

A Critical Analysis of the Provision for Oral Health Promotion in South African Health Policy Development

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Declaration



Declaration

I declare that “A Critical Analysis of the Provision for Oral Health Promotion in South African Health Policy Development” is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete references.

Signature: _____

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“It is not so much that ‘knowledge is power’ but that power is knowledge’ in the health system”

Weiss (1999) *cited in* Perkins, Simnett and Wright 1999.

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List of Abbreviations

CHL	Comprehensive Healthy Living
ECC	Early Childhood Caries
E.CAPE	Eastern Cape
EDL	Essential Drug List
F. STATE	Free State
GAUT	Gauteng
HP	Health Promotion
KZN	Kwa-Zulu Natal
MCWH	Maternal, Child and Women's Health
MPUMA	Mpumalanga
MRC	Medical Research Council of South Africa
N. CAPE	Northern Cape
N. PROVINCE	Northern Province (Limpopo)
N. WEST	North West
OH	Oral Health
OHP	Oral Health Promotion
PHC	Primary Health Care
RDP	Reconstruction and Development Programme
STDS	Sexually Transmitted Diseases
W. CAPE	Western Cape
WHO	World Health Organisation
Dept of Health	Department of Health
No.	Number

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Summary

The rhetoric of primary health care, health promotion and health service integration is ubiquitous in health policy development in post-apartheid South Africa. However the form in which oral health promotion elements have actually been incorporated into other areas of health care in South Africa and the extent to which they have been implemented, remains unclear. The central aim of this research was to critically analyse oral health promotion elements in health policies in South Africa and determine the extent to which they have been implemented. The study set out to test the hypothesis that oral health promotion is fully integrated into South African health policy and practice.

Method

The study used data source triangulation to construct a multilevel conceptual framework for data collection and analysis, collecting a combination of quantitative data and qualitative information on health service management and decision-making. Information for each level was obtained variously from health policy documents, health programme decision-makers, report on oral health promotion activity and oral health care service statistics. The study reviewed all available health policy documents and material from national and provincial health directorates with the capacity to impact on oral health, including Oral Health, Mental Health, Chronic Diseases and Disabilities, Health Promotion, Maternal Health, Child and Women's Health, Nutrition, HIV/Aids and STDS. Content analysis of health policy documents focused on characterising organisational changes and identifying priorities and strategies for oral health promotion. The analysis also included the identification of potential alliances, resources and policy aspects that are important for oral health development but are absent in policy. Quantitative data included statistics on oral health promotion activities. Qualitative data was obtained through telephonic interviews, in-depth interviews and self-administered questionnaires. All qualitative data was recorded and coded using quotations related to perceptions, policy formulations, integration of district health services and support for oral health promotion in policy. The relevance of the themes emerging was compared to the guiding principles of the conceptual framework.

Results

There are distinct contradictions in oral health promotion-related policy statements and decision-making in all of the areas examined. Only 50% of the 15 national health policy documents examined had statements on oral health or oral health promotion. Only two (17%) of the twelve provincial health policy documents reviewed made references to oral health promotion. Oral health promotion is almost entirely absent from policy statements except in four programmes. These include the Policy Guidelines on Youth and Adolescent Health (2001), the draft National School Health Policy and Implementation Guidelines (2002), the Health Promotion Draft Policy (1999) and national guidelines on the management and treatment of HIV/Aids (2000-2001).

Policy makers at national level recognised the link between oral health and their respective health units yet the results indicate that the onus is left upon the National Oral Health Directorate to motivate for inclusion in other health policy efforts. Where there is a recognised need for specific involvement, the policy process responded to include an oral health element, as was evident in the development of the National Policy Guidelines on Youth and Adolescent Health (2001). The interviews and questionnaires (n=35) at provincial level revealed that the process of integrating health policy initiatives is inconsistent and fragmented. Only fourteen provincial health managers (40%) indicated that their programmes included a viable oral health promotion element of some kind. There was almost universal agreement among provincial health managers (86%) that oral health promotion activities could be integrated with their respective health programmes at district level.

One example of a policy document that has clear rhetoric on oral health promotion is the South African National Oral Health Strategy (2004). However, the technical strength of this document appears not to have reached other levels of the health system or key decision makers in other health programmes or directorates. It is perhaps a classic example of rhetoric and reality not connecting in health policy. The study showed almost exclusive reliance on (outdated) national oral health surveys as the primary source of epidemiological data to guide policy development in South Africa despite the limitation of these surveys. Epidemiological data on oral conditions, such as oral manifestations of HIV/Aids, oral cancer and trauma was reported to be scant.

Discussion

The reported lack of updated and reliable epidemiological data on commonly occurring oral conditions has contributed to the unclear picture of oral health in South Africa. This suggests that actual policy formulation, decision-making and oral health care resource allocation is happening without sound epidemiological information or community needs assessment. This further complicates the already poor accessibility to health care. This study also found gaps in communication between national and provincial health directorates. The health policy process in South Africa appears to be dominated by power, protection of professional interests and maintenance of autonomy. This interplay between health process and power in policy formulation needs much closer scrutiny in future.

Where the study did find evidence of policy or programme commitment to oral health promotion, there was usually no evidence of its implementation. Oral health promotion related-policy development appears to be way ahead of the current implementation processes. The reported shortages in human resources and the current imbalance in the urban/rural distribution of oral hygienists could further complicate this area of service delivery. The Health Promoting Schools Initiative may provide opportunities for school oral health programmes to be integrated within a comprehensive approach to health care at schools. The policy on community water fluoridation is an example of a policy that has entered legislation but has still not been implemented. Its relevance as a national programme in South African may need to be re-assessed if its implementation continues to be stalled. This could further exacerbate existing health inequalities in South Africa. The results therefore suggest that even the technically strong content of the national oral health policy document may not have the kind of impact it hoped for. To successfully influence the processes of oral health promotion requires more than simple, document-based policy reforms that are strong on rhetoric and good ideas, but have not achieved the widespread stakeholder support necessary to carry them through to funding and implementation. It is therefore important that oral health promotion strategies are re-assessed and re-structured so that real gains in dental public health can be attained. The failure of oral health policy to have a marked influence on other areas of health policy could be due to a number of factors. One important outcome of health policy development is equity in health service delivery, but this was not reflected in any of the oral health policy elements researched. Where rhetorical introductory statements did indicate an awareness of equity, no indicators by which to measure success or failure could be found.

Conclusions and Recommendations

Oral health promotion is clearly not enjoying much support or prominence and is almost entirely absent from policy and programmes, with few exceptions. Health policy development appears to follow an underlying vertical process despite all efforts to project this process as an integrated effort. Potential opportunities to integrate health service delivery have not been adequately explored. The study shows that oral health has struggled to find recognition in broader health and social development programmes. The failure to translate policy rhetoric on oral health promotion into pragmatic policy formulations or implementable programmes and strategies will continue to perpetuate health inequalities in South Africa. Thus the study clearly shows that the research hypothesis was not true. Even the most technically correct policy documents, written in politically correct language, requires a carefully thought out implementation process, if the community is finally to see the health gains promised.

The findings strongly recommend a re-organisation of health promotion service delivery from national to district health level with a clear strategy to link policy makers across sectors, departments and provinces to facilitate health policy and programme integration. Opportunities do exist for oral health promotion to be effectively integrated into other key health policy development efforts. There is however a need to consider the context, content and appropriateness of oral health promotion services in South Africa.

Chapter 1

Introduction

Despite technological advancements in oral health care and a significant decline in dental caries rates, oral diseases continue to be a major public health concern in South Africa (Department of Health 2004; Appendix 1). Historical imbalances in oral health care have created a legacy of diverse unmet oral health needs despite universal knowledge on preventive and cost-effective measures (Myburgh et al 2005; Singh 2000; Gugushe 1998; Hobdell et al 1997). The prevalence, distribution and impact of oral diseases justify the need for coherent oral health policy statements that can accurately identify appropriate oral health promotion activities (Myburgh 1995).

Healthy public policy is regarded as one of the cornerstones in health promotion efforts (Tones and Green 2004). Health sector reform in post-apartheid South Africa (after 1993) has been characterised by re-orientation of health service delivery through the district health system, using health policy development as a strategy to spearhead this process (Government Gazette Number 17910, 1997; Pillay 1999). These initiatives all embrace integrated health service delivery, a political commitment to involve stakeholders, create supportive environments through the equitable distribution of resources, and facilitate community participation and inter-sectoral collaboration in pursuit of health goals within a broader framework of social development. However the form in which oral health policy elements have been incorporated into other health care areas and the extent of their implementation, remains unclear.

1.1. Purpose of the Study

A review of health policy studies suggests that a better understanding of policy development could be achieved if the analysis examines both the content or substance and processes of these efforts (Walt and Gilson 1994; Walt 1994). This approach to health policy analysis is a departure from the conventional focus on cost-effectiveness and efficiency of health care delivery in relation to economic health gains (Brugha and Varvasovszky 2000). The World Health Organisation (WHO) Regional Initiatives for an Oral Health Strategy in African countries have identified certain fundamental requirements for an effective oral health policy (Myburgh et al 2005; Myburgh, Hobdell and Lalloo 2004). These initiatives advocate

a systematic approach to the identification and selection of oral health policy priorities that are evidence-based and appropriate to local community settings. The challenge would then be to ensure a selection of cost-effective and evidence-based oral health interventions. There is also a need to identify and understand the real and perceived hierarchies of power, professionalism, interest groups and their relationship in shaping policy agendas and health decision-making (Owen 1995; Walt and Gilson 1994).

Despite the development of a South African National Oral Health Strategy (Department of Health 2004), most discussion on policy has focused on content rather than the process areas of health formulation (Myburgh 1995). Policy assessment appears to lack critical appraisal of the processes that would influence implementation and sustainability (Owen 1995). The literature further suggests that the South African experience in oral health policy efforts has not been previously subjected to a rigorous and systematic analysis of both the content and processes of health policy development (Myburgh 1998). A sound theoretical framework is also required to guide this analysis process (Rutten et al 2000; Badura and Kickbusch 1991). A health policy study of this nature would thus help to critically assess if policies that are implemented are the policies intended.

All of these issues highlighted formed the basis for the research. Oral health promotion was selected as the primary focus area and efforts were made to determine the extent to which other identified health policies, interventions and strategies could impact on oral health services in South Africa. In this study oral health promotion is defined as any planned effort to promote oral health-related goals through the development of healthy public policies, the creation of supportive environments within the context of social development, the need to strengthen community action through empowerment strategies and the need to reorient health service delivery to achieve improved community health (Watt and Fuller 1999; Watt, Daly and Fuller 1996). Oral health promotion activities include self-care practices, school and other community oral health programmes, additional fluoride uptake and fissure sealant programmes. Clinical interventions were excluded from the research. Other health programmes identified for the research included Nutrition, Maternal, Child and Women's Health, Health Promotion and HIV/Aids. These programmes are conducted within the Department of Health in South Africa. The study focused primarily on district health activities that could support oral health promotion activities. All other district primary health care efforts were excluded.

1.2. The Research Hypothesis

The hypothesis stated that oral health promotion is fully integrated into South African health policy and practices. The study set out to test this hypothesis that oral health promotion elements are fully integrated into health policy and programmatic efforts.

1.3 Aims and Objectives

The aim of this study was to critically analyse policy proposals on oral health promotion activities in South Africa and examine their potential to contribute to improved community oral health at district level.

The Objectives of the Study

The objectives of the study were:

1. To identify oral health promotion proposals and strategies in specific health policy documents.
2. To examine and locate the form and context of oral health promotion-related activities in specific health policy documents.
3. To determine if these proposed oral health promotion strategies and interventions are consistent with published, evidence-based research literature.
4. To determine the practicality of implementing evidence-based oral health promotion-related health policies.

This study presents the results of an analysis of South African health policy and programmatic practice, and decision-making to determine the nature and provision for oral health promotion within South African health policy. It reports the use of a conceptual framework to examine oral health promotion elements within a wide range of health policy documents and their implementation as reported by health managers across the country.

The literature examines health policy development and analysis, the nature and development of oral health promotion, the provision for oral health promotion within primary health care delivery in South Africa, the capacity for key health programmes to support oral health promotion at district health level and the current delivery of community oral health services

in South Africa. The value and challenges to partnerships in health policy development are explored. The role of evidence-based practices in oral health promotion is critically compared to the current selection of community oral health promotion activities in South Africa. Chapters Seven and Eight focus on the research methods and materials, and outline the development of the conceptual framework and its application to data collection and analysis. Chapter Nine provides an analysis of the results obtained while Chapter Ten discusses the interpretation of the research findings. The final chapter draws on the research conclusions and recommendations. A list of the relevant documents used in the research is included as appendices.

Chapter 2

Literature Review

Defining Health Policy and the Nature and Development of Oral Health Promotion

Health systems in many developing countries are repeatedly faced with challenges occurring as a result of epidemiological diversity and urbanisation within uneven but rapid economic growth (Maunder, Matji and Hlatshwayo-Molea 2001; Richards and Lawrence 1998; Ellwood and Mullane 1996; Jamison and Mosley 1991; Draper 1991; Wissa and Zahran 1986). Demographic changes, massive urbanisation and the acquisition of unhealthy lifestyles have resulted in rapidly changing disease patterns on a global level (Petersen 2004a; Sheiham and Watt 2000; Locker 2000; Sheiham 1988). Similarly there is increasing awareness that the underlying determinants of oral diseases are intricately enmeshed in multi-factoral influences that impact on health and well-being (Sheiham and Watt 2000; Locker 2000; Tickle, Craven and Worthington 1997). It is therefore important that health policy development considers this very intricate relationship between the determinants of health and oral health and the factors that link oral diseases to ill-health. While health policy development is essentially considered a political process, this inter-relationship between oral health and general health have important implications for oral health planning in South Africa.

This chapter of the literature review defines the parameters of the study by exploring the current concepts and ideologies expressed in international health policy development. This theoretical information is pertinent because it could provide a rationale for the current selection of health policy priorities, strategies, interventions and programmes in South Africa. This chapter also focuses on an overview of the nature and development of oral health promotion in general. The ideologies of oral health promotion, policy perspectives and subsequent planning strategies are explicitly outlined in the review. This overview in health policy and oral health promotion forms the foundation to critically appraise health policy and practice in South Africa.

Chapter Three focuses on the debates and conflicts surrounding evidence-based practices in oral health. The chapter also highlights the current findings in evidence-based research relevant to the study area. Chapter Four highlights the development of oral health policy efforts in post-apartheid South Africa. A profile on oral health status in South Africa is also outlined in this chapter. Chapter Five examines the delivery of district primary health care services relevant to oral health promotion. The capacity for district health services to support oral health promotion in both policy and programmatic efforts is also examined. Chapter Six examines the challenges facing the delivery of oral health promotion services in South Africa. Chapter Six also explores the value of developing partnerships at all levels of health policy development and implementation.

2.1. Health Policy Development

This section examines international developments in health policy efforts. These developments include changing perceptions in health priority settings, translation of health policy to practice and the value of including evidence-based research findings in health policy-making (Filmer et al 2002; McQueen 2001; Gray 2001; Tarlov 1999; Jamison and Mosley 1991; Ellwood and Mullane 1996; Badura and Kickbusch 1991). Philosophies underpinning health policy development and analysis are also examined.

Health policy development internationally appears to focus on conflicting policy issues such as preventive versus curative services, selective versus comprehensive primary health care delivery or integrated versus vertical health programmes. The challenge would therefore be the need to develop health policies that could respond best to health priorities within the prevailing political, social and economic influences that impact on health and service provision (Filmer et al 2002). The impact of globalisation on health suggests a need to change strategies on public health policy-making. There is increasing recognition that the organisational form of public policy-making is now based on networks that are characterised by 'shifting alliances and blurred lines of responsibility' (Kickbusch 2000: 979). Jamison and Mosley's (1991) argument for strategies in health policy development have important implications. They postulate that while there is a need for health priority assessment on a national level, there is also a need to translate national health priorities to a local epidemiological context with consideration being given to the socio-cultural, administrative, economic and political impact on health care (Jamison and Mosley 1991). Thus health policy translations need to be conducted within existing budgetary constraints

(Jamison and Mosley 1991; Rein 1983). These arguments will be critically evaluated later in the South African context of health policy development and health priority settings. It is imperative that health policy strategies address issues on equity, efficiency, acceptability and sustainability within health service provision (Scott 1999; Linder 2002, Olsen 1998; Downie, Fyfe and Tannahill 1991). Evidence-based health policy efforts are also seen as an important development in health policy initiatives (Gray 2001). Apart from addressing issues on effectiveness and cost-containment, evidence-based health policies have the potential to evaluate the feasibility and practicality of introducing foreign health policy initiatives (Gray 2001). An evidence-based approach to health policy analysis could thus enhance the potential to critically evaluate health interventions associated with policy implementation efforts (Gray 2001; Barker 1998; Barker 1997; Murray and Lopez 1996). This could provide justification for the selection of health priorities. However the practice of evidence-based health care is not without debate. The issues on the conflicts surrounding evidence-based health care are presented in Chapter Three. Therefore while evidence in health policy is important, there is a need for political accountability and capacity building in health care provision (Barker 1998).

Apart from political, social and economic influences, health policy development and its consequent translation into programmes of service could also be influenced through health planning efforts (Hsiao 1995; Parston 1980). Green (1995) provides a very apt description of health planning as *'a response to the dilemma of a scarcity of resources in comparison to the competing of health care needs'* (Green 1995: 26). This description of health planning would have important implications for the re-distribution of resources according to health needs in South Africa. Parstons (1980) on the other hand provides an interesting observation on the impact of political and economic influences on health policy planning. He concedes that health policy planners are not directly involved in planning of the 'legislative structure of health services' nor in the 'financial or administrative organisations nor the quality of health care' yet these factors play important roles in determining the direction, implementation and sustainability of health care services (Parstons 1980: 87). Failures in the health policy process are often blamed on inadequate policy translation or poor decision-making yet the impact of political and bureaucratic structures on health planning is largely ignored.

Apart from the need to focus on monitoring and evaluating health systems in terms of inputs, process, outputs and outcomes, there is also a need to evaluate the impact of health reforms on systems performance (Scott 1999; Padget, Bekemeier and Berkowitz 2004). Health systems organisational choices such as public and private roles in health care provision should be seen as strategies to not only improve health outcomes but to improve the systems performance (Scott 1999; Barker 1996). While market failures through the limitations of relying primarily on the private sector to fund and deliver health care are noted, there is increasing recognition of the need for public-private partnerships, among other partnerships in health care (Scott 1999; Walt and Gilson 1994).

Klitgaard (1991) argues that health policy analysis should challenge both the state and the market to complement each other, rather than focusing on which form of delivery is more effective. Public health policy would have the potential to evaluate the performance of both public and private health systems through regulations and an organisational convergence (Klitgaard 1991b *cited in* Walt and Gilson 1994; Williams 1988). Other authors argue that it is unclear whether the private sector will bring extra resources into the public health system unless there is strong political will to re-distribute resources according to needs (Naylor 1988). These arguments have pertinence to the South African experience in health care. Historical imbalances in health care would necessitate the need to explore partnerships outside of the public health system. The private sector would have the potential to play a significant role in health service provision. Therefore instead of debating on the merits or efficiency of private and public health systems, there is an urgent need for effective health systems research that is better able to inform governments on the operations of the private sector and the mechanisms by which government can address this role. The impact of shared resources, financing systems and potential burden on the public health system needs to also be considered in this partnership with the private sector.

Health policy development is thus a complex process. Considerations need to be given to the contextual influences on policy proposals and the processes involved in translating policy to practice. A systematic approach to health policy analysis could help to understand these complexities. These factors highlighted have important implications for the study and will be further explored in context of the research findings.

2.1.1. Health Policy Analysis

The value of health policy analysis as a means to understanding the network of interests and influences within a policy environment is recognised as a viable method of examining service delivery (Brugha and Varvasovszky 2000; Frenk 1995; Benson 1982). Dror (1993) defines health policy analysis as approaches, methods and techniques for influencing and improving health policy decisions (Dror 1993 *cited in* Walt and Gilson 1994). Walt and Gilson (1994), on the other hand postulates that health policy is not ‘simply about prescription and description’ but that it is the ‘outcome of complex social, political and economic interactions’ (Walt and Gilson 1994: 359).

The diversities in policy settings, and cultural, economic and structural influences increase the potential for health policy efforts to be context-specific (Badura and Kickbusch 1991; Brugha and Zwi 1998). It is further argued that ‘global and inflexible prescriptive statements’ would therefore be inappropriate (Badura and Kickbusch 1991: 60). It is thus important that evaluations on health policy efforts are structured around strong theoretical considerations. Health policy analysis in this study is thus described as an analytical process that examines the content of health policy and the processes that influence health priorities and its consequent implementation at programmatic levels (Walt and Gilson 1994; De Leeuw 1993; Barker 1997; Linder 2002). An analysis could provide opportunities to highlight the links or gaps between policy development and practice (Brugha and Varvasovszky 2000).

A health policy analysis needs to take into account the principal role players and the extent to which they influence the process of policy development (Glendinning 2003; Brugha and Varvasovszky 2000; Walt 1994; De Leeuw 1993; Clarkson 1995). Apart from the principal role players, there is also a need to understand the impact of organisational changes on policy (Bracht 1990; Wan 1995). Decision-making is described as the act or the result of deciding (Wan 1995). Health services research has provided ample information on the need for an epidemiological basis in health policies, however not much emphasis has been placed on investigating management decisions in policy (Barker 1998; De Leeuw 1993).

2.1.2. Challenges Facing Health Policy Development

Traditionally health professionals have dominated health care provision (Barker 1998). Baggott (2000) provides interesting insight into the delicate interplay between political decisions and the role of professionalism in policy development. He concedes that scientific findings are not automatically translated into policy but are filtered through a political process. Thus experts give legitimacy to government decisions (Baggott 2000). The author further argues that professionals with a vested interest in identifying risks to health through epidemiological models of causation have been a crucial factor in the decline of trust in expert opinion on health matters (Baggott 2000). This observation suggests that the role of vested professional interests sometimes tends to clash with political intentions. Walt and Gilson (1994) further add that health policy reforms are dependent more on political compromise rather than rational debate. It is therefore important to understand that the influences on the impact of policy reform would emerge from the power structures within which they operate from. Thus the failure or success of health policies are very much dependent on the extent to which the identified health problem is addressed within an appropriate context, the strategic involvement of stakeholders, resource allocation, attitudes of policy makers, level of support for change and the impact of external and internal influences.

The gaps between health services research and practice is thus a cause for concern. This means that there is a need for transparency in health services research through the use of sound theoretical foundations and appropriate research methods in the hope of improving political support for health research. While policy development depends on factors that go beyond the research base, the use of models in health policy analysis would provide mechanisms for understanding this complex process.

2.1.3. Other Barriers to Effective Health Policy Translation

Other barriers are also evident in the translation of policy to practice. The strategy on Health Impact Assessment (HIA) is used to highlight the potential barriers to sustainable health policy development. Critics of this approach argue that HIA tends to emphasise policies that enact changes rather than policies that facilitate neglect. Furthermore the assessment focuses on the consequences of the policy rather than the determinants of the policy (Krieger et al

2003; Kemm 2001). Barriers to policy translation could occur as a result of the information itself or in the values of those that respond or advocate the use of the information (Lavis, Farrant and Stoddart 2001). The authors imply that if the barriers are related to the way decisions are made, then the success of health policy is dependent on instituting change in the decision-making structures. The authors thus postulate that information-related and value-related barriers could be a more likely reason for the failure of acknowledging the impact of policy on health consequences. However overcoming the barriers on policy information pertaining to health consequences cannot guarantee an effective translation into practice.

