Pap smear with a result of HSIL during a 3 month period ending at least 6 months prior to conducting the annual review. For example, if you are conducting the review in October 2002, you need to select the period January to March 2002 or earlier.
- Then go to the colposcopy clinic where these clients were referred and check colposcopy clinic records to determine how many came for colposcopy clinic and the outcome of their visit.
- Collect data on each HSIL client on the data collection sheet.
- Collate data on a data collation sheet to calculate HSIL treatment rate.

Appendix M: Tools for Collecting and Collating Data for a Special Annual Review to Assess *continued ...*

Data Collation Tool for Assessing HSIL Treatment Rates

Data collated for the period..... to 20

Number of clients with confirmed HSIL (A)	Number of clients with confirmed HSIL who received treatment for HSIL (B)	HSIL treatment rate (A/B x 100)

Instructions for data collector

- Collate the data on the colposcopy clinic data sheet onto this collation sheet.
- Include only those clients with a confirmed HSIL result (by histology) in column B.