2.1.4. The Role of Equity in Health Policy Analysis

Difficulties associated with translating the ideals of equity from policy to practice are also one of the many challenges facing health policy development (Clarke 2000; Valdivia 2002). Socio-economic conditions are seen to have a significant causal relationship with health inequities (Muirhead 2000; Sanders 1998). Studies also indicate that there is little evidence that specific policies aimed at providing income support or poverty eradication have any measurable impact on health. Thus the comparative effectiveness of these interventions in reducing inequalities in health is unclear (Ludbrook and Porter 2004). Equity refers to the distribution of resources based on health needs in an effort to close the gap between the rich and poor (Wilkinson 1996; Strachan 2000a). An equity approach to health policy would therefore focus on private-public financing, distribution of personnel and services, quality of care and the use of strategic health indicators to ensure that health service delivery is contributing to improved community health. It is important to note the efficiency and cost-effectiveness of health service delivery are closely related to equity and should not be viewed as opposing ideologies (Strachan 2000a).

The challenges facing equity-driven health policy efforts are to balance national health priorities such as HIV/Aids and Maternal and Child Health care against allowing local authorities to set their own priorities, and to allocate resources according to perceived community needs. Thus there is a need to develop and promote partnerships through multi-sectoral collaborative efforts that would include the government, private sector and non-governmental agencies to develop policies that could address the determinants of inequities and ill-health. This policy process needs to be inclusive, transparent, and be supported by

legislative and financial commitment (Sanders 1998). This illustrates that while policy is associated with government activity, its impact and influences often lie outside of the health and political system (Tones and Green 2004; Barker 1997). The accessibility and availability of health services are important factors to consider in health service utilisation (Ackers and Abbott 1996). Thus free health services are theoretically 'free at the point of use' but that it does not ensure that it is utilised equally in practice (Ackers and Abbott 1996: 55). These comments can be applied to the South African context of oral health care utilisation rates. The preamble to the draft national oral health policy for South Africa (Undated) indicates that only 6-8% of the population utilises public oral health services despite the implementation of free primary health care services (Department of Health 1994-2000*).

The issue of equity in health policy development has important implications for the research. McIntyre and Gilson (2002) outline that health programmes have focused more on vertical equity goals by preferentially addressing historically disadvantaged communities in post-apartheid South Africa. They add that there have been no efforts to promote cross-subsidisation between the private and public health sectors (McIntyre and Gilson 2002). The legacy of apartheid policies has resulted in 10% of the population accounting for 60% of the country's wealth in South Africa (Strachan 2000a). In a post-apartheid and democratic South Africa, only about 16% of the population makes use of the private sector for health services while the remaining 84% is dependent on public health services (Health Systems Trust 2002). Private sector spending on health services accounts for more than half of the total health expenditure. Approximately US\$5.5 billion of the total US\$ 9.5 billion was spent on the private sector in 2000 (Health Systems Trust 2002). Apart from increased private sector spending, this skew in health service delivery implies that those who are likely to require the most resources in health care would be those people that are least able to afford these services (Scott 1999). This in turn would increase the divide between rich and poor and further increase health inequalities. Thus it is necessary to uncover the various reasons for these persistent inequalities in health care in South Africa despite post-apartheid political transformation.

* This reference refers to a cluster of four draft national oral health policy documents that were chronologically produced by the Department of Health from 1994 to 2000. All of these documents outline the vision or plan for oral health services in South Africa but are not dated.

2.1.5. Strategies to improve Equity-Driven Efforts in Health Policy

The challenges associated with the translation of equity-based health policies would also provide a significant dimension to the research area. There is a need for governments to be committed to equitable developments in health care and to increase their capacity to facilitate coalition building and management changes (Bloom 2001). Bloom proposes a legal health framework through the definition of minimum standards for health workers (Bloom 2001). However equity-driven health initiatives require more than regulations in health service delivery.

McIntyre, Muirhead and Gilson's (2002) findings on the feasibility of developing a broad-based deprivation index for geographic resource allocation, demonstrate that deprivation in South Africa is multi-faceted, is influenced by ill-health and is concentrated in specific areas (McIntyre, Muirhead and Gilson's 2002). While this information is not new, the formula used to allocate resources between geographic areas according to social needs, provides a rational tool to address health inequities in developing countries. It is however important that the impact of demography, changing disease patterns and urbanisation are taken into this equation. A simple reallocation of funds for development would not be adequate if there is insufficient political, social and community support for development. There is a need to not only allocate resources but to ensure that these resources are utilised in maximising health benefits. Thus sustainable policy reforms require a greater emphasis to be placed on strengthening national capacity for health policy analysis and research, expanding policy methods and enhancing the quality of information available to influence key policy efforts (Okunzi and Macrae 1995).

The impact of process and power in health policy development is further explored in the chapter on district health services in South Africa. The next section focuses on the development and dynamics of oral health promotion on an international level.

2.2. The Nature and Development of Oral Health Promotion

Building healthy public policy is seen as one of the cornerstones for creating supportive environments for health (Taylor, Haglund and Tillgren 2000; Naidoo and Wills 2000). The role of health promotion in public health initiatives has gained popularity on a global level in developed and under-developed countries (Robertson 1998). Health promotion is described as a combination of social actions directed towards improving community health through committed political, economic and environmental support (DeFriese and Crossland 1995; Nutbeam 1998). The Ottawa Charter (World Health Organisation [WHO] 1986) is widely recognised as a guiding document for health promotion activities. The principles expressed in the Ottawa Charter (WHO 1986) highlight the need for health issues to be placed onto the policy agendas for decision-making at various levels of health care development (Nutbeam 1998; Baum 1998). The Jarkata Declaration (WHO 1997) is another important development in health promotion. This document reiterates the need for committed social responsibility in health, increased investments in health development, the need to consolidate and expand partnerships in health and increase focus on community empowerment (WHO 1997).

Milio (1988) argues that people seeking to influence the process of policy-making need to identify the *'points of entry into policy-making processes, sources of support, and strategies to enhance the feasibility of specific health promotion policy options in any given policy sector'* (Milio cited in Tones and Green 2004: 191). Thus healthy public policies need to focus on the selection of supporting easier health choices. The impact of process and power identified in health policy development is also visible in health promotion efforts (Tones and Green 2004). Power at the micro-level of the health system (district level) is associated with individual or small group influences on health initiatives. Meso-level power refers to power exerted by organisations or communities on the selection of health priorities. Power at this level could also be exerted from within the health system through middle-order management (provincial level). Macro-level power would refer to influences on national policy efforts (national level). Thus concepts such as 'control', 'authority' and 'influence' are associated with power within the health system. Corwin (1978) describes 'consensual authority' as a condition when power and control depends on the outcomes of negotiations based on the differential possession of resources (Corwin cited in Tones and Green 2004: 31). This implies that health policy negotiations would very much depend on who has

control of health resources and the extent to which they are prepared to share these resources. An analysis of oral health promotion in policy would thus need to identify the possible power, authority and influences on this process.

2.2.1. Defining Oral Health

Given their impact on pain, discomfort and compromised quality of life, oral diseases are considered to be a major burden on scarce resources (Petersen 2004a; Locker 2000). While the definition of health is critically evaluated for its appropriateness in response to rapidly changing social needs, the definition of oral health appears to be still focused on repairing and restoring the functional capacity of the oral cavity (Baum 1998; Surgeon General's Workshop on Health Promotion and Aging 1988; Corrigan et al 2001). This clinical and bio-medically based definition of oral health care has important implications for health policy development in terms of defining service provision and identifying oral health priorities (Corrigan et al 2001; Watt et al 2001a; Watt and Daly 1996; Gift 1991).

One of the main shortcomings of oral health care is that it is assessed independently without any recognition of its role as an integrated part of general health. Conversely, general health status excludes measures of oral health determinants (Corrigan et al 2001). Taking all these issues into account oral health care is defined in this study as initiatives that are directed towards promoting and supporting oral health self-care practices within appropriate general health strategies that are in response to the prevailing social, economic and environmental influences on health and well-being. A healthy public oral health policy is thus a political commitment involving all relevant stakeholders to create supportive environments through the equitable distribution of resources by facilitating community participation and multi-sectoral collaboration in pursuit of oral health goals within a broader framework of social development.

2.2.2. Impact of Oral Diseases

Despite dramatic improvements in oral health on a global level, disparities in oral health still persists in many developing countries (Petersen 2004a). Oral health services have traditionally focused on dental caries and its impact on the quality of life in terms of economic and social consequences, yet research suggests that the oral disease profile differs

significantly within different countries and within different regions of a particular country (Petersen 2004a; Hobdell et al 1997; Ferjerskov 1997). As indicated in the health policy development section, changes in the oral health profile could be attributed to massive urbanisation, changes in living conditions and the acquisition of foreign lifestyles (Petersen and Mzee 1998; Cowell and Sheiham 1981; Watt and Sheiham 1999; Brennan, Spencer and Szuster 2000). However to focus exclusively on lifestyle obscures the impact of the environment and social constraints on the ability to make healthier choices. Thus the impact of policies on food, employment, fiscal and housing need to be considered in oral health promotion efforts (Ackers and Abbott 1996).

2.2.3. Determinants of Oral Diseases

There is overwhelming evidence to support the link between socio-economic status and health, including oral health (Petersen 2004a; Locker 2000). The evidence suggests that communities with lower socio-economic status generally have more unmet health needs (Reisine and Litt 1993; Locker 2000; Sheiham and Watt 2000; Schou and Uitenbroek 1995; Gilbert 1994; Hanson, Liedberg, Owall 1994; Drum, Chen and Duffy 1998; Palmqvist et al 2000; Wissa and Zahran 1986). Petersen (2004a) further argues that the availability and accessibility of oral health systems are also major determinants in oral health status and that there is an urgent need for incorporating the primary health care approach to oral health service delivery. The value of this assessment will be applied to the South African context of oral health delivery in later chapters. The link between socio-economic status and health would therefore be an integral issue to consider in health policy development (Sheiham and Watt 2000; Sheiham 1988). This is especially important when identifying health priorities and setting policy agendas.

2.2.4. Principles of Oral Health Promotion

There is overwhelming research to suggest that isolated individual interventions that are directed on modifying specific oral health-related behaviours have not been successful in achieving long-term changes in behavioural practices (Locker 2000). There is a need to develop integrated and collective health action through committed healthy public and social policy initiatives. Research suggests that there is need to focus on preventive measures rather than curative approaches (Mautsch and Sheiham 1995; Margolis et al 2001). Oral

health promotion activities need to be based upon theoretical models of individual and organisational change to support the re-orientation of health promotion activities to make healthier choices easier (Sheiham and Watt 2003; WHO 1986). There is need to focus on equitable population-based programmes rather than individually oriented programmes (Petersen 2004a). There is a need for evidence-based actions and community participation and partnership development in oral health promotion efforts (Myburgh et al 2005; Condon 1995). There is also a need to ensure that there are effective mechanisms in place to address the challenges presented in implementing subsequent interventions (Petersen 2004a). There is also a need to build capacity in planning and evaluating oral health programmes and to develop methods to analyse the process and outcomes of oral health promotion interventions (Petersen 2004a).

The principles expressed in the Ottawa Charter (WHO 1986) could also be applied to the South African context of oral health service provision (Table 2.1.). As stated in Chapter One, oral health promotion is defined as any planned effort to promote oral health-related goals through the development of healthy public policies, the creation of supportive environments within the context of social development, the need to strengthen community action through empowerment strategies and the need to reorient health service delivery to achieve improved community health (Watt and Fuller 1999; Watt, Daly and Fuller 1996).

Table 2.1. Application of the Ottawa Charter to Oral Health Promotion

Principle	Activity
Building healthy public policy	This refers to the development of health policies that could include oral health promotion goals. An example could be the development of nutrition policies that include the adverse effect of increased sugar consumption in relation to its impact on dental caries.
Creating supportive environments	Oral health promotion could be included in other health supportive efforts such as healthy cities, health schools and healthy hospital environments.
Strengthening community action	There is a need to promote oral health self-care in an effort to empower communities to take responsibility for their oral health status. This principle of the Charter challenges the traditional ethos of the “6months recall system” in oral health.
Developing personal skills	This principle allows for individuals and communities to develop life-skills related to oral health self-care and to ensure that there is a comprehensive approach to general hygiene and social development related to health.
Reorienting health services	There is an urgent need to redress limitations in oral health service delivery with a focus on disease prevention and oral health promotion. There is also a need to create a user- friendly environment to ensure optimal use of health service facilities.

Sources: Watt et al (2001a); Sheiham (1988); Watt, Daly and Fuller (1996)

The impact of dietary intake on dental caries could be addressed in nutrition and child health policies. Thus nutrition efforts in policy could be addressed in an integrated manner as opposed to individual health policy efforts. Similarly community action could also be strengthened. Communities can be empowered to take responsibility for their oral health status. Overall the ideologies expressed in the Ottawa Charter (WHO 1986) could provide a means to reorient oral health service delivery to a more broad community-based service that forms an integral part of social development in South Africa.

2.2.5. Oral Health Priority Areas

Oral health promotion programmes generally include addressing unhealthy lifestyle practices, oral health self-care measures and advocating additional fluoride uptake (Watt and Sheiham 1999; Watt and Fuller 1999; Watt and Daly 1996). The impact of dental caries, nutrition, periodontal disease and HIV/Aids on oral health promotion, are discussed in this section.

2.2.5.1. Early Childhood Caries

The literature suggests that the impact of early childhood caries rates has not been adequately addressed in oral health strategies on a global level (Macek et al 2004; King 1998; Watt 2000). Harris et al (2004) investigated the possible risk factors for dental caries through a systematic review of the literature. They conclude that apart from a shortage of high quality studies using longitudinal research methods, most children are likely to develop caries because of bacterial exposure. Thus diet and good oral hygiene are seen as ways controlling the development of caries (Harris et al 2004). The limitations of this review are that it completely ignores the social, economic and environmental impact on the caries process. Furthermore no mention is made of the impact of fluoride additives in controlling the development of dental caries. Early childhood caries has social, political, behavioural and health implications that could be effectively controlled by understanding the dynamics of social changes in relation to the family structure and socio-economic status (Ismail 1998; Weinstein and Riedy 2001; King 1998; Milnes 1996; Reich, Lussi and Newbrun 1999). The impact of early childhood caries and the promotion of safe breastfeeding practices would also have important implications for the promotion of oral health care at a community level (Singh 2000).

2.2.5.2. Nutrition

It has been established that oral health knowledge, attitudes and behaviour are also closely associated with socio-economic factors (Honkala et al 2002, Buys et al 2002; Masalin, Murtomaa, Siplia 1994; Watt 2000). The problems associated with over-nutrition could be linked to lifestyle practices (Voster, Love and Browne 2001; Wolmarans and Oosthuizen 2001). Dietary habits and unhealthy dietary practices are established during the primary socialisation phase and interventions on addressing dietary behaviour should take these factors into account (Freeman 1999). Soderling (2001) presents an interesting alternate view to the relationship between diet and dental caries. She concedes that oral health self-care practices in conjunction with exposure to optimal fluoride levels could be more effective in controlling dental caries as opposed to advocating dietary restrictions in isolation (Soderling 2001). The role between oral health and nutrition has been widely documented but there is still ongoing debate on the relationship between sugar consumption and dental caries (Murray 1996; Karajalainen et al *cited in* Suvan and del Aguila 2001; Hornick 2002; Douglas 2003). Sheiham (2001) makes a convincing presentation on the role of non-milk extrinsic sugars on the development of dental caries. He states that despite a significant decline in caries over the past 30 years, dental caries in preschool children remains a major public health concern in most European countries (Sheiham 2001). This observation is supported by other studies investigating the impact of sugar consumption on the development of dental caries in African countries (Enwonwu, Phillips and Ibrahim 2004; Manji and Fejerskov 1990; Fejerskov 1997; Blay, Astrom and Haugejorden 2000; Ismail, Tanzer, Dingle 1997).

Ismail, Tanzer and Dingle (1997) on the other hand point out that there is no scientific evidence to indicate a safe level of sugar consumption. They add that maintaining a safe level is impractical in developing countries (Ismail, Tanzer and Dingle 1997). Studies however indicate the need to develop country-specific and community-specific for reducing the amount of free sugars towards a recommended maximum of no more than 10% of daily energy intake (Moynihan and Petersen 2004). The World Health Organisation Global Strategy on Diet, Physical Activity and Health further recommends that countries undergoing nutrition transition need to implement feasible fluoride programmes (Petersen 2004a). The implications of finding an evidence-based relationship between sugar consumption and dental caries will be discussed in the next chapter.

Dietary habits have been addressed through education and counselling, a focus on lifestyle, dietary knowledge and attitudes to food (Honkala et al 2002; Duggal and van Loveren 2001). However such approaches have ignored the impact of socio-environmental factors on individual behaviours and therefore have had a limited effect (Watt and Fuller 1999; Dunt, Day and Pirkis 1999). The availability and cost of healthier foods as well as providing information on food labels are all seen as important influences on food choices (Watt and Fuller 1999; Duggal and van Loveren 2001). The role between nutrition and oral health is therefore seen as an important factor in health policy considerations (Steyn, Myburgh and Nel 2003; Enwonwu, Phillips and Ibrahim 2004). Policy commitment to nutrition could include advocacy for regulation of food standards, food advertising and nutrient labelling (Sheiham and Watt 2003). There is also a need for effective multi-sectoral collaboration between the public health sector, government, the private sector and other stakeholders on developing strategies to address manufacture and distribution of non-milk extrinsic sugar products. There is also a need to advocate the removal of non-milk extrinsic sugar from infant and baby foods, paediatric medicines and fruit juices (Sheiham and Watt 2003). It would be beneficial to develop a catering policy at schools and other institutions to ensure the selection of foods with low non-milk extrinsic sugars levels. It is also important to train health workers in nutritional knowledge and skills (Sheiham and Watt 2003).

2.2.5.3. Periodontal Disease

Traditionally periodontal disease was considered to be associated with poor oral hygiene practices (Vered et al 2003; Amarasena et al 2002). There is now increasing evidence to suggest a strong causal link between smoking and periodontal disease (Hujoel et al 2003; Wickholm et al 2003; Hujoel 2003; Newman 2003; Hamasha, Sasa, Qudah 2000; Croucher et al 1997). Evidence-based research findings indicate that the effects of smoking could be a predictor of early loss of periodontal attachment in adolescents (Hashim, Thomson and Pack *cited in* Novak, Merchant and Jeffcoat 2001). These findings suggest that the aetiology of periodontal disease needs to be re-evaluated (Novak, Merchant and Jeffcoat 2001). Furthermore socio-demographic changes in smoking rates could have a significant impact on the economics of periodontal care (Hujoel et al 2003).

However research indicates that periodontal disease does not appear to be a risk factor for premature or low birth weight in infants (Moore et al 2004). One of the limitations of this study was that some of the baseline data relied on self-report from the subjects, which could have introduced bias into the results. Therefore more research with appropriate study designs is required in this area.

Systematic evidence-based reviews generally highlight the level of strength in the research evidence. Studies conducted on the effect of alcohol consumption and periodontal disease concludes that alcohol consumption may be associated with increased periodontal disease (Elter 2004; Tezal et al *cited in* Etienne and Merchant 2001). It is therefore important to exercise caution when interpreting evidence-based research because one needs to also consider the limitations associated with the review. The value and strength of the evidence supporting this association is far more important than simply drawing conclusions. This debate on evidence-based oral health care is further explored in the next chapter.

2.2.5.4. HIV/Aids

The literature indicates that there is a significant relationship between HIV and oral manifestations of the disease (Albougy and Naidoo 2002; Santos et al 2001; Rego and Pinheiro 1998). The impact of HIV/Aids on Sub-Saharan Africa remains a contentious and debatable public health issue in terms of aetiology, the spread of the disease and access to anti-retroviral treatment (Ogunbodede 2004; Dunn et al 1992). The prevalence and impact of HIV/Aids will also have far reaching consequences for South Africa's development in health care (Whiteside 1998). Similarly there are important oral health implications to the HIV/Aids epidemic in South Africa (Ogunbodede and Rudolph 2002; Albougy and Naidoo 2002; Badri, Maartens and Wood 2001; Ayo-Yusuf, Naidoo and Chikte 2001).

Evidence-based findings suggest that saliva composition and flow rates could have an impact on early presentation of HIV infections (Leigh 2004). These findings could provide a rationale for funding oral health efforts among populations affected and afflicted with HIV infections. The presence of oral candidiasis could also serve as an important sentinel marker for HIV infections and disease progression (Ogunbodede 2004). Although these studies are mainly clinical in nature, they can be entered into policy discussions to ensure improved

awareness of the role of oral health promotion in the detection and control of selective opportunistic oral infections.

2.2.6. Strategies to improve Oral Health Status

The WHO Global Strategy for the prevention and control of non-communicable diseases highlights the need to identify health priorities that are linked by lifestyle-induced diseases sharing common risk factors (Petersen 2004a). This strategy has been endorsed by the World Health Assembly (resolution WHA 53.17) in 2000 (Petersen 2004a). The WHO Strategy for Oral Health outlines the following recommendations:

- Reduce the burden of oral diseases especially in disadvantaged communities.
- Promote healthier lifestyles by addressing the socio-economic and environmental risks to oral health.
- Develop oral health systems that would be able to deliver services in an equitable manner.
- Develop policies that support oral health integration within other national and local health programmes.

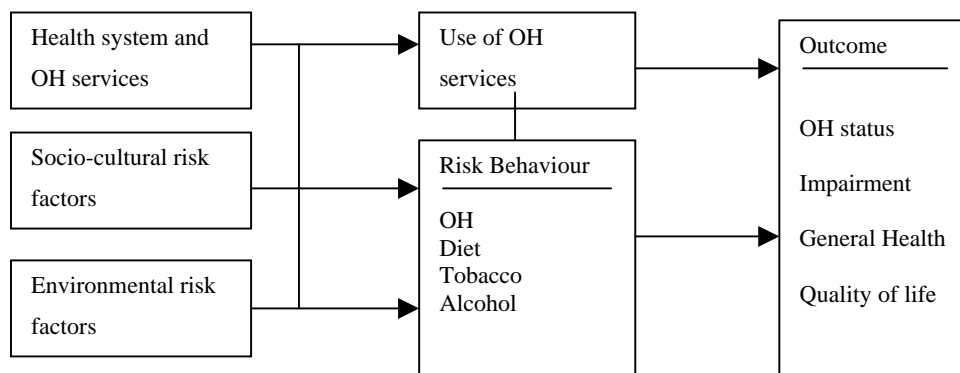
The challenge would then be to improve access to oral health systems through equitable distribution of resources and to identify populations that are most vulnerable to oral diseases (Petersen 2004a). This approach to oral health care delivery could better meet the basic needs of the community, strengthen community action and foster determination in oral health self-care practices (Petersen 2004a, Watt, Daly and Fuller 1996).

2.2.7. Integrated Common Risk/Health Factor Approach

While it is important to focus on the development of healthy public policies to guide and support community oral health interventions through a committed framework, it is also necessary to consider other salient influences on community well-being. The intricate relationship between social behaviours and lifestyle has been identified as important predictors for health (Locker 2000). The integrated common risk/health factor approach is based on the premise that control of risk factors could have a greater impact on a larger number of diseases as opposed to individual disease-specific approaches (Figure 2.1.). Thus the causes of dental caries, periodontal disease, oral cancer and oral mucosal lesions could be directly linked to smoking, alcohol consumption, diet or trauma. These unhealthy

lifestyle practices are also responsible for other chronic diseases such as heart disease, cancer and strokes.

Figure 2.1. The Integrated Risk Factor Approach to Oral Health Promotion



Source: Petersen: WHO 2002 *cited* in Petersen (2004a). Page 336.

A multi-dimensional approach to addressing oral conditions within the scope of preventing heart disease, obesity, diabetes and stroke would thus be a more viable strategy to influence health policy decisions rather than individual caries prevention strategies (Mautsch and Sheiham 1995). This strategy also aims at strengthening the coping mechanisms by creating supportive environments. The major advantage of this approach is that the focus is on improving overall population health while also focusing on groups at high risk (Watt, Daly and Fuller 1996). Furthermore the economic costs for interventions are lower in comparison to individual based treatment procedures. An equity oriented health policy could focus on actions or address specific risk factors to reduce specific diseases aimed at improving health conditions especially in the “at risk category” (Sheiham and Watt 2003: 247).

The value of the integrated common risk approach to oral health promotion efforts cannot be disputed, given the need to address current oral health inequalities in health care. This approach also helps to place oral health within the context of health and social development through the identification of risks to human health. Furthermore the integrated common risk approach can provide an injection of much needed resources into oral health promotion efforts without the need for having to compete with other health priorities for funding. However this approach is not without criticism. Several authors have questioned the feasibility of disease-oriented risk factor approaches in health policy efforts. These arguments are presented in the next section.

2.2.8. Focus on Social Systems

Harrison (1999) argues that public health initiatives that have focused on disease-oriented risk-factor approaches to improve health are an inadequate foundation for policy and action in health promotion (Harrison 1999). Symes (1996) further questions that *'how is it possible that after 50 years of massive effort, all of the risk factors we know about, combined, account for less than half of the disease that occurs?'* (Symes 1996 cited in Perkins, Simnett and Wright 1999: 125). He thus suggests that 60% of preventable diseases resulting in illness or death, are neither located in individual sovereignty, nor in individual behaviours, lifestyle or risk but rather in the social organisation. Wilkinson (1996) has demonstrated that it is inequality itself rather than poverty that may be a major cause of preventable morbidity and mortality in most countries (Wilkinson 1996).

Thus there is an urgent need for a paradigm shift in the conceptual framework and problem-solving strategies for public health. There is a need to recognise *'that most health risk and most determinants of health are systemic, located within complex, dynamic and interactive social relationships which themselves are determined by social institutions and organisations including families, communities, workplaces – indeed the health system itself...Determinants of population health are mediated through social systems but are determined by social relationships within those systems'* (Harrison 1999: 126). These sentiments on healthy public policy directives have very important implications for the research and will be explored in much depth throughout the study.

2.2.9. Planning in Oral Health Promotion

Having outlined the value of policy in oral health promotion, it is also necessary to focus on planning strategies. Planning in oral health promotion is defined as a response based on reducing the inequities in oral health care through the re-distribution of resources according to oral health needs (Sheiham and Watt 2003). Using the planning cycle, the first stage could be to assess the needs of the population. A situational analysis based on epidemiological data on oral health status would be useful indicator for oral health planning. The second stage requires an identification of goals for change. This requires a committed policy framework to guide the parameters of oral health provision. The goals for oral health could be expressed as acceptable levels of low occurring oral diseases, multi-sectoral approach to addressing oral health risk factors that go beyond individual control (Sheiham

and Watt 2003). The third stage requires the development of an action plan or strategy to meet the goals identified (Sheiham and Watt 2003). The Ottawa Charter (WHO 1986) could provide a useful guide to develop strategies that focus on creating healthy environments, re-orienting health services and mobilising communities to respond to local oral health needs. It is also important to develop appropriate evaluation strategies to monitor all stages of the planning stages, and after implementation of the intervention or programme (Watt et al 2001a). Stage four would involve the implementation of the strategy and intervention. The important factors to consider at this stage would be resources, infrastructure, staff incentives and community participation.

2.2.10. Health Promoting Schools

School oral health promotion is one important setting to examine in oral health planning. School health promotion is a combination of collective health actions to address priorities in health and life-skills with the intention of creating a safe and healthy school environment (The Child-to-Child Trust and UNICEF 1997; Taylor, Jinabhai and Dladla 1999; Center for Health Improvement 2004a). Similarly the School Health Policy and Implementation Guidelines in South Africa seeks to guide and support the delivery of school health services within social welfare and educational settings (Department of Health 2003a). A major advantage of school-based oral health programmes is that schools are seen as a controlled and accessible environment (Taylor, Haglund and Tillgren 2000; Petersen and Mzee 1998; Petersen, Danila and Samoila 1995). There is potential for reaching all children, continuity in instruction, integrated service delivery and low cost for activities (Petersen and Mzee 1998; Lalloo and Solanki 1994; Freeman 1999; Pine et al 2000). A possible disadvantage could be that teachers are not properly trained in oral health-related issues or that they may not have the time to conduct oral health programmes on a daily basis (Peng et al 1997).

Thus school-based health programmes would have important implications for oral health promotion. School policies could address oral health risk behaviours, diet and the consumption of sugars and substance abuse. Access to safe water is beneficial to both oral health and general hygiene (Petersen 2004a; National Department of Health 2001). A safe physical environment could reduce dental trauma caused by accidents at schools (Petersen 2004a).

An assessment of 12-year-old children's oral health status at health promoting schools suggest that children in supportive schools had better oral health than those in non-supportive schools (Moyses et al 2003). These results suggest a health promoting school environment has the potential to reduce social inequalities by addressing the unmet needs of children from disadvantaged backgrounds. However true oral health status needs to be measured beyond the presence or degree of oral diseases and conditions. There is a need to focus on changes in oral health behaviours through the acquisition of life skills by creating supportive environments at schools and other learning institutions.

Thus communications between national and schools levels, health and education, social and economic development are all necessary to ensure an effective school health policy. An analysis of policy content in the health policy formulation process in Sweden suggests that health promotion initiatives at schools are more likely to be accepted and implemented provided that there is effective local political support specifically in terms of resource allocation (Taylor, Haglund and Tillgren 2000). Although this study highlights the impact of political support for policy translation and practice, its limitation was that it focused exclusively on content analysis. The impact of decision-making in the selection of policy proposals and in its implementation phase was not considered. These would be important factors to consider because decision-making could affect policy implementation even if there is local political support.

The challenge in creating healthy school environments in South Africa would require sustainable political and health decision-making support specifically when the historical imbalances in education and school infrastructure are taken into account. Thus creating healthy school environments in South Africa would require addressing the basic infrastructure such as security, broken windows, missing doors, inadequate classrooms and educators as a pre-requisite to creating a safe environment for teaching.

In summary this chapter highlighted the dynamics of health policy development on a global level. The literature on health policy analysis outlined the need to understand the impact of power and process in health policy development. The value of understanding the impact of determinants on oral diseases in oral health policy efforts was also outlined. Equity in health service provision was seen as an important factor to consider in health and oral health promotion policy development and planning. Oral health priorities such as addressing dental

caries, periodontal disease, HIV/Aids were examined together with the importance of focusing on a comprehensive approach to nutrition policy efforts in oral health. The literature outlined the importance of focusing on whole social systems as a mechanism for implementing and evaluating improvements in oral health promotion as opposed to focusing on disease-oriented policy goals.

Chapter 3

Evidence in Oral Health Promotion

The emergence of evidence-based practice in health care has gained considerable popularity over the recent years. The use of evidence-based decision-making in health services and planning is now seen as a viable mechanism to identify optimal health benefits to the population in question (Gray 1997; Richards and Lawrence 1998). However the role and value of evidence in health promotion and oral health, particularly the nature and quality of evidence, has also been the subject of substantial debate (Wiggers and Sanson-Fischer 1998). This chapter explores these debates and examines the existing literature on evidence-based findings in oral health promotion efforts.

3.1. Strengths of this Approach in Health Promotion

The literature suggests that a systematic incorporation of quality research evidence into planning and implementation of health initiatives, and applying quality research evidence to a logical decision-making process, would be most likely to bring about cost-effective improvements in community health status (Wiggers and Sanson-Fischer 1998; Gray 2001; Nutbeam 1999; Richards and Lawrence 1998). Nutbeam (1999) argues that such an approach increases the possibility of successful health outcomes by mobilising political and community support for health interventions (Nutbeam 1999).

Thus the appropriate practice of evidence-based health promotion and by analogy oral health promotion requires high quality available evidence, considerations in local values and availability of prevailing resources (Petersen and Kwan 2004). However population health requires more than evidence-based health care (Nutbeam 1999). The value of developing healthy public policy grounded in social systems and organisations has been outlined in the previous chapter. In a quest for evidence in health promotion, Weiss (1991) demonstrates that research has very little impact on any policy effort. The author argues that research rarely determines policy but rather that it is used to support the selection of policy decisions. Although this observation has been explicitly outlined in the previous chapter, the multifactoral influences on health policy development are also applicable to evidence-based

research. Health decisions are made on the basis of custom and practice, values and interests (Weiss 1991 *cited in* Perkins, Simnett and Wright 1999). Harrison (1999) further outlines the role of power and process in selecting value judgements and concedes that 'evidence is thus really only amenable to political choice' (Harrison 1999: 129). Evidence in health promotion therefore needs to focus beyond the health system. There is a need to examine the social, cultural, economic and environmental context of the whole social system instead of health promotion activities only (Perkins 1999).

3.2. Barriers to Evidence-Based Practice and how to overcome them

A number of barriers have been identified to the effective adoption of evidence-based health practice. There is a lack of quality research evidence in health promotion. This could be due to an insufficient focus on developing appropriate evaluation strategies in measuring the efficacy and effectiveness of health promotion efforts (Wigger and Sanson-Fischer 1998; Raphael 2000). Further difficulties identified would be the inappropriate application of randomised controlled trials (RCT) criteria to population-based studies. The current criteria for good quality evidence have been developed from bio-medical paradigms that are best expressed in quantitative outcomes (Petersen and Kwan 2004). The outcomes associated with health promotion initiatives are as a result of complex individual and community interactions and changes cannot be reduced to singular units of measurement for evidence (Raphael 2000).

Funding has also been identified as another barrier to the practice of evidence-based health promotion (Wigger and Sanason-Fischer 1998). There is a need for policy commitments on evidence-based research so that issues of funding could be adequately addressed (Speller 2001). McQueen (2001) further argues that there is no disciplinary-based epistemological structure that underlies the evaluation process in health promotion.

The quality of evidence could be influenced by various conceptual and technical factors (Raphael 2000). Evidence-based research recognises the political realities in health promotion initiatives. It is further proposed that evidence-based health promotion practice does not preclude action even if the highest quality of evidence is not available (Wigger and Sanson-Fischer 1998). The challenge is therefore to identify a balanced consideration of evidence through a critical appraisal of various sources of data. There is a need to

distinguish what consists the rules of evidence within the various health disciplines. There is also a need to specify the role of epidemiology, sociology, anthropology and other relevant disciplines in building evidence in health promotion (McQueen 2001). The literature suggests that there is an urgent need to develop health practitioner skills in epidemiology and biostatistics, data collection and in critical appraisal of research literature (Petersen and Kwan 2004; Speller 2001). It is important that these skills are developed at tertiary and training institutions.

It is also important to ensure that there is a theoretical basis to health promotion interventions and strategies. It is also important to ensure that there is sufficient capacity building and political and public awareness to programme implementation (Nutbeam 1999). Atkinson (2002) further adds that health systems research has failed to take the cultural influences on health systems and policy partly because it challenges fundamental values. There are also difficulties associated with including evidence within a rational systems model (Atkinson 2002). Evidence-based health investments would need to increase the allocative efficiency of resource allocation (Harrison 1999).

3.3. The Value of Examining Health Promotion within Social Systems

Harrison (1999) provides different perspectives to the description of evidence in health promotion. He discusses the need for evidence on the appropriateness, efficiency, effectiveness, equity and sustainability in relation to a specific intervention that is context and time-specific. This means that results obtained from this research cannot be replicated in repeat examinations. Harrison (1999) also discusses the need for evidence in relation to input, output, outcome and process of health promotion activities. He further iterates that research evidence needs to be provided for specific stakeholders in terms of perceptions on quality of care, management and productivity (Harrison 1999).

A key goal of evidence-based health promotion practice would therefore be the need to develop strategies for organisational changes within the health care system. A focus on building organisational systems for health could be more sustainable because health becomes incorporated into the everyday social system instead of dependency on health practitioner intervention. Thus *'health is the goal but change management is the process. Knowledge about the aetiology of health and disease are important but their transmission is not the outcome measure of relevance in intervention. What is relevant is whether health*

investment has been made and whether an infrastructure for health promotion has been constructed within the formal or informal fabric of the organisation or social system' (Grossmann and Scala 1994 cited in Perkins, Simnett and Wright 1999: 131). Thus there is a need to examine the social process that would support or reject health promotion efforts in a quest to find evidence.

These comments on evidence-based health promotion practice highlight the importance of examining health promotion activities within a defined social context. These perceptions are a departure from the focus on improving study designs and research methods. They provide a plausible approach to placing health care and health investigations within the social systems that they arise from. Thus the basis for evidence in health activities is grounded within social and organisational systems. While this section highlighted the merits and barriers to evidence-based health promotion, these comments can be extrapolated to oral health promotion. The previous chapter has outlined the traditional perception and delivery of oral health to be disease oriented and dependent on practitioner intervention. The value and impact of the underlying determinants on oral health are now being increasingly recognised. Thus grounding oral health activities within the social framework and as a component of health activities would contribute to not only providing evidence but to ensure sustainability of health efforts.

3.4. Evidence-Based Oral Health Promotion

As mentioned previously, changes in global disease patterns have been intricately linked to changing lifestyles. This includes dietary intake, smoking and alcohol consumption and unhealthy behavioural practices (Petersen 2004a). The oral health response to unhealthy lifestyle practices has been to identify community oral health activities that could contribute to improved community health (Helderman et al 1999; Mautsch and Sheiham 1995). These activities include oral health education, additional fluoride uptake, nutrition guidance and fissure sealant applications.

The need for high quality systematic evaluation would be an integral component of organisational and community oral health efforts (Petersen 2004a; Petersen and Kwan 2004). Evaluation would form an important aspect of examining policy development and planning, providing feedback on intervention efforts and justifying the effective utilisation

of limited resources (Nutbeam 1998). However the strengths and weaknesses of the various evaluation methods need to be considered when searching for evidence. Several authors have demonstrated the negative impact of inappropriate and poor quality outcome measures used in oral health promotion reviews (Watt *cited in* Petersen and Kwan 2004). The potential weakness lies on the emphasis on clinical disease, limited focus on policy implications, limited evidence on cost-effectiveness and limited community input (Watt *cited in* Petersen and Kwan 2004). This in turn has prejudiced the outcome of most systematic reviews in oral health promotion. A comprehensive evaluation of any community-based intervention would require data that measures both the process and outcomes of the intervention (Petersen and Kwan 2004).

The presentation of oral health promotion activities in this section is reviewed with an understanding that some inherent limitations are present in the literature. The level and strength of evidence presented must be taken into account when reviewing the evidence in oral health promotion practice. Furthermore changes to the evidence base are very likely to occur, as evidence-based health practice is a growing field. Therefore the presentation of evidence-based oral health promotion efforts in this section must be viewed with caution.

However despite its current limitations, evidence-based practice provides new insights into the realm of oral health care. A systematic review of the effectiveness of oral health-related health promotion suggests that these efforts are successful in altering reported attitudes and beliefs (Kay and Locker 1998; Kay and Locker 1996). However *'the studies, which included other outcome measures, also suggested that alterations in knowledge, attitudes and beliefs were not related to changes in behaviour or health'* (Kay and Locker 1998: 13). This review has important implications for public health programmes because there is continued reliance on health education to bring about behavioural changes. Kay and Locker (1998) also suggest that the evidence for supporting the effectiveness of oral health promotion programmes is weak. This does not mean that oral health promotion efforts are ineffective. It simply shows that evidence and criteria to measure the effectiveness of oral health promotion needs to be further developed.

3.5. Oral Health Education

Health education has been identified as a strategy to modify unhealthy behaviours by improving the individual's ability to make healthier choices (Kay and Locker 1996; Green and Kreuter 1999; Cohen 1990; Frazier 1992). There is a growing body of evidence supported by systematic reviews that the current delivery of oral health education strategies has resulted in the perpetuation of oral health-related inequalities (Box 3.1.). There is a need for health education strategies to evolve beyond the concept of modifying unhealthy behavioural practices and to focus on enabling and supporting communities to set their own health agendas (French 1990; Schou and Uitenbroek 1995; Kay and Locker 1996). Therefore a policy framework is required to support these efforts. This implies a need to understand health interactions within the social environments that they occur in (McGrath, Broder and Wilson-Genderson 2004; Schou and Wight 1994). A summary of evidence-based recommendations promoting community oral health is presented in Box 3.1.

Box 3.1. Evidence supporting Oral Health Promotion Activities

Evidence Supporting Oral Health Promotion Activities

- Community water fluoridation is shown to be effective in reducing dental caries.
- Oral health promotion activities is shown to be effective in increasing awareness in knowledge of unhealthy behaviours but its clinical, behavioural and health significance is unknown.
- Oral health promotion is shown to be effective in control plaque levels on a short term and individualistic level.
- School-based tooth brushing programmes aimed at improving oral hygiene are not effective.
- There is an urgent need to re-assess the impact of oral health promotion activities on control sugar consumption.
- Ill-designed oral health education strategies could inadvertently increase inequalities in oral health.
- There is also a need to assess the cost-effectiveness of oral health promotion activities.
- Mass media campaigns may increase health awareness but there is no evidence of this strategy being effective in promoting behavioural changes.
- Very little evidence exists on the effectiveness of screening as a strategy to detect oral cancers.

Source: Watt et al (2001a). Page 163.

Evidence-based research in oral health promotion has important implications for oral health policy and planning efforts. The traditional perception of oral health personnel being the primary service provider is now challenged. Oral health care should be seen as a collective

responsibility of all community health workers. The role of oral health workers goes beyond clinical and community responsibilities. Oral health workers need to be involved in advocacy, enabling, communications and networking.

Brothwell, Jutai and Hawkins (1998) discuss that *‘although personal oral hygiene is essential to dental health, professional treatment and frequent maintenance are not universally necessary’* (Brothwell, Jutai and Hawkins 1998: 302). A summary of evidence-based mechanical oral hygiene practices relevant for individual and community oral health self-care is presented in Table 3.1.

Table 3.1. Evidence in Oral Hygiene Practices

Oral Hygiene Practices	Available Evidence
Tooth brushing	Effective if fluoridated toothpaste is included.
Frequency of brushing	No optimal frequency in brushing has been established. Brushing twice daily with fluoridated toothpaste is consistent with optimal periodontal health and decrease in caries incidence.
Use of Dental Floss	Combined tooth brushing and flossing is shown to improve gingival health in adults.
Tongue Brushing or scraping	Is not shown to be effective in controlling gingivitis.
Six months recall visits for clinical care	No evidence to suggest that that the six months recall is an optimal frequency for monitoring gingival and periodontal health.

Source: Brothwell, Jutai and Hawkins (1998). Pages 295-302.

The main lesson drawn is that exposure to additional fluorides is seen as being more important than tooth brushing practices. The evidence also suggests the need for a reduced dependency on oral health professionals for maintaining optimal oral health care. These recommendations have important implications for the delivery of oral health services. Recommendations on oral health promotion activities and evidence-based findings on oral hygiene self-care practices again highlight the need for a shift in paradigm on oral health care (Watt et al 2001a). Essentially the emergence of evidence-based health care raises serious questions on the validity of existing oral health promotion activities (Kay and Locker 1998). Studies on the analysis of the six-monthly dental checks suggest that the cost-effectiveness of this strategy varies across risk groups. Thus consideration should be given to whether a population recall policy or a recall policy based on identifying high-risk groups is more acceptable (Murray 2003). The issue of six monthly recall checks raises limitations of this approach because it promotes dependency on oral health professionals for oral health care. This approach thus challenges the need to empower communities to gain control of

their own oral health status. These shifts in paradigms on oral health care would therefore require explicit policy commitments to guide the translation of rhetorical statements into programmatic practice.

3.6. Community Water Fluoridation and Dental Fluorosis

This strategy is arguably one of the most marked indicators for measuring improvements in community oral health status, namely the reduction of dental caries (Ripa 1993; Brumley et al 2001). However given the amount of public interest in community water fluoridation, very little high quality research has been undertaken in this area (McDonagh et al 2000). Recent systematic reviews on community water fluoridation efforts suggest that the evidence on caries reduction needs to be reviewed in conjunction with possible increases in the prevalence of dental fluorosis (McDonagh et al 2000). Other analyses suggest that the risks associated with fluoride ingestion may be underestimated and therefore community water fluoridation is an unacceptable method of reducing dental caries (Gibson and Gibson 2001; Mac Auley 2001; Connett 2001).

The question that arises is whether community water fluoridation is a justifiable strategy given the diversities in the prevalence and distribution of dental caries in South Africa (Government Gazette Number 18960, 1998). The impact of these findings will be discussed in later chapters in the South African context of health priorities and strategies.

3.6.1. Diffuse Benefits of Community Water Fluoridation

Systematic reviews of the diffused benefits of water fluoridation in the United States conclude that this strategy provides caries protection even in non-fluoridated communities (Griffen et al *cited in* Coulter, Moss and Newman 2001). These reviews raise important considerations on the diffuse effects of water fluoridation. The potential benefits arising from the diffused effects in community water fluoridation suggests that this feature requires closer scrutiny in health policy development. This implies that not all communities would require fluoridated water. Dental caries rates at a local epidemiological level would therefore be a significant indicator for identifying communities that require water fluoridation.

3.6.2. Cessation of Community Water Fluoridation

Various authors examined the effect of cessation of water fluoridation on caries levels (Maupome et al *cited in* Coulter, Chuang and Hujoel 2001a; Kunzel and Fischer *cited in* Bakdash, Hujoel and Niessen 2001a; Burt, Keels and Heller *cited in* Bakdash, Hujoel and Niessen 2001b). The reviewers conclude that a lack of information on fluorosis made it challenging to provide reliable inferences regarding the impact of water fluoridation cessation (Bakdash, Hujoel and Niessen 2001a and b).

3.7. Additional Fluoride Uptake

Randomised controlled trials have been effective in confirming the benefits of topical fluorides (Hausen 2004). Conclusions drawn from an analysis of fluoride varnishes, gels mouth rinses and toothpaste suggests that there is no conclusive evidence that fluoride varnishes are more effective than mouth rinses. Furthermore no definite conclusions could be reached on the adverse effects of these strategies because of a lack of data from the trials (Marinho et al 2004a and b; Hausen 2004). This again highlights the impact of study designs and evaluation techniques in evidence-based practice.

On the other hand systematic reviews show that sodium fluoride mouth rinses may have an anti-caries effect on children with limited background of fluoride exposure (Twetman et al 2004). However programmes using fluoridated toothpaste containing different levels of fluoride concentration were not shown to be indicative of reducing deprivation-related health inequalities (Ellwood et al 2004). The use of topical fluorides, specifically the use of toothpaste, would be a major strategy to consider in the absence of community water fluoridation. It is therefore important that research findings are integrated into a larger body of evidence.

3.8. Strategies to improve Community Health through Fluoride Use

Whelton et al (2004) suggests a need to co-ordinate studies that can determine in more detail the aesthetic impact of dental fluorosis. They suggest the development of profile of the risk factors for fluorosis in different countries and to review the levels required for maximum fluoride benefit in each country on a regular basis (Whelton 2004). The literature also

recommends the need for ongoing research to update information on the cost-effectiveness of community water, salt and milk fluoridation and its possible adverse effects, and to evaluate the effects of introducing affordable toothpaste and its utilisation rates (Petersen and Lennon 2004; Estupinan-Day 2004; Center for Health Improvement 2004b; Fejerskov, Manji and Baelum 1990). Research further suggests that appropriate research designs would explicitly highlight the relationship between diet, oral hygiene and dental caries (Harris et al 2004).

While community water fluoridation is highly effective in reducing the burden of disease, little is known about the mechanisms associated with community-level perceptions in additional fluoride uptake. Thus the process of understanding community and individual oral health-related decision-making would be an important public health area to investigate (Eklund *cited in* Petersen and Kwan 2004).

3.9. Reviews on Oral Health and Nutrition

The role of nutrition in oral health has been explicitly outlined in the previous chapter. Systematic reviews on the relationship between sugar consumption and dental caries conclude that this relationship is much weaker in the modern age because of the exposure to fluorides (Burt and Pai 2001; Billings 2004). However controlling the consumption of no-milk extrinsic sugar products remains a justifiable part of caries prevention.

Research shows a modest association between diet, obesity and periodontal disease (Merchant 2004; Saito 2004). The literature further suggests that there is a need to conduct large-scale prospective investigations to assess the long-term impact of diet on periodontal disease using surveillance techniques (Merchant 2004). While evidence linking diet, obesity and periodontal disease is low, all three issues are public health concerns. The integrated common risk factor approach outlined in Chapter Two provides an explicit link between these conditions. Furthermore diet and obesity are linked to acquisitions of unhealthy lifestyle practices that are deeply rooted in social and economic circumstances that limit the selection of healthier choices. Thus the relationship and impact between diet, obesity and possible, periodontal disease, needs to be examined, within the multi-factoral determinants of ill-health and well-being and not just through a review of evidence.

3.10. Other Strategies on Oral Health Promotion

This section examines current strategies on community oral health promotion efforts in relation to the literature on evidence-based oral health care. This assessment focuses only on issues that have potential to improve capacity building through health policy and programmatic efforts. Issues such as cost analyses and efficacy have thus been excluded.

3.10.1. School Oral Health Education Strategies

While there are different definitions and ideologies on oral health education, consideration should be given to the environment in which oral health education is given. The medium of communication, cultural sensitivity and enabling communities and individuals to take responsibility for their health and oral health status are all important factors that are needed in oral health education planning (Schou and Uitenbroek 1995).

3.10.2. School OH Programmes versus Maternal and Child Health Care

Similarly there is a growing body of research that questions the validity of the school environment as a primary source of community oral health efforts (Pine et al 2000). Research shows that there are still inequalities in children's health status despite the presence of organised school oral health programmes and access to free dental treatment for children (Petersen 1992 *cited* in Schou and Wight 1994).

It is also argued that issues such as tooth brushing efforts are acquired during the primary socialisation phase of a child's life and that efforts to influence a child's behaviour need to consider parental and other social impact on a child's health status (Milgrom 1998; Pine et al 2004). Furthermore strategies on early childhood caries should start from the antenatal period (Helderman, Lo and Holmgren 2003; Okada, Kawamura and Miura 2001; Kowash et al 2000; Milgrom 1998). Studies also show that the mother's attitudes and behaviour towards oral health care could influence her skills to take proper care of her child in areas of behavioural concern (Pine et al 2004; Milgrom 1998; Preston, Davies and Craven 2001; Redmond et al 2001).

On the other hand studies also indicate that adolescents' knowledge and beliefs on nutrition were not influenced by their mother's social class or caries experience (Hollund 1990). These conflicting reports indicate the complexities in understanding health interactions within a social or economic context. However the value of including the mother and other caregivers in children's oral health care appears to be a plausible recommendation. The value of including oral health promotion activities in maternal, child and women's health care is outlined in Chapter Five.

3.10.3. Evaluation in Oral Health Promotion

Studies conducted in Jerusalem suggest that the free distribution of toothpaste and toothbrushes together with a properly designed oral health education programme could be an effective method in promoting early hygiene practices (Sgan-Cohen et al 2001). This strategy would however have limitations because there is potential to create social dependency on health handouts and this is contrary to empowering communities to take responsibilities for their oral health. This observation is supported by Hollund's (1990) opinion that some parents believed that oral health care became the responsibility of the school environment following the child's enrolment at school.

Milgrom (1998) rightly states that if a health promotion intervention or product is not selling, chances are that something is wrong with the product, not necessarily the potential buyer. This loosely defined statement provides a challenge for oral health promotion strategies and interventions to be redefined and restructured in response to local needs (Milgrom 1998). However the availability of resources and technical capacities must also be considered in health interventions (Masalin, Murtomaa and Sipila 1994; Barmes 2000; Nutbeam 1999).

The lessons learned thus far are that evidence-based research has revolutionised oral health care (Watt et al 2001a). However it is still important that appropriate oral health policy priorities are selected and that the subsequent strategies are implemented and monitored (Myburgh 1998). It is also important that the identified health programmes or interventions are evaluated for their effectiveness (Watt and Daly 1996).

Thus the process of evaluation would play a key role in determining an evidence base as well as ensuring the sustainability of oral health promotion programmes. It is however important that a combination of quantitative and qualitative evaluation approaches are used (Petersen and Kwan 2004). There is a need to match evaluation methods with the nature of the intervention. It is also important to develop an appropriate workforce capacity in evaluation techniques (Petersen and Kwan 2004). Kernick (2001) provides a very pertinent observation that the value of evidence-based health care cannot be overstated. Health promotion planning and development needs to take into account that organisational life is influenced by complex non-linear interaction, and changes in one element can alter the context on other elements (Kernick 2001). Thus there may be areas of health and social development where it would not be possible to provide evidence irrespective of the amount of research that is conducted in an effort to understand the processes involved (Kernick 2001).

The points raised have important implications for the research. Providing evidence to justify health priorities and strategies forms only a part of health policy development (McQueen 2001). Adoption of evidence-based oral health practices requires change and there could be numerous barriers to influence organisational and practitioner behavioural changes (Elliot 2004). The author further suggests that interactive educational meetings, small group work, audit and feedback would be more likely to influence practitioner behaviour as opposed to continuing medical education lectures and guidelines (Elliot 2004). These comments presented have important implications for continuing education in South Africa. Much emphasis is placed on ensuring that health professionals are exposed to continued learning. However very little emphasis is placed on evaluating the effectiveness of these strategies on practitioner perceptions and behaviour. These issues will be further discussed in the context of the research findings.

Chapter 4

Oral Health Promotion Planning and Service Delivery

The previous chapters discussed the dynamics surrounding the development of policy and planning in relation to evidence-based oral health and health promotion. A review of oral health policy development and service delivery in South Africa could therefore assist in gaining a better understanding of the dynamics surrounding current oral health service provision. This chapter begins with a brief overview of health services before democratic changes and then focuses on contemporary issues in the planning, development and implementation of oral health promotion activities in South Africa. These activities are critically reviewed in comparison to the evidence-based developments identified in Chapter Three.

4.1. Background to Health Services in South Africa before Democracy

The history of racial discrimination pre-dates the apartheid era in South Africa (Goldstein, Ntuli and Coulson 1998). Williams and Rucker (2000) further add that racial disparities in medical care should be understood within the context of racial inequities in societal institutions (Williams and Rucker 2000). Health care provided by the apartheid government was racially-based with large well equipped hospitals providing services in the Afrikaner stronghold while the facilities in the ‘homelands’ were under-funded, under-equipped and under-staff (Goldstein, Ntuli and Coulson 1998: 16). Afrikaners refer to Afrikaans-speaking white colonists and ‘homelands’ refer to the demarcated geographical areas that were allocated to Black people in apartheid South Africa. These homelands had their own administration and budget. Health promotion consisted mainly of health education and focused almost entirely on population control measures. Thus the legacy of health education and promotion in government was both didactic and racist. The emergence of progressive health organisations in the late 1970s and 1980s ensured that health vision was mass-based, organised around local demands and supported through strategic alliances (Goldstein, Ntuli and Coulson 1998). There were indications of transforming the health system towards primary health care in the late 1980s however the government’s version of primary health care was largely that of providing second-class medical services for underserved populations (Goldstein, Ntuli and Coulson 1998). Historically the South African experience

in oral health care reflects similar colonial influences to those of other colonised countries in Africa (Hobdell et al 1997). Oral health services have been urban-based, clinically oriented and have excluded large sections of the population (Bhayat and Cleaton-Jones 2003). Numerous attempts have been made to address these historical imbalances in the post-apartheid era (after 1993) but oral health disparities still persist in the current delivery of health services in South Africa (Gugushe 1998; Singh 2000). Disparities in provincial infrastructure and uneven rates of oral health development would appear to be the primary reasons for continued imbalances in service delivery. The emergence of health priorities such as HIV/Aids demands a reassessment of the traditional focus on dental caries (Hobdell et al 1997).

The current delivery of oral health promotion activities in South Africa was initiated in the Apartheid era (Personal correspondence with National Directorate of Oral Health - South Africa 2003). School oral health programmes formed the core of community oral health promotion efforts in both South Africa and in other countries (Department of Health 1*; Hartono, Lambri and Helderma 2002). There is no evidence of formal policies that have guided school oral health promotion efforts prior to the restructuring of health services in South Africa (before 1994).

4.2. Current Health Delivery in South Africa

In 1994, the Interim Constitution of South Africa was established. This consisted of a quasi-federal system that focused on national, provincial and local levels of government (Goldstein, Ntuli and Coulson 1998). Political transformation resulted in the re-demarcation of provincial boundaries, municipalities and districts in South Africa (Figure 4.1.). These geographical boundaries have important implications for health policy development, service delivery and consequent efforts to integrate district health services (Pillay 1999; Barron 2000). The historical burden of disease and the legacy of imbalances in health care have also resulted in various provinces having different structural capacities to deliver health care services (Jinabhai, Coovadia and Abdool-Karim 1986; Nannan et al 2003). The Constitution of South Africa (1996) identifies the role of local government in its drive to address

* All of these references (Dept of Health 1 to Dept of Health 4) refer to official documents produced by the Department of Health in South Africa but are undated. This is merely a convenient method to identify and cite these official documents.

historical inequities in social and economic conditions (Republic of South Africa 1996). The Constitution describes the different levels of government as spheres (Figure 4.2.). This definition has important implications because it rejects a top-down approach to service delivery and increases potential for co-operation between different levels of health service delivery (Nicholson 2001). The process of decentralisation is seen as an important vehicle for improving flexibility, efficiency and responsiveness of the health system (Hall, Haynes and McCoy 2002). Decentralisation of health services refers to the transfer of skills, resources and management from central government to local government level (Mills et al 1990; Abel-Smith 1994). However this process could also have the opposite effect by exacerbating fragmentation, increasing co-ordination costs and inequities in local health service provision (Nicholson 2001; Hall, Haynes and McCoy 2002).

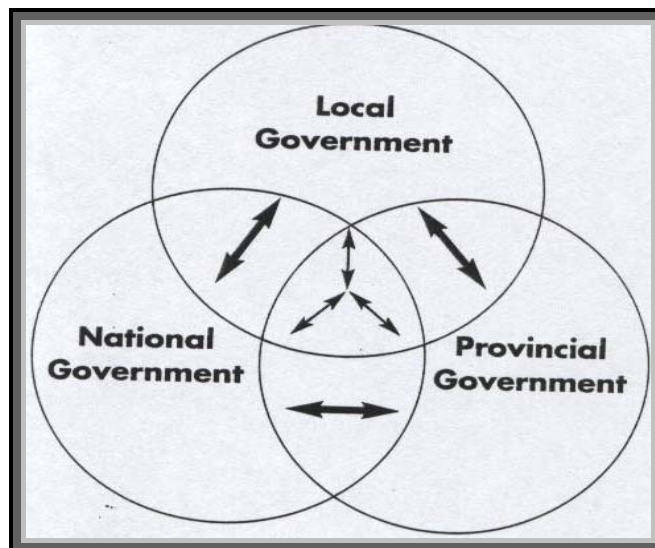
South Africa is classified as a middle income emerging market with a generous supply of natural resources and a well-developed network for communications, transport and fiscal responsibilities (van Wyk and van Wyk 2004). The health system is divided into a private and public sector. The mortality profile indicates that South Africa experiences a compounded burden of disease with HIV/Aids, non-communicable, poverty-related diseases and injuries being the most common cause of death (Bradshaw, Masiteng and Nannan 2000). It is therefore necessary that health policy development addresses these above-mentioned issues and that the subsequent strategies and interventions are in response to the transient social and economic trends in South Africa (Maunder, Matji and Hlatshwayo-Molea 2001).

Figure 4.1. Provinces in Post-Apartheid South Africa*



Source: www.geocities.com/TheTropics/8240/stats/htm#provinces

Figure 4.2. Different Levels of Government Accountability in South Africa



Source: Nicholson (2001). Bringing Health closer to the People. The Health Systems Trust. Page 7.

* Provinces refer to a clearly demarcated mapping of South Africa's geographical area. There are nine provinces in South Africa with each province having its own administration, budget and decision-making processes.

4.3. Oral Health Profile

More than 80% of the oral health workforce is located in the private sector (Department of Health 2002a). Thus less than 20% of the oral health workforce serves more than 80% of the population in South Africa (Health Systems Trust 2002). This implies that only 20% of the population has access to sophisticated and comprehensive clinical oral health care. The remaining 80% of the population is dependent on state services. Issues of budgetary constraints, under-developed infrastructures and lack of appropriate human resources would therefore complicate public oral health service delivery (Department of Health 1994-2000).

4.3.1. Dental Caries

As stated in Chapter Two, the prevalence and distribution of dental caries rates are the most documented research on oral diseases yet the evidence suggests that caries rates differ significantly and is on the decline in some countries (Petersen 2004a; Akpata 2004; Beiruti and Helderman 2004; Kaimenyi 2004). The WHO Oral Health Country/Area Profile Programme suggests that 68% of 12-year-old children in the 184 countries examined had less than 3 DMFT (Petersen 2004a). This indicates a steady decline in the caries incidence rates for 12-year-old children over a thirty-year period. A similar trend is observed in the South African oral health profile (van Wyk and van Wyk 2004). There have been only three studies conducted on a national scale by the Department of Health to determine the oral health status in South Africa. The first two studies were conducted in the apartheid era. The most recent national oral health survey was conducted from 1999 to 2002 and was restricted to 4 to 5-year-olds, 6-year-olds, 12 and 15-year-old children in South Africa (Department of Health 2003b).

The National Children's Oral Health Survey 1999-2002 is thus the only recent and reliable source of epidemiological data on oral disease rates in South Africa. The limitation of this report is that only data on children are presented. There is no reliable data on a national level for other sub-groups within the population.

Oral health surveys have focused on dental caries, periodontal disease, malocclusion, edentulousness and dental fluorosis, thus obscuring the impact of other oral diseases. This lack of reliable data would have serious implications for oral health planning in South

Africa. The impact of poor nutrition and HIV/Aids on oral health has now emerged as serious oral conditions in many parts of Africa, including South Africa (Ogunbodede 2004).

The report on the National Children's Oral Health Survey 1999-2002 indicates that 39.7% of the 6-year-old group are caries free (Department of Health 2003b). This figure is thus far below the goal of 50% set by the National Department of Health for the year 2000 in South Africa (Department of Health 1994-2000). The report further indicates that children living in urban areas have slightly higher rates of dental caries. The report adds that the *"percentage of children in the South Africa who need treatment for dental caries ranges from 45-60 per cent and the mean number of teeth needing care per child ranges between 2 to 3. The needs varied widely from province to province. The greatest need was recorded in the Western Cape Province where almost 80 per cent of the children needed care. The lowest need for dental caries was recorded in the Limpopo Province"* (Department of Health 2003b: 12-13).

Applying the Unmet Treatment Need Index (UTN) to the recorded caries rates, the results imply that 80% of carious lesions in children go untreated (van Wyk and van Wyk 2004). These statistics have important public health implications. They raise questions on the quality of public health services, the accessibility of oral health services, the quality of preventive measures and the impact of awareness campaigns on oral health behaviours.

The DMFT for 12-year-old children is also well below the goal of 1.5 set by the National Department of Health in 2000 (Department of Health 2003b). However the results also indicate a steady decline in caries rates in this group over a twenty-year period from 2.5 in 1982 to 1.1 in 2003 (van Wyk and van Wyk 2004). The most common oral health need identified in children would be personal preventive services, restorative treatment and extraction of teeth (van Wyk and van Wyk 2004). Oral health needs varied widely with the age 4-5 and 6-age group requiring more conservative and emergency relief of pain in comparison to the older groups. The need for preventive services was greatest in the 12-year group and the need for extraction was lowest in both the 12- and 15- year old children (Department of Health 2003b). This report (National Children's Oral Health Survey 1999-2002) thus has important implications for oral health planning in South Africa (Table 4.1.).

Table 4.1. Prevalence of Dental Caries and Untreated Caries by Age Group in South Africa

Age group	4-5*		6*		6		12		15	
	% Caries	% Un-treated caries	% Caries	% Un-treated caries	% Caries	% Un-treated caries	% Caries	% Un-treated caries	% Caries	% Un-treated caries
Weighted national mean	50.59	46.56	60.32	55.11	6.28	5.13	36.91	30.31	50.98	42.17
Western Cape	77.1	72.0	82.3	75.2	9.6	6.9	61.8	51.6	81.1	70.7
Northern Cape			84.1	82.7	16.4	14.8	47.3	44.2	62.8	55.2
Eastern Cape	58.9	53.7	67.7	63.6	4.1	3.7	49.0	32.7	63.8	48.4
Free State	60.1	57.8	59.2	56.8	4.9	4.0	36.8	33.3	54.5	50.6
KwaZuluNatal	52.4	50.8	64.8	59.9	6.2	5.3	38.7	34.9	50.9	46.3
Gauteng	49.10	37.60	59.70	50.50	4.90	3.90	34.30	26.60	49.90	31.10
North West	41.0	39.5	52.3	48.2	7.8	7.4	27.5	25.0	39.0	35.5
Mpumalanga	40.2	35.1	56.2	48.4	10.1	4.8	29.7	26.6	41.4	36.8
Limpopo	31.3	30.8	37.2	33.8	4.9	4.8	15.8	14.1	28.4	24.1

*Primary dentition

Source: Department of Health (2003b). Report: National Children's Oral Health Survey. South Africa. 1999-2002. Page 9.

There is little evidence to suggest that early childhood caries is adequately addressed in oral health promotion efforts in South Africa despite the availability of supporting epidemiological data. Free primary health care services were legislated in 1994 (Government Gazette Number 15817, 1994). An evaluation of patient attendance rates at primary health care centres after the introduction of free primary health care services in South Africa (in 1996) indicates that there is a significant increase in patient loads (Bhayat and Cleaton-Jones 2003; Wilkinson, Sach and Karim 1996). Emergency relief of pain and sepsis has been identified as the most frequent clinical procedure at a primary oral health care rendering service facility (Bhayat and Cleaton-Jones 2003; Gugushe 1998; Department of Health 2002a). This suggests that oral health services in South Africa are essentially curative-driven and contradicts the philosophy of the primary health care approach.

4.3.2. Periodontal Disease

The report on the National Children's Oral Health Survey 1999-2002 also shows that there are marked variations in the prevalence and severity of periodontal disease on a provincial basis in South Africa (Department of Health 2003b; van Wyk and van Wyk 2004). The report further indicates that less than 15% of 15-year-old children examined, had healthy periodontal tissues (Department of Health 2003b). The report cites poor oral hygiene as a possible cause of periodontal disease in children. The limitation of this observation is that the impact of lifestyle practices was not considered. The link between smoking and periodontal has been established yet there is little evidence to suggest that these practices

are being adequately expressed in health policy and programmatic efforts in South Africa. Vague references are made to these practices in national oral health policy statements (Department of Health 1994-2000). There are no clearly defined proposals that explicitly outline the extent to which smoking and other unhealthy lifestyle practices will be addressed from an oral health policy perspective.

4.3.3. Dental Fluorosis

The National Children's Oral Health Survey 1999-2002 indicates that 65% of children are classified as normal according to Dean's Index of fluorosis. More than 20% of 12-year-old children showed signs of dental fluorosis. The records fell in the very mild category (10%) while 6% of 12 year-old-children presented with mild fluorosis. 3% of the records were classified as moderate and 0.7% was indicated as severe fluorosis (Department of Health 2003b). Four areas in South Africa were identified as high-risk areas for dental fluorosis. This was a result of naturally occurring fluoride and a combination of mining and industrial activities (van Wyk and van Wyk 2004).

4.4. Oral Health Policy Development

As mentioned before, health policy development has played a major role in post-apartheid transformation of health services in South Africa (Department of Health 2*). Similar efforts have been executed in oral health policy efforts (Myburgh 1998; Ayo-Yusuf 2002). The provision for equitable oral health services is outlined in "The White Paper for Transformation of the Health System in South Africa" (Government Gazette Number 17910, 1997).

This document recommends that the need to '*reduce disparities and inequities in health service delivery and increase access to improved and integrated services, based on primary health care principles*' (Government Gazette Number 17910, 1997: 14).

* All of these references (Dept of Health 1 to Dept of Health 4) refer to official documents produced by the Department of Health in South Africa but are undated. This is merely a convenient method to identify and cite these official documents.

A critique of draft national oral health policies 1-4 (Department of Health 1994-2000) suggests that the proposed oral health plan for South Africa embraces principles of the primary health care approach but provides little if not no direction on how these policies are to be translated to a programmatic level (Myburgh 1998). All four of these documents are undated and are simply entitled: "Draft National Oral Health Policy for South Africa". The preamble to all of these documents highlights the expenditure on curative and restorative oral health procedures in 1994 in South Africa. This provides the evidence that these documents were produced in the post-apartheid era (Department of Health 2).

Myburgh (1998) further iterates that oral health policy discussions have focused on the content rather than the processes of health policy formulation. The apparent omissions in oral health policy development appear to be '*a rational basis for statements about oral health needs and priorities; adequate recognition of communities, stakeholder groups and others with an interest in the formulation, implementation or revision of oral health policy; oral health interventions selected for their proven efficacy; and statements that show how oral health policy will give effect to rhetoric commitments to the primary health care approach*' (Myburgh 1998: 5).

In summary a number of shortfalls were observed in Drafts 1-4 (Department of Health 1994-2000). There is little if not no direction for the translation of oral health promotion proposals to a programmatic level. There is no apparent rational basis for the identification of oral health priorities. There has been little support for the integration process. It would also appear that there is still professional control and protection of professional interests in oral health policy development in South Africa. The challenges facing oral health service delivery would therefore be the need to reconcile oral health needs and demands through an integrated approach and to have appropriate epidemiological evidence to support these health initiatives (Ross 1988; Pakhomov 1999). The World Health Organisation Regional Oral Health Strategy for African countries identified criteria for an effective oral health policy (Myburgh et al 2005; Myburgh, Hobdell and Lalloo 2004). This strategy advocates a systematic approach to the identification and selection of oral health policy priorities and intervention strategies that are evidence-based and appropriate to local community settings. This approach is a break away from the previous emphasis on dental caries and looks at other oral conditions such as oral cancer, noma and oral consequences of HIV/Aids (Hobdell et al 1997; Hobdell et al 2003).

The national strategy for oral health in South Africa proposes a basic package for treatment services at district level (Department of Health 2004). Helderman, Lo and Holmgren (2003) argued that while the basic package for oral health has been proposed in most developing countries (non-established market economy countries), there is a lack of experience in the implementation and the consequent effectiveness, efficiency and sustainability of the proposed components of the basic package under local conditions (Helderman, Lo and Holmgren 2003). They argue further that an effective approach to implementing an essential package for oral health services may not be conducive to all community settings. Issues such as lack of finance, human resources or community acceptance could have a negative impact on implementation strategies (Helderman, Lo and Holmgren 2003). The authors propose that locally implemented pilot projects be evaluated for their effectiveness, efficiency and sustainability as opposed to a national implementation of the basic oral health package (Helderman, Lo and Holmgren 2003). The proposals presented by Helderman, Lo and Holmgren (2003) raise serious questions on the validity of implementing a basic package on oral health services nationally in South Africa. The literature has outlined the limitations of implementing broad-based population-wide strategies that are not in response to local conditions and needs. The arguments presented by Helderman, Lo and Holmgren (2003) provide further support that oral health promotion-related activities need to be developed in accordance to local conditions and needs in South Africa.

4.5. The Need for Evidence in Oral Health Promotion in South Africa

Evidence-based policy efforts would have the potential to justify the selection of specific health proposals and could provide a rational basis for the implementation of health interventions and programmes (Gray 2001). It is therefore important that health planners and service providers are aware of these developments in oral health care. There is no evidence in the literature to suggest that evidence-based findings are adopted in the current strategies, interventions and programmes on oral health promotion in South Africa, with the exception to policy proposals on oral health promotion. The literature review implies that there is an urgent need to re-orient oral health promotion strategies and interventions to include comprehensive efforts in both maternal and child health care as opposed to focusing exclusively on the school-going child. These shifts in paradigms on community oral health efforts would require commitments in policy. These policy efforts would need to be supported through all levels of the health system in South Africa.

4.5.1. Fluoride Efforts

4.5.1.1. Community Water Fluoridation

Community water fluoridation has been identified as a policy strategy to promote optimal oral health care in South Africa (Department of Health 1994-2000; Department of Health 2002a; Department of Health 2004). Chikte (2002) defines water fluoridation as *'the process of adjusting the amount of fluoride that is present naturally in the community's water to the best level for protection against tooth decay'* (Chikte 2002: 709).

Community water fluoridation has the potential to reduce inequalities but it should not be viewed as a means of eliminating health inequalities (Locker 2000; Fergusson and Horwood 1986). The South African burden of ill-health is largely due to socio-political, economic and environmental influences (Bradshaw, Masiteng and Nannan 2000). Large pockets of South African communities do not have access to piped water therefore community water fluoridation efforts will not be able to reach these communities (Rothberg, Magennis and Mynhart 1999). Consumer products such as toothpaste and mouth rinses are largely expensive and relatively unaffordable to disadvantaged communities. Therefore alternate vehicles for fluoride delivery systems need to be explored in the South African context of oral health delivery. Community water fluoridation efforts would appear to be the most cost effective method of fluoride delivery in South Africa (van Wyk, Kroon and Holtshousen 2001). This strategy appears to be a valid issue to address in oral health policy in South Africa. The promotion of community water fluoridation could also contribute to long-term health benefits in social developments. The availability of safe water supply could help to reduce other water-borne disease such as cholera and contribute to parasite control (Taylor et al 1999; National Department of Health 2001).

Studies conducted on the concentration of fluoride in toothpaste in South Africa indicate that current levels of fluoride in toothpaste could be effective in the prevention of dental caries but that community water fluoridation efforts need to take into account the potential risks of a cumulative exposure to additional sources of fluoride (Kroon and Botha 2001; Kroon 2001). Data indicates that dental fluorosis appears to be more severe in the Northern Cape with more than 20% of children being affected (Department of Health 2003b).

The value of additional fluoride uptake cannot be disputed. However this review suggests that strategies on fluoride uptake need to be systematically evaluated for its appropriateness before being proposed in health policy efforts in South Africa. The cost-effectiveness of the different fluoride additives will have important implications for oral health policy development. These issues also highlight the necessity for diversity in evaluating the effectiveness and efficacy of strategies and interventions in oral health promotion (Bader, Shugars and Bonito 2001).

4.5.2. The ART Technique and Fissure Sealants in Caries Prevention

Traditional delivery of oral health clinical services had been dependent on sophisticated technology and specific manpower (Frencken, Makoni and Sithole 1996). The Atraumatic Restorative Treatment approach (ART) is now recognised as a viable strategy for the prevention and treatment of dental caries (WHO 2004; Frencken, Makoni and Sithole 1996).

An evaluation of Atraumatic Restorative Treatment and Glass-Ionomer Sealants in a Zimbabwean school oral health programme suggests 93% of one surface ART restorations and 60% of complete fissure sealants had a survival rate after one year. Similar success rates are presented for the evaluation of atraumatic restorations in South Africa (Louw et al 2002).

Lodra et al (1993) conclude that fissure sealants are effective in preventing dental caries but that the effectiveness decreases over time. Therefore periodic reapplication is required (Lodra et al 1993 *cited in* Ferguson 1998). The need for multiple replacements of fissure sealants questions the cost-effectiveness of this intervention as a public health strategy (Ferguson 1998; Morgan et al 1997). This fact should be considered when advocating fissure sealant applications in community oral health promotion programmes. Research findings suggest that there is a need for a policy on protocols for sealant application (Parnell et al 2003; Louw et al 2002). There is no evidence at present, of policy efforts to guide fissure sealant programmes in South Africa.

In summary several pertinent issues are raised in this chapter. Despite concerted efforts in oral health policy development several challenges still face the delivery of oral health services in South Africa. Evidence-based research findings have provided an alternate

perspective to oral health service delivery. This shift in paradigms on oral health care challenges the traditional ethos and delivery of oral health promotion services in South Africa. A review of community oral health promotion programmes in relation to evidence-based research findings suggest that there is an urgent need to re-orient community oral health promotion programmes in South Africa. The literature on evidence-based findings provides support for policy recommendations on community water fluoridation as a strategy in addressing dental caries in South Africa. However the impact of persistent health inequalities must also be taken into account.

Chapter 5

Current Delivery of District Health Services Relevant to Oral Health Promotion

Health policy development has identified district health services as a primary vehicle for driving the health transformation process in South Africa (Government Gazette Number 17910, 1997). An over-simplistic interpretation of this process would be the assumption that community health policy priorities and agendas are developed at national and provincial levels. The implementation of health strategies and interventions would most likely occur at district health level (Department of Health 2001a). Although the process of health policy development is considered to be cyclical and is dependent on a number of external and internal influences, this simple interpretation of the health policy process in South Africa highlights the translation of health policy into programmatic action at community health level. Most community oral health promotion activities are generally conducted at primary health care level (Mautsch and Sheiham 1995; Helderma et al 1999). District health services would therefore be the most appropriate setting to examine the impact of oral health promotion policy and programmatic efforts (Department of Health 2001b; Newell 1989; World Health Organisation 1988).

This chapter examines the dynamics of district health services in relation to primary health care and compares proposals and rhetorical statements in health policy to the actual delivery of district primary health care services in South Africa. This chapter also attempts to establish a link between oral health promotion efforts and specific health programmes. These programmes include Maternal and Child Health, Nutrition, HIV/Aids and Health Promotion.

5.1. District Primary Health Care

Primary health care is defined as '*essential care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination*' (WHO 1988). District primary health care services

generally focuses on the prevention of disease, together with the promotion of healthy lifestyles using basic curative interventions (Singh 2000; Department of Health 2). The challenge would therefore be to ensure equality in the district's capacity to deliver optimal primary health care services and to achieve equity in health service delivery (Ntuli 1999). Similarly issues of equality and equity have important implications for developments in oral health promotion (Watt and Sheiham 1999; Gugushe 1998).

5.2. Limitations in Integrating District Health Services

The South African experience in health integration efforts has been largely directed to functional, organisational and administrative integration, that is, bridging the physical gaps in previously fragmented health services delivery (Pillay 1999; Bramford 1999; Gaede 1999; KZN District Health Expenditure Review 2001/2 and 2002/3). Although the National Health Bill (Government Gazette Number 26595, 2004) has been finalised, there is at present, no national legislation to guide the formation of a district health system in South Africa (Barron 2000). The absence of an updated legislation on health has important implications for health service delivery in South Africa. The responsibility is left to the various provinces to introduce their own legislation regarding health care delivery. The absence of a national guideline is likely to perpetuate provincial variations on the capacity to support and deliver effective district health services (Barron 2000; Health Systems Trust 1997). There is also an understanding that primary health services should be organised in response to local conditions and this would require a fair degree of tolerance for differences between provinces, regions and districts (Schierhout and Fonn 1999). However there have been difficulties in translating this vision into practice (Strachan 2000b; Schierhout and Fonn 1999; Kraus 1999; Scott et al 2004).

Barron (2000) adds further that the availability of resources will also determine implementation and sustainability of district health efforts (Box 5.1.). There is a need to communicate policy efforts to district service providers effectively so that health workers are informed of their working conditions and service benefits (Barron 2000). There is also a need to examine staffing norms and the capacities for districts to sustain health action. Barron (2000) concludes that primary health care services face the danger of having to respond to an increased demand in curative services and this could undermine the impact of preventive and promotive health care (Barron 2000).

Box 5.1. Challenges facing District Primary Health Care (PHC) Services

Challenges to PHC Delivery

- No definite guideline on the scope and depth of district PHC services.
- The need for a dedicated budget for the delivery of PHC services.
- The need to have effective communication between policy planning and implementation and the actual service providers involved in executing health implementation strategies.
- The need to address staffing norms and availability of human resources for service delivery.
- There is also an urgent need to address the technical and administrative capacities within the various provinces.

Adapted from Barron (2000). HST Update. Issue No. 5. Page 3-4.

The Annual Report for the Department of Health - 2001/2002 (Department of Health 2002b) indicates that the majority of services provided at a primary health care level are linked to the provision for priority health programmes (Table 5.1.). This report states that only 20%-39% of primary health care services include provisions for oral health and school health services. The records also suggest that services on maternal and child health, nutrition, HIV/Aids and chronic diseases are widely implemented at a primary health care level (85%-100% availability in service provision) in South Africa (Department of Health 2002b). The availability of these services at district level has important implications for oral health promotion services. The research selected the areas of health promotion, nutrition, maternal and child health and HIV/Aids as those that are most likely to support oral health promotion efforts. These records (Table 5.1) provide support to these postulations in terms of availability of district health services.

Table 5.1. Availability of Services at a Primary Health Care Level

Percent providing service	Type of Service
90-100%	Child health; Family planning; STI management; TB care; Nutrition.
80-89%	Maternal health; Adult acute curative; Chronic diseases; HIV and AIDS.
60-79%	Mental health; Health Promotion; Fast queues; Emergency services; Violence/Sexual abuse; DOTS.
40-59%	None.
20-39%	Termination of pregnancy; School health; Environmental health; Home-based care; Eye care; Oral health; Speech and hearing screening; Rehabilitation.
0-19%	Occupational health; Radiology

Source: Department of Health (2002b). Annual Report – 2001/2002. Page 73.

However there are limitations in this report (Annual Report for the Department of Health 2001/2002). These limitations are reflected in the fact that the report does not outline the number of districts or areas that are not receiving adequate access to optimal primary health care services. This is important given the historical imbalances in health care in South Africa (Jinabhai, Coovadia and Abdool-Karim 1986). This report does not explicitly outline the extent to which these historical inequities have been addressed (Department of Health 2002b). The implications are that primary oral health care services are in a critical state in South Africa.

The challenges and limitations in the current delivery of district health services have important implications for health policy development. The challenges facing district health service integration would undermine the success of health transformation in South Africa unless urgent steps are taken to address these issues. The shortages in human resources, lack of commitment to the principles of the primary health care approach and delays in the health transformation process could have a negative impact on health policy efforts. This in turn could widen the gap between health policy and practice. The impact of process and power outlined in the previous chapters could also be extrapolated to the current limitations in district health services. The need for retaining professional control of district programmes would perpetuate difficulties in translating policy to practice.

It is therefore important that the content and dynamics of existing district health services relevant to community oral health promotion are examined within the context of these current shortcomings in district health services in South Africa.

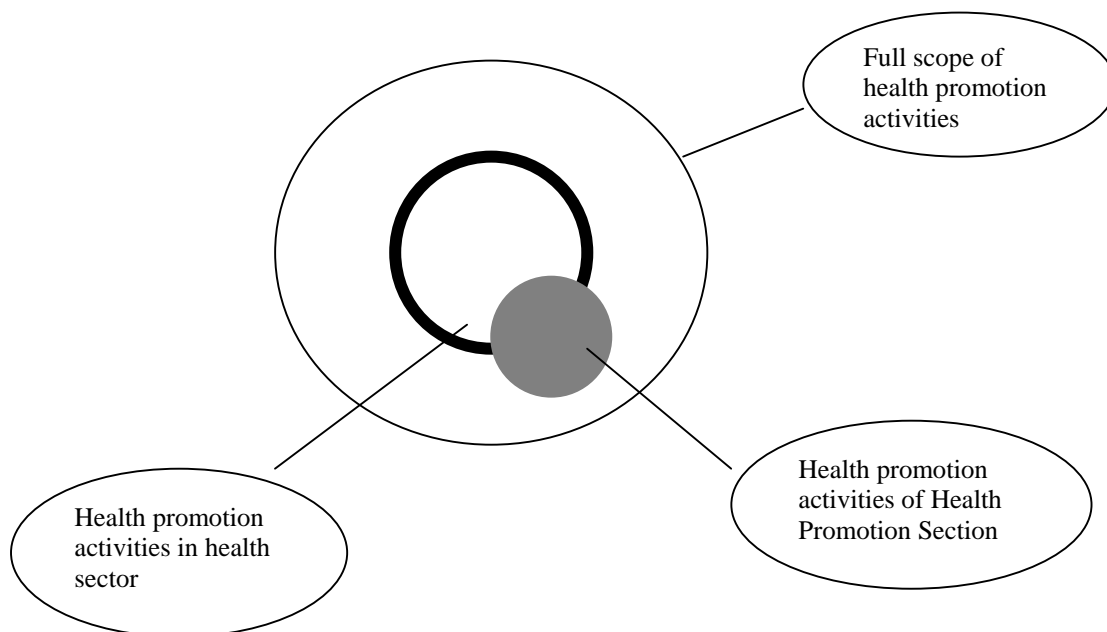
5.3. District Health Activities relevant to Oral Health Promotion

This section explores the dynamics of each of the identified health areas in relation to policy and programmatic issues. Research outlining the role and practicality of including oral health promotion efforts in each of these health areas is also presented.

5.3.1. Health Promotion in South Africa

Health promotion in South Africa is built on policy, advocacy and healthy environments; the settings approach; education and information; community participation and reorienting health service delivery (Coulson 2000; Ntuli 2000; Strachan 2000b). Key health settings would include healthy cities, healthy schools, healthy hospitals and healthy workplaces (Baum 1998). One of the biggest challenges facing health promotion would be its contextual definition (Ntayiya et al 1998; Reddy and Tobias 1994; Kelleher 1996; Reddy et al 1995). Similar contradictions in the definition of health promotion are visible in the South African experience of service delivery. Ntayiya et al (1998) provides an interesting illustration to describe the complexities and apparent dualities in the delivery of health promotion services (Figure 5.1.).

Figure 5.1. Potential Scope for Health Promotion Activities



Source: Ntayiya et al (1998). Health Promotion in a Rural Health District. Making it more Effective and Efficient. Page 2.

Health promotion activities are seen to cut across the various sectors of social development, namely welfare, finance, education, commerce, etc. Simultaneously every district health programme has a built-in health-promoting component that focuses on promoting healthy lifestyles and providing support for healthier choices to be made. In addition there is a specialised health promotion programme that carries out its own health promotion strategies and interventions (Figure 5.1). This convolution of health promotion activities has serious implications for health policy development. There is lack of clear distinction between emphasis on collective social responsibility and that of modifying individual health behaviours (Ntiyaya et al 1998). The consequence of this lack of distinction and its subsequent impact on oral health promotion will be discussed in later chapters.

5.3.2. Maternal and Child Health

There is no evidence at present to suggest that the impact of dental caries is addressed in maternal and child policy development in South Africa. Furthermore despite the development of dedicated child health programmes at both national and provincial levels, there are significant gaps between policy initiatives and their successful implementation (Shung-King 1999). Using child health programmes as a guide, Shung-King (1999) demonstrates the gaps between policy and practice (Box 5.2.). Some of the identified factors for the apparent failure to successfully translate policy efforts into practice would include the lack of necessary skills and resources (Shung-King 1999; Lehmann, Kama and Sanders 2003; Strachan 2000b). These policy issues are not directly related to oral health promotion. However the difficulties in translating these policies to practice will also apply to oral health promotion because of the context of health service provision.

Box 5.2. Addressing the gaps between Health Policy Initiatives and Practice

Addressing the gaps between health policy and practice

- Need to advocate sustainable budgetary dedications.
- Identify structural capacities to deliver services.
- Identify appropriate skills and human resources required for the implementation and sustainability of health initiatives.
- Foster partnerships between the public sector and other community-based organisations.
- Develop comprehensive programmes that include life skills so as to equip people to make informed decisions with regard to unhealthy behavioural practices.
- To ensure that the selection and delivery of health services is built on sound evidence and research.
- There is also a need to develop well defined policies to guide the process of health delivery.

Sources: Shung King (1999); Department of Health (2001c and d)

Gaps between policy and programmatic implementation could be addressed through the following strategies. Apart from policy initiatives on maternal and child health care there is a need to institute community and home-based care as an extension of public health care service provision (Shung-King 1999). This would require partnerships between the public health sector and community-based organisations for health priority focus (Shung-King 1999; Freeman, Lee and Vivian 1999). It is also important to develop an effective district information system (Department of Health 1998). There is a need for comprehensive youth programmes for the promotion of healthy lifestyles and the development of life skills. These issues could be extrapolated to oral health promotion efforts as well. The promotion of appropriate breastfeeding practices has important implications for addressing the development of early childhood caries (Singh 2000). The promotion of safe breastfeeding could contribute to reducing the onset of early childhood caries, specifically nursing bottle caries (Singh 2000; Watt 2000). However the prevalence of mother to child transmission of HIV/Aids has complicated the promotion of breastfeeding efforts in South Africa (Jackson et al 2004; Department of Health 2001a; Dunn et al 1992). The debate over public policy regarding infant feeding practices and the provision for free formula continues to be a complex public health issue (Department of Health 2001a). Integrating oral health priorities into policy developments on maternal and child health care could therefore help to strengthen commitments in addressing early childhood caries and other oral health implications through a comprehensive approach.

5.3.3. Nutrition

5.3.3.1. Successful Programmatic Implementation

The Primary School Nutrition Programme was introduced as a Presidential Lead Programme of the Reconstruction and Development Programme (McCoy 1997). This project used the rationale that educational learning capacities, school attendance and punctuality could be improved through the provision of healthy meals at school (Singh 2000; McCoy 1997). Although there is an urgent need to transform the Primary School Nutrition Programme from a vertical school-feeding scheme into a comprehensive school nutrition programme, this programme could also be used as a catalyst for other integrated community-based nutrition programmes (McCoy 1997).

The Primary School Nutrition Programme has important implications for the delivery of school oral health services (Singh 2000). There is no evidence at present to suggest that oral health services has any direct input into The Primary School Nutrition Programme in South Africa either from a policy or programmatic perspective. Although operational, logistical and administrative problems do exist in the current primary school nutrition programme (Department of Health 2002a), the potential does exist to ensure that oral health promotion issues on dietary intake can be addressed through partnerships within the school environment (Singh 2000; Sheiham and Watt 2003).

5.3.3.2. Policy Implications for Oral Health and Nutrition

Although oral health was initially excluded from the National Food-Based Dietary Guidelines (2002), policy advocacy efforts have resulted in a proposed guideline for sugar consumption in South Africa (Steyn, Myburgh and Nel 2003). However an analysis of the proposals presented in this document reveals that there should be concerns on how this guideline will be implemented. The document does not at present, outline any criteria that could guide the implementation, monitoring and evaluation process. It is difficult to express an absolute value in the amount of sugar consumption required for exposure to initiate the onset of dental caries. This in turn could have an impact on the quality and validity of health messages that promote a reduction in sugar consumption. The onset of dental caries is a complex process that is dependent on a number of variables and not simply an exposure to excessive sugar consumption (Murray 1996; Soderling 2001; Ismail, Tanzer and Dingle

1997). This complexity in susceptibility to dental caries reiterates that oral health needs to be addressed in a comprehensive manner through integrated health policy efforts and not through isolated risk factor approaches.

5.3.4. Oral Health and HIV/Aids

There is a need for programmes on HIV/Aids and STDs to incorporate their structures and resources into other primary health efforts such as nutrition and maternal and child programmes in order to play a more meaningful role in addressing the epidemic. The association between oral health and HIV/Aids suggests that district health workers have a much bigger and more meaningful role to play in combating the HIV/Aids epidemic in South Africa (Patton 2001; Russel and Schneider 2000; KwaZulu-Natal Department of Health 2001/2002). It would justify the inclusion of oral implications in HIV/Aids-related health policy agendas in South Africa. The potential does exist to include oral health promotion efforts in building capacities for community support and for effective communication in creating awareness in unhealthy behavioural practices (Petersen 2004b; Heslin et al 2001; Kelly, Parker and Gelb 2002; Mautsch, Gamarra and Mora 1995).

5.3.5. Unhealthy Behavioural Practices

There is no evidence to suggest that oral implications of smoking and alcohol consumption are included in health policy efforts in South Africa despite the availability of literature supporting the link between smoking and periodontal disease. It is therefore important that oral health planning strategies take into account the social context of the determinants of periodontal disease and that appropriate strategies are developed (Baelum and Lopez 2004). The combined practice of smoking and alcohol consumption has also been shown to increase the risk of developing intra-oral cancer (Hille, Shear and Sitas 1996). Thus there is an urgent need to advocate the oral implications of smoking and alcohol consumption onto the relevant health policy agendas in South Africa.

However to simply focus on educating people to make informed health choices is inadequate (Watt and Fuller 1999; Kay and Locker 1998). There is a need for support from legislation and political commitment (Clarke 1999). The Tobacco Products Control Amendment Act, 1999 has been hailed as a major contribution to health promotions efforts

in South Africa. Research evidence indicates that the national legislation on tobacco control in South Africa has had an impact on the distribution and sale of tobacco products (Clarke 1999). However it is unknown whether legislation on tobacco control has had an impact on smoking prevalence rates in South Africa (Clarke 1999).

In summary the literature indicates that there are distinct gaps between health policy initiatives and their consequent implementation efforts. One of the key factors involved in the challenges facing health policy implementation would be the lack of adequate skills, resources, structural inadequacies, management issues and referral guidelines. The district health activities outlined, have important implications for the research. Although oral health is visibly absent from most of these district activities it was still deemed necessary to examine the relevant policy development and implementation at district level. Since oral health promotion services are conducted under similar conditions at district level, the difficulties experienced in translating policy rhetoric into practice could also be applied to oral health promotion. Furthermore, literature on primary health care integration does not explicitly outline the actual role that oral health workers could play in integrated health efforts. Therefore the review focused on not simply outlining the value of integrating oral health promotion but elaborating on the potential roles that service providers could play. The implications of these proposed efforts are presented in the Discussion Section.

Chapter 6

Challenges Facing the Development of Oral Health Promotion

A number of pertinent issues have arisen from the literature review thus far. The lack of effective evaluation strategies for oral health promotion, discrepancies in resource allocation, including human resources, and the need to develop effective strategies to foster and support oral health promotion efforts within a broader context of health service planning and delivery, are all seen as potential challenges that need to be urgently addressed in oral health promotion policy efforts. This chapter focuses on the challenges facing the development and delivery of oral health promotion services, and the need to develop effective strategies in evaluating oral health promotion efforts. This chapter focuses on the need to develop human resources through effective partnerships within the health system in South Africa.

6.1. Evaluation of Oral Health Programmes

There is a need to improve the quality of oral health promotion research (Watt et al 2001a). There is also a need for a shared responsibility between researchers, health decision makers and district health service providers (Watt et al 2001a). It is important to have sound research in health promotion efforts at a district level in order to increase effectiveness in oral health-related action (Brindle et al 2000).

Nutbeam (1999) argues that the success of health programmes can be increased if:

- They are planned on the basis of epidemiological, behavioural and social factors.
- Intervention programmes are developed on the best available evidence.
- There is sufficient community and political support for the proposed health intervention.
- Health interventions could make use of a combination of intervention methods.

The factors outlined have important implications for health policy development in South Africa. There is no research evidence to suggest that South African health policy statements include a component that clearly expresses the policy's intended evaluation process. This limitation in health policy development needs to be urgently addressed in South Africa.

6.2. Challenges in Evaluating Oral Health Promotion Activities

Health promotion programmes are designed to influence communities through specific interventions known as the “process”. These processes may have an immediate effect or impact, or have long-term influences or outcomes (Harden et al 1999; Blinkhorn 1993). Knowledge of unhealthy behavioural practices does not guarantee positive changes in attitudes. The *‘inclusion and exclusion criteria used in effectiveness reviews which are derived from an epidemiological and clinical paradigm are inappropriate for health promotion research as they fail to recognise the nature of health promotion practice’* (Watt et al 2001a: 163). Therefore it is inappropriate to have a rigid or inflexible set of criteria for evaluating oral health promotion efforts.

Watt and Daly (1996) reiterate that health promotion activities ‘does not fit comfortably into the conventional evidence based model of randomised trial’. The results of randomised control trials are ‘often atypical and not generaliseable to other patients and populations’ and the ‘outcomes related to health behaviour and RCTs [randomised control trials] are often inappropriate to measure change in behaviour’ (Watt and Daly 1996: 9-11). Green (1998) points out that a lack of evidence should not be viewed as a lack of effectiveness. However there is general consensus that despite shortcomings in the current methods of evaluation the potential to improve the ‘overall quality of evaluation of health promotion interventions’ does exist (Watt et al 2001a: 163).

Research shows that health gains can sometimes be viewed as health care benefits and not benefits to overall health (Adam 1994). A health needs approach that is based on equity will ensure that health benefits are directed to those communities where it is most required (Adams 1994 *cited* in Watt and Daly 1996).

As mentioned in Chapter Two, a focus on health promotion outcomes tend to obscure the issue of impact on health promotion (Harrison 1999). Thus focusing on expected effects might obscure the unexpected, unplanned, negative and secondary effects of the entire process on health interventions.

It is therefore important to include an effective evaluation component in the planning stages of any health policy or intervention (Watt et al 2001a and b). The strategy for evaluation depends on the methods used for the health intervention (Watt and Daly 1996). Watt et al (2001b) also discuss the need for partnerships in health promotion. They reiterate the need for active involvement of role players in the planning, implementation and evaluation processes. This ensures that the 'evaluation process is more grounded in the practical realities of the world' (Watt et al 2001a: 164). Health professionals should recognise their limitations in evaluating health promotion interventions and that there is a critical need to collaborate with other experts and stakeholders. There is also a need to include training in research as part of skills development for health care providers (Watt et al 2001b).

Navarro (1977) on other hand argues that most health strategies for change focus on 'changing the behaviour of the individual and not the behaviour of the system' and that a '*far better strategy than self-care and changes in lifestyle to improve the health of the individual would be to change the economic and social structure*' (Navarro 1977: 55-56). The author further postulates that the political system and economic interests of corporate companies could have a major influence on determining the acquisition of unhealthy lifestyles.

These issues highlighted have important implications for health policy development. It is important that provisions for evaluating health policy and programmatic efforts are included in health policy statements. This could help to ensure that the process of health policy formulation as well as the implementation and monitoring of the health intervention are evaluated in a systematic manner. There is also a need to collaborate with other stakeholders. This is important to adopt a multi-sectoral approach not only to health interventions but to health policy development as well.

6.3. Ethical Issues in Oral Health Promotion Activities

The issue of ethical considerations in oral health promotion is largely ignored in research and this shortcoming is possibly built on the assumption that health promotion activities are primarily designed to contribute to improved community health (Watt and Daly 1996). The authors stress that traditionally health promotion activities have been implemented 'without sufficient evidence of their benefits' and question the ethics of including people in community research without proper and informed consent (Gibbons 1999 *cited in* Watt and

Daly 1996: 16). The literature suggests that population-wide public health interventions that are implemented without consideration being given to the nature of the message, the medium of communication, the cultural and social context and the target audience, could be regarded a violation of ethics (Beauchamp and Steinbock 1999; Yeo 1993). The issue of ethical consideration is largely not expressed in health policy development and this aspect of health services research needs to be addressed in health policy efforts in South Africa.

6.4. Human Resource Development

The quality of care and sustainability of health services depends on the effectiveness and efficiency of health service delivery (Gray 2001). The literature review has outlined the value of integrating health programmes at a district health level (Singh 2000; Baez and Morigilhane 2003; Helderma et al 1999). The literature has also established that availability of human resources is equally important for health service delivery (Department of Health, Welfare and Gender Affairs, Mpumalanga 1997; Filmer et al 2002). Walt and Gilson (1994) explains that *'the role of the civil service cannot be under-estimated because of the strategic roles bureaucrats play in the implementation of reforms'* (Walt and Gilson 1994: 362).

Needs assessment in respect of human resource development indicates that some of the general shortcomings in the public health service would include the mal-distribution and inappropriate utilisation of resources, lack of management skills, lack of primary health care skills, lack of health planning skills (Department of Health Welfare and Gender Affairs, Mpumalanga 1997). Human resource policies need to be explicated formulated with the purpose of providing a firm basis for health planning and should minimise and prevent competition and conflict in health interests (WHO 1985). The literature suggests that health management at district and provincial level is poor in many countries (Cassels and Janovsky 1995). Thus organisations and governments need to make explicit management decisions that would improve systems performance by play central roles in the promotion of quality development (Woodward 2000).

Oral hygienists form the primary workforce for oral health promotion activities at a community level in South Africa (Department of Health 2002c*; Gugushe 1998). Records on the public health sector workforce are presented in Table 6.1. The records suggest that only 9% of oral hygienists are employed within the public health sector (Department of Health (2002b).

Table 6.1. Composition of the Health Sector Workforce in South Africa - 1999

Occupational Category	Total Active Workforce	Number in Public Sector	% of occupational category in Public Sector	Category as % of Workforce
Doctors	29 369	8 587	29%	9.7%
Professional nurses	91 945	60 495	66%	30.4%
Enrolled nurses	82 809	76 489	92%	27.4%
Dentists	4 387	271	6%	1.4%
Oral hygienists	893	81	9%	0.3%
Dieticians	1 190	194	16%	0.4%

Source: Report of the Human Resources for the Health Task Team *cited* in Department of Health - Annual Report 2001/2002. Page 81.

This discrepancy in the oral health promotion workforce further reiterates the need for integrated health service delivery to ensure a comprehensive approach to oral health care. These records again highlight the relationship between the private and public sector. The records indicate that majority of the health workforce with the exception of nurses, are employed in the private sector. The process of health policy development in South Africa therefore needs to consider the viability of partnerships both within and outside of the health system. The literature also suggests that shortages in human resources seem to occur more from mal-distribution and mal-management rather than from shortages in personnel (Daviaud et al 2003; van Rensburg and van Rensburg 1999; Pick et al 2001). These findings are in agreement with the studies conducted by Bhayat and Cleaton-Jones (2003) on the current oral health workforce in South Africa. There is an urgent need to address the process of human resource planning at all levels of the health system with particular focus at a provincial and district level. Furthermore there is a need to ensure that there are effective management skills at district level. Thus skills development for staff would be essential for effective health service delivery (Barker 1997).

* This is the latest comprehensive overview of oral health services on a provincial basis in South Africa. The National Directorate of Oral Health indicated it was difficult to produce further national overview of provincial oral health services because of decentralised district services (personal correspondence with the National Directorate of Oral Health 2005).

6.5. Partnerships in Health Policy Development

Integrated health programme development would require collaboration between health service providers and management from health priority settings to programmatic implementation and evaluation (Pillay 1999; Engelbrecht 1999). It is therefore necessary to determine the dynamics and expectations of partnership development within health policy development. There is general consensus in the literature that health policy development is essentially driven by implicit or explicit expressions of power (Baum 2003; Clarkson 1995; Freeman 1984). Partnerships would be very necessary in health policy development but more especially in integrated health policy development (Baum 1998).

The literature suggests that the relevant role players that are directly or indirectly involved in health policy development could have different levels of influence on the health policy process (Baum 2003). The potential for developing alliances or partnerships is therefore dependent on identifying role players that are likely to have the most influence over the main decision makers and includes the capacity and willingness to have resources directed towards specific health policy goals (Tesoriero 2002; Ham and Hill 1984). The process of identifying potential allies or building alliances through health policy efforts could be collectively referred to as partnerships in health policy development (Baum 2003).

Partnership development could be considered as more than simply consensus building, trust or being based on altruistic reasons (Baum 2003; Tesoriero 2002; Blair, Fottler, Whitehead 1996; Blair and Fottler 1990). Kerr, Taylor and Heard (1998) further argue that the competition for scarce resources and differences in values and professional allegiances could result in conflict in health partnerships development. These are some of the new challenges facing oral health professionals (Wilson 2003). The issues highlighted on the development of partnerships need to be applied to health policy development in South Africa. In summary the challenges facing the delivery of oral health promotion services include the need to develop sustainable partnerships both within and outside of the health system and the need for effective processes in evaluating oral health promotion interventions. It is also important to include an evaluation component in the process of health policy development. The following chapter focuses on theoretical considerations for the development of the conceptual framework. This conceptual framework is applied to the data collection and analysis.

Chapter 7

Methods and Materials for Developing a Conceptual Analysis Framework

The rationale for selecting a specific research method was based on the need to provide the best possible explanation for why proposed strategies would have the most potential in answering the research question. The literature has established that a health policy needs to consider the processes and outcomes that influence policy-making. This chapter focuses on the theoretical base used to develop the conceptual framework for the research.

7.1. The Value of Quantitative and Qualitative Research

Quantitative research aims at generating data that is representative of a given population (Williams, Bower and Newton 2004). Quantitative studies are generally easy to conceptualise and are amenable to valid and reliable measurements (Bowling 1997). Qualitative research on the other hand attempts to explore the diversity within an identified population (Elliot 2004; Williams, Bower and Newton 2004). Qualitative studies involve the conversion of observed data into synthesis, hypotheses and generalisation of the identified phenomena. There is also increasing awareness that qualitative data that explores theoretical considerations and paradigms have a significant role to play in health-related policy analyses (Morse 1994; Blinkhorn 2000; Meadows, Verdi and Crabtree 2003; Elliot 2004; Baum 1998; Bowling 1997; Ovretveit 1998).

Both qualitative and quantitative studies have individual strengths but a combination of these research techniques could provide more meaningful data. Bowling (1997) argues that triangulated research measurements provide the most persuasive evidence by reducing the level of uncertainty because a 'proposition can be confirmed by more than one independent measurement process' (Bowling 1997: 180). A combination of quantitative and qualitative information was therefore essential to explore theoretical considerations and paradigms in this health policy analysis (Bowling 1997). This analysis also needed to address the influence of power, professionalism, interest groups and their relationship in shaping policy agendas and decision-making (Walt and Gilson 1994; Tones and Green 2004).

7.2. Health Systems Analysis

According to this framework, quantifiable data and information on qualitative aspects of health service management and decision-making were essential to this research area. The research used the technique of systems analysis to identify information that could be used to explain the process of problem solving, planning and decision-making in oral health-related policy development in South Africa. The advantage of this approach is that it could be used to identify essential inputs, processes, outputs and outcomes at various levels of the health system (Wan 1995). Previous empirical research used multilevel frameworks to examine health policy and health promotion (Rutten et al 2000). Oral health promotion-related policy analysis was conducted at a macro (national) and meso level (provincial) in an attempt to understand oral health promotion implementation at a micro level (district) in South Africa. This represents a multilevel model of analysis.

7.3. Development of a Conceptual Framework for Oral Health Promotion Analysis

The main requirement for this conceptual framework was that it should help to explain how health decisions are made within decision-making processes. It should also help to define the various external and internal influences that impact on these decisions. Furthermore it should provide insight into the intra- and interpersonal dynamics that influence health decision-making (Tones and Tilford 2001; Tones and Green 2004; Wan 1995).

7.3.1. Principles Guiding the Conceptual Framework

The concept of health promotion as a vital component of public health is elaborated in numerous texts including the WHO Global Strategy for Oral Health (Tones and Green 2004; Petersen 2004a). Collectively they call for comprehensive approaches to health development through a combination of strategies that enhance community empowerment and ensure sustainability. For oral health this means reducing the oral disease burden in ways that improve oral health outcomes in an equitable manner and promote healthy lifestyles by reducing the socio-economic and environmental risk factors to oral health care (Petersen and Kwan 2004; Locker 2000). By implication this requires a common risk factor approach to health promotion to control risk factors to oral health and preferably embraces population-wide intervention and strategies (Sheiham and Watt 2000). This provides the rationale behind attempts to integrate oral health promotion elements into all other areas of

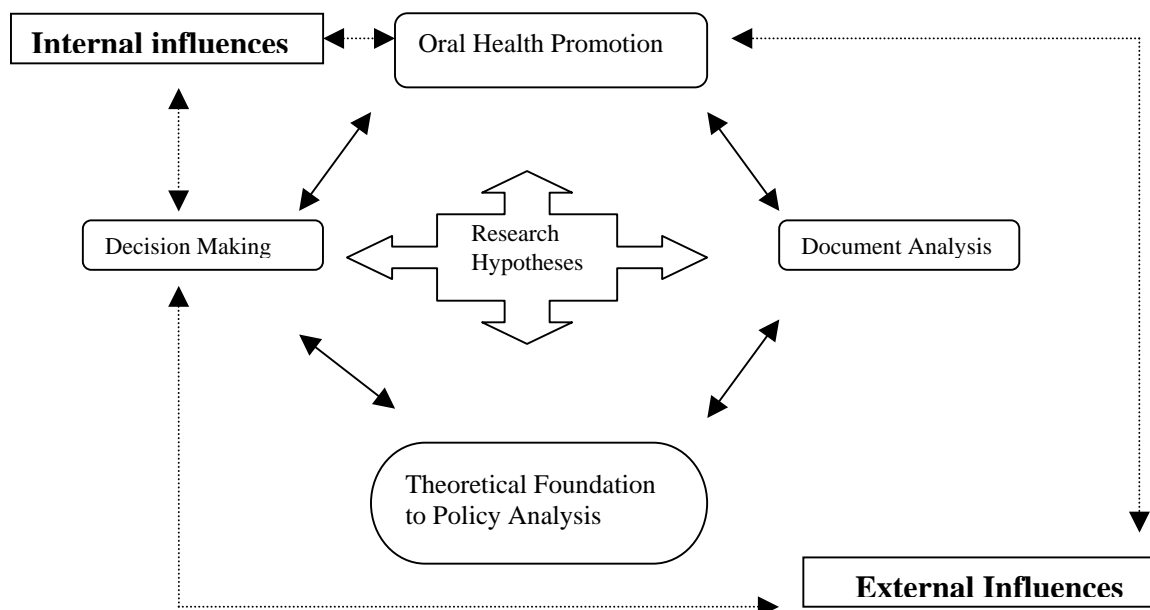
health policy and health-related policy. These concepts and the guidelines of the Ottawa (WHO 1986) and Jakarta (WHO 1997) charters, provide the basis for the conceptual framework used. Furthermore there is a great need to focus on the actual social systems and organisations that form the foundation, the influence and the outcome of health interventions. Thus the value of understanding the mechanisms and influences on change management within social systems would have important implications for the research (Grossmann and Scala 1994 *cited in* Perkins, Simnett and Wright 1999).

7.3.2. Applying other theoretical considerations to the Conceptual Framework

Having outlined the various guiding principles, this section defines the various elements of the conceptual model, their inter-relationship and the assumptions made for empirical analysis. The use of theory was thus an important aspect in developing the conceptual framework. Theory provides the *'analytical framework through which to form logical interpretations of the facts collected in the study and guides the search for new information'* (Wan 1995: 31). The research used the theory that oral health promotion efforts could be better supported at an implementation level if these activities were adequately expressed in other strategic health policy documents.

The conceptual framework consisted of the following components: theoretical foundation to policy analysis; policy document analysis; oral health promotion-related decision-making at national and provincial levels and an examination of the external and internal influences on oral health promotion policy (Figure 7.1.). External influences refer to issues such as infrastructure, health inequities and resources. Internal influences refer to decision-makers' attitudes and perceptions towards oral health promotion policy. Each component of the framework is discussed briefly using theoretical considerations and supporting evidence from the literature section.

Figure 7.1. Conceptual Framework for Oral Health Promotion Policy Analysis



7.3.2.1. Policy Document Analysis

The World Health Organisation Regional Oral Health Strategy for African countries identifies criteria for an effective oral health policy (Myburgh et al 2005). This strategy advocates a systematic approach to the identification and selection of evidence-based oral health policy priorities and interventions appropriate to local community settings. Historically oral health services in South Africa had been administered as a vertical national programme where the programme had its own budget, management structures and human resources (Department of Health 3). The research used the assumption that oral health promotion activities would thus not be uniformly expressed in all of the identified health programmes. Oral health managers would be in a better position to comment on the intricate details of programme strategies, perceptions and expectations on oral health promotion.

Content analysis is defined as a systematic method to identify specific characters or themes and to draw logical conclusions from the presentation (Taylor, Haglund and Tillgren 2000). Content analysis of health policy documents would be important to characterise organisational changes, identify priorities and strategies for implementation and potential alliances and resources (Taylor, Haglund and Tillgren 2000). Content analysis could also identify policy aspects that are important for oral health development but are not included in policy. Thus this analysis focused on the underlying philosophical approach that each policy document adopted. The inclusion of broad-based philosophical statements provided

evidence for whether these statements were preventive or curative driven. Alternatively health policy statements could also indicate whether health policies focused on health integration or vertical programme delivery. The criteria for selecting health policy documents are outlined in Chapter Eight.

7.3.2.2. Oral Health Promotion-Related Decision-Making

The research used strategic mapping to identify health decision-makers involved in health policy development (Kerr, Taylor, Heard 1998). The research also used the assumption that health policy development has the potential to mobilise and support health action. The research built on the assumption that while there may be interest groups that have an explicit interest in oral health activities, there may also be decision makers in health management that will not have an explicit interest in oral health promotion but that they could prove to be very influential in determining the delivery and sustainability of oral health promotion services. The research used the theory that the leadership structure within the health system in South Africa may support change in response to changing external and internal conditions (Bracht 1990). These changes would include the generation of evidence-based developments in oral health practices.

Decision makers in Health Promotion, Maternal, Child and Women's Health, Nutrition and HIV/Aids cannot by definition be referred to as direct stakeholders in oral health promotion but they could be regarded as implicit stakeholders where they do not have an outright interest in oral health promotion but their influence could impact on the delivery and sustainability of oral health promotion services in South Africa. The research took into account that health policy studies are context specific and that it would not be feasible to generalise the findings (Brugha and Varvasovszky 2000; Badura and Kickbusch 1991).

7.3.2.3. Key Criteria to address Health Decision-Making

The following key criteria were used to examine the oral health decision-making process in South Africa. The study needed to determine the extent to which oral health promotion is recognised as a priority in policy and programmatic efforts at all levels of the health system. This required an examination of the extent to which oral health promotion efforts is included in other health policies and programmes at district level. The extent to which

lifestyle induced risk factors to health are included in policy and programmes was also seen as an important indicator for oral health promotion programmatic compatibility with other district health activities. The study examined possible opportunities to include oral health promotion efforts in integrated district health service delivery. It was also important to identify specific strategies that could support and facilitate the inclusion of oral health promotion efforts onto the other identified health policy agendas.

The study also focused on the epidemiological basis for the current selection of oral health promotion programmes and strategies (Box 7.1.). The study attempted to determine the impact and availability of appropriate human resources on service provision. The study needed to determine the extent to which the current oral health promotion programmes have contributed to improved community health and to identify the possible barriers in this process.

The study examined possible influences on the oral health policy process. These included provisions on stakeholder involvement and the impact of budgetary allocations at provincial and district levels. Considerations were also given to the fact that oral health promotion activities could be in competition with other health issues on the policy agenda. Economic, socio-political and cultural influences were taken into account. The role of lobbies or special interest groups on oral health promotion issues such as fluoridation and smoking were also considered.

Box 7.1. Criteria Guiding the Analysis Process

Criteria Guiding the Analysis Process

- Oral health promotion as a priority in other district health activities
- Risk factor approaches to district health care
- Support for oral health promotion in other health policy agendas
- Evidence for improved community oral health
- Epidemiological basis for policy proposals
- Impact of appropriate human resources on service provision
- Barriers to effective service delivery
- Stakeholder involvement in oral health promotion activities
- Impact of budgetary allocations on oral health promotion
- External influences such as socio-economic, political and environment impact on oral health promotion policy efforts

It is accepted that the conceptual framework would not be able to provide a complete and comprehensive explanation to oral health promotion-related policy and decision-making in South Africa. This limitation of the conceptual framework necessitated the development of further assumptions to guide the research process. These assumptions are presented as research questions: Will the inclusion of oral health promotion proposals or strategies in health policy help to improve oral health status? There is general consensus that health promotion interventions do have a positive impact on community health. Does this imply that oral health promotion if properly executed, can also contribute to improved oral health status? Could improvements in community oral health be achieved without oral health promotion proposals, strategies and interventions being integrated into national or local health policy efforts? In other words can the absence of an oral health promotion policy be the policy?

The conceptual framework was implemented in the research process in four stages. The first two stages involving data collection and analysis are discussed in Chapter Eight. The third and fourth stage of the implementation process forms the core of Chapter Nine and Ten respectively. These stages involve the presentation and interpretation of the research findings. In summary theoretical considerations were used to build the conceptual framework developed on specific assumptions. The use of health systems research that is grounded in the scientific process contributed to addressing the challenging questions posed in the research enquiry. The following chapter focuses on the actual process of data collection and analysis. An analysis of the impact of the conceptual framework on the overall research is presented in the Discussion Section.

Chapter 8

Application of the Conceptual Framework for Data Collection and Analysis

Chapter Seven discussed the value of using a combination of qualitative and quantitative research methods and theoretical considerations to develop an analytical framework. This chapter focuses on the application of this framework to health policy document analysis and oral health promotion-related decision-making. A systematic approach was applied to implement the conceptual framework. The first stage involved the assessment of the literature, including evidence-based oral health practices, and to identify the current debates on oral health promotion. This included the nature and development of oral health promotion policy and practice within primary health care settings. The second stage involved collection of data using clearly defined research methods and measurements. This chapter focuses on the second stage of implementing the conceptual framework.

8.1. Sources of Study Material

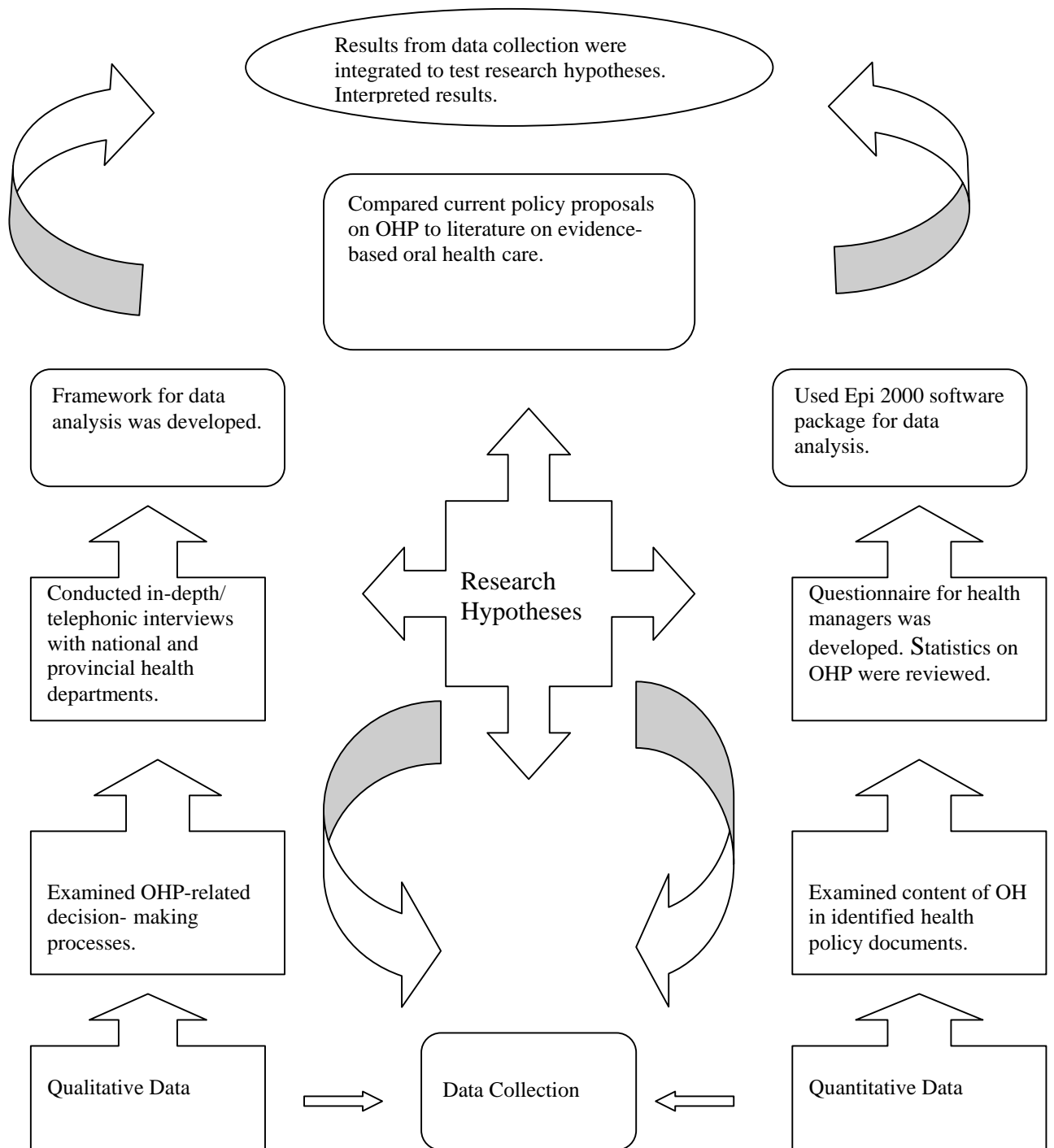
The material used for data analysis was obtained through the following process:

1. An in-depth analysis of existing oral health and health policy documents was conducted to determine the extent to which oral health promotion issues are covered.
2. Existing oral health programmes at provincial and district levels were examined to ascertain the extent to which policy proposals on oral health promotion are translated to a programmatic level.
3. Records on oral health prevention and promotion programmes were also examined. This included annual reports and statistics on oral health promotion activities.
4. Key advisors in oral health and other health management decision makers were consulted with regard to oral health promotion-related decision-making.

8.2. Study Design

The research used the concept of triangulation to present a combination of qualitative and quantitative methods in data collection. Triangulation refers to the use of multiple research methods, data sources and theoretical considerations to address research questions (Bowling 1997; Baum 1998). The study included specific health policy document analysis, oral health promotion-related decision-making at national and provincial levels, and analysis of statistics and other records on oral health promotion activities (Figure 8.1.). Qualitative methods such as telephonic interviews, in-depth interviews and self-administered questionnaires were used to examine oral health promotion-related decision-making. Quantitative data collection focused on reviewing statistics on oral health promotion activities.

Figure 8.1. Methodological Approach to Oral Health Promotion Policy Analysis



8.3. Data Collection

Data collection consisted primary and secondary sources. The primary source of information comprised of self-administered questionnaires, structured non-standardised in-depth and telephonic interviews and policy documents in Oral Health, Nutrition, Maternal, Child and Women's Health, Health Promotion and HIV/Aids Programmes. Statistical records on oral health promotion activities formed a secondary source of data collection. Data was collected from the National and Provincial Department of Health in South Africa.

As stated previously, the restructuring of health services in South Africa has been characterised by health policy developments (Myburgh 1998). As a result most of the health policies analysed were still in draft form. The research therefore selected to use the term 'health policy document' to describe any policy statement, strategic plan or policy guideline that had been developed by the Department of Health in South Africa after 1993 (Refer to Appendix 2).

8.3.1. Health Policy Documents

Policy documents in the identified health areas were obtained electronically from the National Department of Health's Website in South Africa and through telephonic requests from the various national and provincial health directorates (Department of Health 4). The criteria for assessing health policy documents were that the documents had to be produced by the Department of Health or endorsed by the Department of Health in South Africa. The research focused on documents that were related to the research area. All other health policy documents were excluded. Only health documents produced after 1993 (post-apartheid) were considered for analysis.

Data collected for health policy document analysis was divided into two groups, namely oral health policy documents and health policy documents. The following section outlines the policy documents selected for oral health and general health respectively. Each group had a separate framework developed to guide the analysis process.

8.3.1.1. Oral Health Policy Documents

The research selected the national draft oral health policy document (July 2001) for analysis. This document was selected so that previously identified limitations that were already addressed, could be excluded from this analytical process. An approved strategy on oral health in South Africa became available only in 2004 (Refer to Appendix 1). Apart from the national oral health policy document (July 2001), the research also analysed available oral health policy documents developed within the provincial Directorates of Oral Health (Table 8.1.). Oral health managers in the provinces of Kwa-Zulu Natal and Gauteng submitted their strategic plans for oral health while managers in the Western Cape and North West provinces submitted their Provincial Oral Health Plan (1999) and Draft Oral Health Policy (1997) documents respectively.

Table 8.1. Provincial Draft Oral Health Policy Documents

Province	Programme
Kwa-Zulu Natal	<ul style="list-style-type: none">▪ Programme Oral Health Strategic Plan 1999/2000 – 2003/2004▪ Programme: Oral Health Business Plan (Draft 1997)
Gauteng	<ul style="list-style-type: none">▪ Programme Oral Health (Undated)
North West Province	<ul style="list-style-type: none">▪ Oral Health Services Policy (Final Draft Policy 1997)
Western Cape	<ul style="list-style-type: none">▪ Oral Health Plan (Draft 1999)

i. Framework for Oral Health Policy Document Analysis

The research developed a common set of criteria that was systematically applied to the documents being analysed. Health policy document analysis was conducted in stages (Box 8.1.). The first stage was to examine statements for the identification or citation of reference documents. These reference documents were important because they indicate the philosophy that underlines health policy documents. References to other host documents also helped to determine if these health policy documents were in line with national documents such as the Constitution of South Africa (1996), or other documents that guide the restructuring process in health and social development in post-apartheid South Africa. The next stage in oral health policy analysis involved locating oral health promotion elements in policy statements. The context in which oral health promotion is expressed was also examined. The analysis process attempted to identify recipients of the programmes or interventions, human resources and levels of care and service provision. The third stage of the analysis process

was to determine if there is a rational and scientific basis to the selection of oral health promotion needs, priorities and strategies (Box 8.1.). The criteria for oral health needs assessment looked at epidemiological prevalence, impact on health resources, community well-being and whether health priorities or needs are localised or population-wide.

Box 8.1. Analysing Oral Health Policy Documents

<p>Analysis Process for Oral Health Policy Documents</p> <p>Stage 1 Identify reference documents.</p> <p>Stage 2 Locate oral health promotion in document. List the proposals or statements made. State the context in which oral health promotion is expressed. Identify recipients, levels of care, human resources.</p> <p>Stage 3 Compare identified strategies with evidence-based literature.</p>

Proposals on oral health promotion strategies and interventions were critically compared with published evidence-based literature. The research focused on specific evidence-based findings that have been proven to be capable of contributing to improvements in community oral health in a cost-effective manner.

8.3.1.2. Health Policy Document Analysis

Health policy documents that were identified for policy analysis are listed in Tables 8.2. and 8.3. The selection of these documents was based on the recommendations presented in *The Primary Health Care Package for South Africa—A set of Norms and Standards (2001)* but was subject to the availability and accessibility of these documents.

Table 8.2. National Health Policy Documents

No.	Policy Document	Directorate/Sector
1	Policy Guidelines for Youth and Adolescent Health (2001)	Cluster MCWH and Nutrition
2	National Guidelines for the Development of Health Promoting Schools/Sites in South Africa: Draft 4 (2000)	Health Promotion with Dept of Education and Welfare
3	Dietary Guidelines for South Africa (2001)	South African Food-Based Dietary Guidelines Work Group
4	Integrated Nutrition Programme Strategic Plan 2000/1 – 2006/7 (2001)	Directorate Nutrition and Provincial Nutrition Units
5	HIV/Aids STD Strategic Plan for South Africa 2000-2005 (2000)	Directorate HIV/Aids and STDS
6	Maternal, Child and Women's Health Care Draft Policy (1 st Draft 1995)	Cluster MCWH
7	National School Health Policy and Implementation Guidelines (Draft 2002)	Sub-Directorate Child Health
8	Policy Framework for Non-Communicable Chronic Conditions in Children (Undated)	Directorate Chronic Diseases, Disabilities and Geriatrics
9	Health Promotion Draft Policy (1999)	Directorate Health Promotion
10	Policy Guidelines and recommendations for the feeding of infants of HIV positive mothers (2000)	HIV/Aids and STD Directorate
11	Management of occupational exposure to HIV (2000)	HIV/Aids and STD Directorate
12	Prevention of mother to child HIV transmission and management of HIV positive mothers (2000)	HIV/Aids and STD Directorate
13	Managing HIV in Children (2000)	HIV/Aids and STD Directorate
14	Policy Guidelines for Community [based] Health Workers in South Africa (Draft 1997)	National PPHC Network
15	Guidelines for Cholera Control (2001)	Directorate Communicable Disease

All other reviewed documents are listed in Appendix 3.

Table 8.3. Provincial Health Policy Documents and Reports

No	Policy Document or Report	Province
1	Integrated Nutrition Programme – Strategic Framework 2001-2005	Dept of Health. North West Province. Directorate: Health Programmes
2	Policy Guidelines on Health Promotion (Draft Undated)	Dept of Health and Welfare: Northern Province
3	An Aids free KZN by 2020. Strategic Framework (Undated)	Kwa –Zulu Natal Dept of Health
4	Aids Policy for the Kwa-Zulu Natal Provincial Administration (Undated)	Kwa-Zulu Natal Dept of Health
5	Draft HIV/Aids Related Illness Workshop. Policy for the Northern Province Government Department (2000)	Northern Province Government Dept
6	Kwa-Zulu Natal Policy Document on Community Health Workers (Undated)	Kwa-Zulu Natal Dept of Health
7	Strategic Plan for the Department of Health (1999)	Province of the Eastern Cape
8	Draft Strategic and Service Delivery Improvement Plan (SSDIP) [Undated]	Directorate: Information Management. Provincial Government of The Western Cape
9	2000 –2001 Annual Report of the Gauteng Provincial Government Aids Programme	Gauteng Provincial Government Dept
10	The Mpumalanga Provincial Growth and Development Strategy (Undated)	Mpumalanga Provincial Government
11	Draft Policy Document: Health Promotion 3 rd Draft (1997)	Programme Development. Dept of Health Kwa-Zulu Natal
12	Report on the Status of HIV/Aids Programmes undertaken by the Department of Health in the Free State (2001)	Directorate Health Programmes: Free State

Other national documents that were analysed are listed in Table 8.4. The analytical process for these documents differed slightly in that the focus was on locating oral health promotion activities and identifying where proposals on oral health promotion could be incorporated into the existing policy documents (Table 8.4.).

Table 8.4. Supplementary Documents for Analysis

No.	Document	Department
1	A Comprehensive Primary Health Care Service Package for South Africa (2001)	National Health
2	The Primary Health Care Package for South Africa – A set of Norms and Standards (2001)	National Health

i. Framework for Health Policy Document Analysis

The criteria for health policy analysis differed slightly from policy analysis for oral health policy documents (Box 8.2.). The initial stage of health policy document analysis was the same where the reference documents were first identified. The next stage involved identification of statements on oral health or oral health promotion. If oral health or oral health promotion was mentioned in policy statements then the analytical process proceeded to determine if there was a rational or scientific basis to the selection of these strategies. A pre-determined set of criteria based on evidence findings was developed from the literature.

If oral health was not mentioned in policy documents then the next stage was to identify the provision for lifestyle style induced risk factors. The analytical process attempted to determine if oral health promotion could be incorporated into the lifestyle induced risk factor element in health policy documents.

Box 8.2. Analysis of Health Policy Documents

Analysis of Health Policy Documents

Step 1

Identify reference documents.

Step 2

Locate oral health or oral health promotion in document.

Is there a scientific basis to the selection of oral health promotion strategy?

Step 3

Does policy document mention lifestyle induced risk factors?

Can oral health promotion be incorporated into this section of policy?

How can oral health promotion be incorporated?

8.3.2. Oral Health Promotion-Related Decision-Making

8.3.2.1. Study Population

Purposive sampling was used to identify oral health promotion-related decision makers in South Africa. This is ‘a deliberate non random’ method of sampling (Bowling 1997: 167). This method of sampling was selected because of a finite number of decision makers in health policy development in all of the identified health research areas. The sample was divided into a national and provincial sample (Table 8.5).

Table 8.5. Study Sample at National and Provincial Levels

National Directorates	Provincial Directorates
<ul style="list-style-type: none">• Oral Health• Health Promotion• Mental Health• Maternal Health (Sub-Directorate)• Child and Youth Health (Sub-Directorate)• Nutrition• HIV/Aids and STDS• Chronic Diseases and Disabilities	<ul style="list-style-type: none">• Oral Health• Maternal, Child and Women’s Health• Nutrition• Action for HIV/Aids• Health Promotion

8.3.2.2. Selection Procedures

Only one provincial manager in each identified health programme in all nine provinces was contacted to participate in the study. The criterion for selection was that the identified provincial health manager should be involved in the development and co-ordination of provincial health policies. The selection procedure for the national health directorates differed slightly. Preliminary correspondences were conducted with each of the identified national health directorates.

The National Department of Health is structured where individual health directorates may have sub-directorates or different components and sections in health management and decision-making (Department of Health 4). It was therefore necessary to identify the relevant key players that are either directly or indirectly involved in oral health promotion-related policy development.

8.3.2.3. Sampling Techniques

Sampling techniques included the development of two separate questionnaires. These questionnaires were directed to provincial oral health and the other identified health managers. Interviews were conducted with all other identified health decision-makers.

8.3.2.3.1. Self-Administered Questionnaires

Self-administered questionnaires were developed for provincial oral managers and programme managers in Health Promotion, Nutrition, HIV/Aids and Maternal, Child and Women’s Health Care (Refer to Appendix 4). The questionnaire attempted to establish the

extent to which oral health promotion activities are covered in existing health interventions or programmes. Attitudes and perceptions towards integrated health programmes were also explored.

The questionnaire examined the provision for oral health priorities in the province in terms of social impact and effect on resource allocation (Appendix 4). The questionnaire also examined epidemiological evidence on oral diseases in an attempt to compare these findings to the actual programmes that are being carried (Box 8.3). The impact of human resources on oral health promotion service delivery was also examined. The questionnaire explored provincial oral health policy development and examined rhetorical health policy statements such as integration and inter-sectoral collaboration. The questionnaire examined the capacity of current programmes to contribute to improved community oral health. The contextual influences on oral health promotion were also considered.

Only five oral health managers out of the nine provinces participated in the study despite numerous follow-up attempts to get the questionnaires completed.

Box 8.3. Summary of Questionnaire for Provincial OH Managers

Questionnaire for Provincial Oral Health Managers

- Oral health priorities in relation to social impact and resources
- Epidemiological evidence on the determinants of oral conditions in the province
- Current oral health promotion programmes
- Number and distribution of hygienists in the province
- Evaluation of oral health promotion programmes
- Community water fluoridation efforts
- Oral health promotion policy development
- Integration efforts
- Oral health promotion programmes capacity to improve community oral health
- Contextual influences on oral health promotion

Refer to Appendix 4. Page 226.

The questionnaire for provincial health managers attempted to examine the extent to which oral health promotion is covered in the identified health programmes (Appendix 4). The questionnaire first outlined the health priorities that each of the individual health programmes address at provincial level (Box 8.4.). The questionnaire also examined the manager's knowledge of existing oral health promotion activities in the identified province.

This information was very important because it could provide insight into the extent to which provincial health managers interact with the provincial oral health directorate. The questionnaire examined the effect of addressing lifestyle-induced risk factors and health services integration efforts at district level. The questionnaire also explored programmatic and policy support for oral health promotion in the province.

Eighteen provincial health managers participated in the questionnaire phase of the study.

Box 8.4. Summary of Questionnaire for Provincial Health Managers

Questionnaire for Identified Provincial Health Managers

- Health priorities in the province
- Oral health promotion activities in the province
- Addressing lifestyle induced risk factors
- Policy statements on oral health
- Programmatic support for oral health promotion at a district level
- Integration efforts
- Support for oral health promotion in the province

Refer to Appendix 4. Page 232.

The questionnaires consisted of both open-ended and closed-ended questions, and positive and negative responses to loaded statements (Petersen et al 1995). All individuals in the study sample were first informed of the intended research and a formal request was made for participation. Questionnaires were then e-mailed or posted manually to all participants. The e-mail version of the questionnaire differed slightly in technical appearance to allow for online completion (Dillman 1978 *cited in* Tickle, Craven and Worthington 1997). Return-addressed envelopes were included with the questionnaires that were manually posted. Regular telephonic follow-up was done to motivate participation in the research. Each returned questionnaire was then coded to monitor the response rate. Data was electronically transcribed. The data capturing process was repeated. This provided validation for the data captured.

Oral Health Programme Managers in Kwa-Zulu Natal reviewed the questionnaire for oral health managers. The Programme Manager (Action for HIV/Aids Kwa-Zulu Natal) and two academics (Natal University and the Department of Health) reviewed the provincial health questionnaire. Interviews were initially designed to supplement information obtained from

the questionnaires and to clarify any information that was not clearly stated in the questionnaire. After numerous telephonic follow-up calls, many of the identified provincial health managers indicated that they had referred the questionnaire to the oral health manager in the province. They felt that they were not equipped to answer the questionnaire. Difficulties encountered in the questionnaire phase necessitated the need to reassess data collection methods. The interview phase was then revised and the questions for the interview were adapted from the questionnaire (Refer to Appendix 5).

The provinces also appeared to adopt different strategies for communication within the individual provinces. Some of the questionnaires had to be forwarded to the Programme Director before being directed to the relevant programme manager. Despite these shortcomings there is adequate data collected to support the research task.

8.3.2.3.2. Interviews

The interview with the National Directorate Oral Health could be considered an elite interview (Gubrium and Holstein 2001). The research selected to conduct an in-depth interview with this group in order to gain a deeper understanding of the processes that are involved in the selection and implementation of oral health promotion activities. This interview was in-depth, face-to-face, structured and non-standardised (Appendix 5a). The interview was structured because oral health promotion is only a part of the Directorate's responsibility and care had to be taken to ensure that the research objectives were addressed. A prepared protocol of questions was developed before the interview. These questions included oral health promotion policy development, current strategies and interventions and future directions in oral health promotion. A copy of the interview protocol was presented to the participants before the interview. This allowed the participants to be familiar with the questions that were being asked.

A short discussion was held before the interview could commence. This was to set the tone and atmosphere for the interview (Gubrium and Holstein 2001). The expectations and parameters of the interview, and the goals and objectives were discussed with the participants. Permission was obtained to tape record the interview and issues of confidentiality were iterated. The tape-recorded version ensured that there were verbatim records of the interview. Apart from the tape recording, some process notes on the interview

were taken down manually in order to have a better understanding of the interaction during the interview (Gubrium and Holstein 2001). The duration of the interview was one hour and involved two participants. The interview was conducted at the National Department of Health, Pretoria (South Africa) for the participants' convenience. The non-standardised nature of the interview allowed the participants freedom to interact actively in a relaxed environment. Although considered elite, respondents were friendly, co-operative, warm and eager to discuss both the strengths and weaknesses of the current strategies, interventions and programmes on oral health promotion activities. Care was taken to ensure that the interviewer took a passive role and that respondents were more active. Care was also taken to allow the interview to progress with a sense of mutual co-operation and trust building.

A separate in-depth telephonic interview was set up with the national Directorate of Health Promotion. The interview was for one hour and focused on the Directorate's involvement or perceptions and visions into oral health promotion-related policy and programmatic issues (Appendix 5b). A telephone with a speaker was used to record the interview. Raw data was then transcribed from the interviews and verified. Interviewees were informed that they would be contacted for further information or clarification.

Interviews were set up with the national directorates in Nutrition, Chronic Diseases and Disabilities, Maternal Health, Child and Youth Health, Mental Health and the HIV/Aids Unit. Interviews were structured and non-standardised (Appendix 5c). Interviews had to be structured to ensure emphasis on the research area. Non-standardisation allowed flexibility in the interview. Telephonic interviews were set up for about 10-15 minutes and addressed the Directorate of Oral Health's involvement in the identified directorates' health policy process. The issue of oral health promotion being addressed through the individual directorate's policy efforts was also assessed. The provision for a health-promoting component in each of the identified health policy documents was also discussed.

Telephonic interviews were set up with all those provincial health managers that did not want to complete the questionnaire but were willing to participate in the interview process (Appendix 5d). Interviews were structured but non-standardised. This allowed for focus on the specific health interest but also contributed to providing flexibility (Gubrium and Holstein 2001). The interview consisted of pre-coded and open-ended questions. Interviews were conducted for about 10-15 minutes and examined the extent to which the provincial

oral health directorate is involved in other provincial health policy development. The interview also examined the extent to which oral health promotion is covered in district health activities. Questions focused on the criteria required to get oral health promotion issues onto the provincial health policy agenda.

No interviews were conducted with the provincial oral health managers. None of the oral health managers indicated that he or she had difficulty in answering the questionnaire. Those questionnaires that were returned provided comprehensive responses. Therefore there was no need for further clarification on any issue outlined in the questionnaires.

The interviews, questionnaires and health policy document analysis were verified through the following process: The health focal area in all of the interviews and questionnaires were matched with the framework for analysis of health policy documents. Thus individual interview and questionnaire responses were compared to policy statements developed within the same health directorate either at national or provincial level.

8.3.2.3.3. Statistical Records on Oral Health Promotion Activities

Statistical data was retrieved from the National Directorate for Oral Health (Department of Health 2002c). Oral health services were previously evaluated using the Public Dental Evaluation System. However this system of capturing and analysing statistics on oral health activities has been discontinued (Personal correspondence with Kwa-Zulu Natal Department of Health 2003). Dental statistics were only available for seven of the nine provinces. No statistics were available for The Eastern Cape and Mpumalanga Provinces. The records collected included the number of schools or institutions visited, number of group oral health education done and the school tooth brushing programmes conducted. Statistical data for fluoride mouth rinsing programmes, the number of fissure sealants placed and other community preventive programmes were also collected. The research compared available statistics on oral health promotion activities between the various provinces. It is important to note that annual reports and statistical data on oral health promotion activities have serious shortcomings. The literature has established that oral health services are not uniformly distributed in South Africa (Gugushe 1998). Basic clinical oral health services could be provided in the absence of preventive oral health services. Therefore assumptions could not be drawn that records on clinical oral health services are reflective of the availability of comprehensive preventive and treatment oral health services in South Africa.

8.4. Data Analysis

Data analysis for each sampling technique is outlined in detail.

8.4.1. Data Analysis of the Questionnaire Phase

Data derived from the questionnaires were coded using deductive coding for closed questions and inductive coding for open-ended questions (Gubrium and Holstein 2001). Deductive and inductive reasoning are data gathering approaches that focus on theory development from an idea or an idea generating from a set of observations (Elliot 2004). The advantage of this approach is that it allows for new codes to develop through the inductive process when these codes were not previously thought of (Bowling 1997). Care was also taken to ensure that the codes were mutually exclusive. This implied that a code could fit into only one category and that all codes were applied consistently. The research prepared a codebook that consisted of a copy of the questionnaire with all the codes and categories that were used. Missing data was indicated as a space on the data sheet. The codes were entered on a data spread sheet using the Microsoft Excel Programme (Windows Version XP). Data was checked twice before analysis was conducted. Data was then analysed using the Epi 2000 Software Programme (Medical Research Council of South Africa 2001). Univariate statistical tests such as frequency distribution and central tendency were conducted in all categories of the data collected.

8.4.2. Data Analysis of the Interviews

Data for each interview phase was analysed separately. Data analysis began by writing individual case studies for each of the interviews conducted. At the transcription phase it was necessary to differentiate between that said what and how it was said. The raw and transcribed data was organised, checked and verified for quality purposes and then analysed inductively using the concept of logical analysis (Patton 1990). Data analysis for all qualitative data in the research was conducted in four steps. The first step in the analysis involved quotations in perceptions, policy formulations, integration of district health services and support for oral health promotion in policy. This means that the analysis process began with an observation and measurement of the data. In the second step quotations were again analysed to obtain a broader description of the content and the

variation in the themes. The patterns, themes and categories that emerged from inductive analysis were then further analysed for emergent patterns, and linkages were made with various part of the data collected (Patton 1990).

The third step involved the differences noted between health policy documents and the themes prioritised by health decision-makers. Cross-classification of these dimensions provided new insights into the data that was not previously considered. The fourth step involved applying guiding principles of the conceptual framework to have an in depth understanding of the themes. This form of integrating all aspects of data collection provided a new understanding of the research process.

8.5. Validity and Accuracy of Data

External validity was obtained by ensuring that all data collection processes focused on the objectives of the study. The interview for provincial health managers addressed questions derived directly from the questionnaire for provincial health managers. This ensured that the investigation was focused. The research applied different forms of validity to test the internal validity of the data analysed (Bowling 1997). Face validity was used to test the presentation and relevance of the questionnaires and telephonic interviews (Bowling 1997). The research ensured that the questions presented were focused, reasonable, unambiguous and clearly stated. The use of hypotheses or theory was also used to test validity (Bowling 1997). Data collected was analysed in comparison to the research hypotheses. Reliability of the data was tested using internal consistency (Bowling 1997). This involved ensuring that the questions presented in the questions and interviews could be classified in one category only. The multiple form method was used to identify and compute all correlations for the sub-domains of the scale (Bowling 1997). Bias and error was reduced by ensuring that statements requiring a positive or negative response was followed by providing reasons for selecting that particular response. Bias in handling outliers was eliminated by repeating the data capturing process and by comparing the data fields for consistency. Each respondent was made aware of the nature of the interview. This reduced evaluation apprehension (Bowling 1997). As mentioned before several telephonic meetings were conducted to discuss the dynamics and expectations before the interviews were set up. Interviews for the identified national health directorates with the exception of Oral Health and Health Promotion were standardised to reduce bias. The analysis of all identified policy documents

were also standardised. Five respondents participated both in the interview and questionnaire phases. This represented 14% of the 35 provincial managers in the study sample. These questionnaires were returned after the interviews were conducted.

8.6. Involvement of Stakeholders and the Dissemination of Results

A preliminary research report will be submitted to the National Oral Health Directorate for review. This is to ensure that the recommendations following the research findings are practical and applicable within the context of public oral health care in South Africa. The health questionnaires and interviews also included a commitment with regard to dissemination of the research report. Efforts will be made to have the research findings published in a peer-reviewed journal and in the internal newsletter for the Department of Health. The research grant was also subject to disseminating the research findings and presenting a research report. The requirements for the funding institution included a full research thesis, articles for HST Update (publication for The Health Systems Trust) and policy briefs for key stakeholders.

8.7. Ethical Considerations

Ethics approval was obtained from the Ethics Committee at the University of the Western Cape. The Medical Research Council's (South Africa 2002) guidelines were used to ensure that issues of confidentiality, consent to conduct interviews and use of responses for academic purposes, were adhered to. The research also considered commitments to communicate with stakeholders and research funding institution, acknowledgements and accurate referencing of texts. Ethics approval was also obtained from the Director of Support Services (Kwa-Zulu Natal) and The Ethics and Research Committee in Mpumalanga Province. A copy of the ethics approval letters from the University of the Western Cape and Mpumalanga Province is included in Appendix 6.

Chapter 9

Results

This chapter integrates the results obtained from data collection and analysis. This includes health document analysis, oral health-related decision-making, the provision for oral health promotion activities and its current delivery at community level. These issues form the central research theme and all data obtained, is discussed in relation to these core issues. Health document analysis included the national draft oral health policy document (July 2001), provincial oral health policy statements, supplementary documents on oral health promotion, and specific national and provincial health policy documents. Data was also collected through interviews and questionnaires with health management. Records on oral health promotion activities were also analysed.

9.1. Locating Oral Health Promotion in Oral Health Policy Documents

9.1.1. Analysis of National Draft Oral Health Policy Document (July 2001)

The national draft policy document for oral health (July 2001) is a broad-based document that focuses on population-wide initiatives for promoting oral health care (Table 9.1.). These initiatives include a national campaign on community water fluoridation and addressing the risks to oral health through unhealthy lifestyle practices. The document advocates for strategies and interventions on oral health care to be integrated with other key district health activities and in response to local health needs. The identified core documents mentioned in Table 9.1. is part of the preamble to the national draft oral health policy document. The national strategy for oral health in South Africa was approved in 2004 (Appendix 1). This document is similar to the national draft oral health policy document in concept and layout. The difference between these two documents is that the national strategy for oral health elaborates on the identification of national goals and resources for oral health delivery in South Africa.

Table 9.1. Analysis of Draft Policy on Oral Health

Question	Evidence
Supporting documents in the policy*	The Constitution, National Health Bill, Bill of Human Rights
What are the proposals for oral health promotion?	<ul style="list-style-type: none"> • National water fluoridation • Population based initiatives • Risk factors/ Unhealthy lifestyles
Where is it located in the document?	Under guidelines for <ul style="list-style-type: none"> • National programmes for oral health • Population based initiatives to promoted oral health • Locally effective oral health strategies or services
Is there a scientific basis for selecting criteria?	Yes, provided that the selection of strategies take into account local conditions in implementation and evaluation.

*Listed as part of the preamble to the oral health policy document (July 2001).

One of the objectives of the research was to determine if policy proposals and strategies on oral health promotion are consistent with evidence-based literature on oral health care. The following table (Table 9.2.) represents a summary of recommendations relevant to oral health promotion. These recommendations appear as an appendix to the national draft oral health policy document (July 2001). The selection of community water fluoridation is seen to be consistent with literature on evidence-based oral health care.

Table 9.2. Evidence-Based Recommendations in National Draft OH Policy (2001)

Programmes Listed	Evidence Presented
Oral Health Promotion	Strategies and interventions on oral health promotion can be effective in increasing people's knowledge of unhealthy lifestyle practices (Kay and Locker 1998).
Water Fluoridation	Proven to be effective in reducing the incidence of caries (McDonagh et al 2000).
Mass Media for Oral Health Programmes	There is no evidence to suggest that this strategy is effective in influencing oral health-related outcomes (Freemantle et al 1998).
Health Education in School-Based Programmes	Evidence suggests that this strategy is not effective (Watt et al 2001a).
Tooth brushing	Shown to be effective if toothpaste contains fluoride (Marinho et al 2004a and b).
Fissure Sealants	This intervention is effective against dental caries but requires periodic reapplication. The success rate depends on the type of sealant used and the technology involved (Fergusson 1998; Morgan et al 1997).

Source: National Draft Oral Health Policy Document. July. (Department of Health 2001). Page 13.

Analysis of the national oral health policy document highlights the inclusion of evidence-based recommendations on oral health promotion. However oral health managers did not express a perceived need for evidence-based practices in oral health promotion. Document analysis also highlights the limitations in strategies on health education in school-based programmes (Table 9.2.). Contradictions between policy recommendations and the actual implementation of school-based oral health programmes are highlighted in the Discussion Section.

9.1.2. Analysis of Provincial Oral Health Policy Documents

Only four of the nine provinces submitted draft oral health policies. Managers in the Eastern Cape, Northern Cape and Mpumalanga provinces indicated that they had not formulated policies as yet. Analysis of draft provincial oral health policies indicate that the identified target populations is in accordance with the national draft oral health policy requirements. However there were variations in the identification of human resources. Oral health managers in the Western Cape and North West provinces identified oral health workers and community health providers as the community oral health workforce. Oral health managers in Kwa-Zulu Natal and Gauteng identified only oral health workers for oral health programmatic implementation. The manager in the North West province further indicated that mobile services are required in addition to the existing services rendered by clinics and community health centres (Table 9.3.).

Schools and community health centres are identified as the primary community setting for oral health promotion activities. Pregnant women, mothers, children and disadvantaged individuals are identified as the primary recipients of oral health care. However these policy documents do not elaborate on the dynamics of oral health promotion activities. Furthermore specific selections of oral health interventions or programmes are not outlined (Table 9.3.).

Table 9.3. Oral Health Promotion at Provincial Level

Province	Where is oral health promotion located?	In which context is it located?	Recipients of care	Levels of care	Human Resources
KZN	Goals Priorities Budget	District Health, Integration, Methods	Pregnant women, adult patients, institutional patients	Clinics, schools, Community	Dental personnel
W.CAPE	Principles Priorities	Antenatal Care, Postnatal Care, Schools, Integration plans	Mothers, children, schools	Community, Schools	Community health workers, oral health workers
N.WEST	Principles Service Policy Facility Policy	Community Service, Schools, District Health	Preschools, Mothers, Disadvantaged	Clinics, Mobiles, Community health centres	Community health workers, oral health workers
GAUT	Strategy Objectives Activity	School, Clinics, Community Programmes	Scholars, non- scholars, general community	Clinic, Schools, community	Oral health workers

9.2. Locating oral health promotion in other identified health policy documents

9.2.1. National and Provincial Health Policy Analysis

Analysis of health policy documents indicated that 50% of the national documents (n=15) examined, do include statements on oral health. An illustration of the national and provincial health policy documents is presented in Table 9.4. and Table 9.5. The national policy guidelines on HIV related infections and management (2000-2001) include the management of opportunistic oral infections. These guidelines are directed more towards individual care but this information could be extrapolated to community settings. This was an important feature because the interview response with the National Directorate for HIV/Aids indicated that oral health is not mentioned in their policy documents. Comparisons between national policy documents and available provincial statements on HIV/Aids indicate that while oral health promotion is included in national health policy guidelines this feature is absent in provincial policy documents.

None of the provincial identified managers in HIV/Aids indicated that oral health messages are included in their programmes at district level. However some integrated health awareness activities are in existence but these efforts are not based on any existing policy statements. This contradiction is reflected in the following example: The Directorate of HIV/Aids Kwa-Zulu Natal indicated that oral health promotion activities are not included in their policy documents or programmes. The Annual Report for KwaZulu-Natal Department

of Health 2001/2002 clearly provides evidence that supports some integrated efforts in oral health promotion and HIV/Aids in the province (KwaZulu-Natal Department of Health 2001/2002). This discrepancy between the research evidence and the literature illustrates another gap between policy development and implementation.

Table 9.4. Analysis of National Health Policy Documents

Policy No.	Reference Document*	Is OH mentioned?	Is OHP mentioned?	Context mentioned	Scientific basis	Risk factor/ HP mentioned	Where can OHP be incorporated?
1	Constitution RSA, UN Convention on Children's Rights	Yes	Yes	Priorities for youth and adolescents	Yes	Yes	Health education, skills development, creating supportive environments
2	Ottawa Charter, Education and Welfare	No	No	None	None	Life-skills, education. Substance abuse	Develop HP schools within school development
3	UNICEF, Dietetics SA, MRC	No	No	None	None	Nutrition, exercise	Nutrition, addressing specific strategies on sugar consumption
4	SA D. Health Survey (1998) Health Sect Strategic Plan	No	No	None	None	Nutrition Promotion	School programme, Breast feeding awareness
5	Nat. Aids Plan Whiter Paper	No	No	None	None	Advocacy Enabling Support	Strengthen inter-departmental response
6	RDP, Alma Ata, PHC	No	No	None	None	Lifestyle	HIV/Aids, adolescent health, health education
7	PHC, WHO, Children's Rights	Yes	Yes	School health package	Questionable	Yes	Within an integrated approach to school health services
8	Constitution, Bill of Rights	No	No	None	None	Health promotion	All levels of care
9	Alma Ata, RDP, Ottawa Charter	No	No	None	None	Yes	Risk to human health
10	Infant feeding Policy	Yes (oral infections)	No	None	None	Risk factors	Recommended feeding practices
11	Management of exposure to HBV	Yes	No	None	Yes	No	Occupational settings
12	EDL	Yes (oral infections)	No	No	None	Sexual practices	Managing HIV-related oral conditions
13	No mention	Yes (oral infections)	No	No	None	Social support	Nutritional and social support
14	RDP, National Health Plan	Yes	Yes	Training manual	Questionable	None	Within PHC training
15	WHO	No	No	None	None	Risks to water use	Prevention and Control

* These reference documents were cited directly in the health policy statements that were analysed. This summary table indicates the main features of each policy statement.

National health policy documents that did not include statements on oral health promotion-related activities did have a component to addressing risk factors or health promoting activities (Table 9.4). These provisions could provide opportunities to incorporate oral health promotion-related efforts. Another important feature of these policy documents was that provision is made for inter-departmental responses to a particular health priority.

The Policy Guidelines on Youth and Adolescent Health (2001) includes provisions for oral health promotion activities. The guideline advocates a safe and supportive environment through fluoridation of drinking water supplies. Information is also provided on the importance of good oral hygiene practices and reducing sugar intake. The guideline advocates the acquisition of skills through organised school brushing programmes and counselling adolescents and youths on issues of oral hygiene and cosmetic practices. The Draft School Health Policy (2002) identifies oral health examinations as a strategy in school health programmes. The School Health Policy and Implementation Guidelines were approved in 2003 (Department of Health 2003b). The Draft Policy Guidelines for Community [Based] Health Workers on South Africa (1997) recognises the need for its core curriculum to include oral health related issues. Collectively these documents indicate that the potential does exist for oral health promotion to be included in the core policy statements.

The Draft Health Promotion Policy (1999) is a broad-based guideline that focuses on risks to human health. It essentially uses the integrated common risk approach to promote policy proposals that address health risks that occur as a result of lifestyle. This lifestyle approach to health care has important implications for oral health because it provides a sound foundation for oral health to be integrated into other health efforts. However policy formulation appears to still be in line with other national health policy efforts. International philosophies on health care provide a foundation for the policy document but the focus is still limited to individual health interests. Thus this document is not comprehensive enough to embrace other relevant health activities at a practical level.

Policy analysis of provincial health policy documents indicated that policy development generally focuses on the individual area of health priority. Only two of the twelve documents analysed had direct references to oral health (Table 9.5.). This indicated a significant difference in comparison to the national health policy documents. These

differences could also be attributed to a lack of available and accessible provincial health documents. However interviews with provincial health managers confirm that oral health statements are not generally included in provincial health policy statements.

Table 9.5. Analysis of Provincial Health Policy Documents

Policy No	Reference Document*	OH Reference	OHP Reference	Context mentioned	Scientific basis	Lifestyle or HP	Where can OH be incorporated?
1	Ottawa Charter (1986)	No	No	None	None	Yes	Inter-sectoral collaboration
2	Integrated Nutrition	No	No	None	None	Yes	Nutrition promotion, advocacy
3	RDP, Bill of Rights (SA)	Yes	Yes	Education and support	Yes	None	Goals and targets for HP Schools
4	National Policy	No	No	None	None	Yes	Life-skills, education
5	Conditions of Service	No	No	None	None	Yes	Cannot be incorporated
6	Labour Act 66 (1997)	No	No	None	None	Yes	Inter-departmental committees
7	Alma Ata	No	No	None	None	Yes	Health education
8	None	No	No	None	None	Yes	Increased output and customer care
9	None	Yes	Yes	OH strategies	Yes	Not applicable	Not applicable
10	National Aids Strategy	No	No	None	None	Yes	Local inter-sectoral programme
11	National Policies	No	No	None	None	Yes	Basic service needs
12	National strategies	No	No	None	None	Yes	Infant feeding practices

* These reference documents were cited directly in the health policy statements that were analysed. This summary table indicates the main features of each policy statement.

The analysis also indicated that provincial strategies to the HIV/Aids epidemic are the most visible efforts in health policy development (Table 9.5.). The provision for addressing lifestyle-induced risk factors or health promoting activities also allows for oral health promotion activities to be included in most of the examined provincial health policy documents. The only document that does not allow for oral health promotion activities to be incorporated is the “Aids Policy for the KwaZulu-Natal Provincial Administration 1996” (Policy Number 5, Table 9.5.). This policy document focuses on conditions of service and employment benefits for health workers within the department. The policy outlines recruitment strategies, support for employees that are already infected and afflicted, health benefits and education on the prevention and management of HIV in the workplace.

Supplementary documents used in health policy analysis included The Primary Health Care Package for South Africa - Norms and Standards (2001) and A Comprehensive Primary Health Care Service Package for South Africa (2001). These documents recommend activities such as oral health education; tooth brushing activities, fluoride mouth rinsing and the ART technique as potential strategies for oral health promotion in South Africa (Table 9.6.). Another interesting feature of these documents is that oral health service providers are identified as the primary workforce for oral health promotion activities.

Table 9.6. Analysis of Supplementary Documents

Document	OH Location	Activity	Comments
PHC Package for S.A. Norms and Standards (2001)	<ul style="list-style-type: none"> • School Programmes 	OH Education, Tooth brushing, Fluoride Mouth rinsing, ART Technique	Identifies oral health personnel to provide services.
Comprehensive PHC Service for S.A. (2001)	<ul style="list-style-type: none"> • District level • Inter-sectoral Services • School Services • Marketing Messages 	Recognises the need to integrate OH services	Identifies oral health personnel to provide services.

The National Norms, Standards and Practice Guidelines for Primary Oral Health Care (Undated) identify a basic treatment package for the prevention and promotion of primary oral health services. The document essentially focuses on guidelines for clinical oral health services. Community oral health services are not covered in this document. These guidelines imply that clinical oral health services takes precedence in South Africa. There is no evidence of a formal process to guide and define the role of community oral health promotion services in South Africa.

The policy process in South Africa appears to be based on primarily addressing health needs. The need for creating supportive environments is highlighted in health policy but only as a means to addressing health need. The overall value of comprehensive social development in achieving health gains appears to be largely neglected. This issue will be elaborated in the next chapter.

9.3. Oral Health Service Provision

9.3.1. Perceived Prevalence of Oral Diseases

Only five of the nine provincial oral health managers provided input for the research (a 60% response rate). Under disease prevalence, dental caries was considered to be high in Kwa-Zulu Natal (KZN), North West, Northern Cape and Mpumalanga provinces. Oral health managers perceived dental caries of having a high social impact in Mpumalanga and N. Cape. Managers in KZN and N. West provinces indicated that dental caries would have a medium social impact. However the oral health manager in the N. West province also perceived that dental caries would have a high impact on resources. Other respondents except the manager from the Free State province stated that dental caries would have medium impact on resources. This suggests that there was probably a higher perception of dental caries in comparison to actual utilisation rates, specifically in the North West province.

Similar recordings were presented for the perceived prevalence of periodontal disease. Managers in KZN and N. Cape provinces perceived periodontal disease to have a high social impact. Oral health managers perceived periodontal disease to have a medium social impact in Mpumalanga and North West provinces.

The perceived prevalence of early childhood caries ranged from low to medium with only the oral health manager in Mpumalanga suggesting high levels of prevalence (Table 9.7). The oral health manager for the Free State province did not submit any epidemiological information because the provincial results from the National Children's Survey 1999-2002 (Department of Health 2003b) were not made available to them.

Table 9.7. Perceived Prevalence on Dental Caries and ECC

Province	Dental Caries	Early Childhood Caries (ECC)
KZN	High	Low to Medium
N. WEST	High	Low to Medium
FREE STATE	No response	No response
N. CAPE	High	Low to Medium
MPUMALANGA	High	High

Respondents also perceived oral manifestations of HIV to be high in KZN but low in Mpumalanga and Northern Cape provinces. Oral HIV was perceived to have a high impact on social issues and health resources in KZN and North West provinces but low impact in Mpumalanga and Northern Cape provinces. The perception of prevalence in oral diseases and its consequent impact on resources could be supported by findings from the National Children's Oral Health Survey 1999/2001 (Department of Health 2003b) for the various provinces.

9.3.2. Unhealthy Lifestyle Practices

Respondents indicated that smoking was a high risk factor in KZN and N. Cape but a medium risk factor in North West and Mpumalanga provinces. Unhealthy dietary habits were recorded as a high risk factor in KZN, N. Cape and Mpumalanga provinces. The oral health manager in the North West province perceived diet to be a low risk factor in oral disease. The oral health manager in the Northern Cape province indicated that lifestyle posed a high risk factor while KZN and North West provinces stated that lifestyle had a medium effect as a risk factor.

9.3.3. Records on Oral Health Services

The data for basic oral health services rendered at a primary health care level indicate that the relief of pain and sepsis (resulting in extractions of teeth) is by far the most frequent clinical procedure (Table 9.8.). This suggests that a significant portion of the budget is spent on clinical services, specifically the relief of pain and sepsis. The statistics presented for the number of extractions in Kwa-Zulu Natal were a combination of treatment services rendered to both children and adults.

Table 9.8. Basic Oral Health Services rendered at a Primary Health Care Level

Province	No. of Extractions (Child<18)	No. of Extractions (Adult)	No. of Teeth Filled (Child)	Fissure Sealants (No. of teeth)	Prophylaxis (Child)	Expenditure (2000/1)
W.CAPE	114648	264823	12522	20567	8667	Not available
E.CAPE	None	None	None	None	None	Not available
N.CAPE	10000	22000	2800	4400	400	R 3 613 200.00
FREE STATE	13059	65455	2440	3584	522	R 10 422 866.37
KZN	258456	None	9054	4052	2436	R 6 382 500.00
GAUT	45981	174987	18433	2490	4212	R 43 998 993.00
N.WEST	24920	50128	3998	1925	5294	R 35 087 833.00
Limpopo (N.Province)	16108	34171	11253	12102	8534	R 26 747 360.00
MPUMA	13430	46661	1344	83	753	R 6 098 555.00

Source: Department of Health – Annual Report for Oral Health Services – 2002c. Pages 13-17.

This data on basic primary level oral health care services further iterates the imbalances in oral health service provision in South Africa.

9.3.4. Oral Health Promotion Programmes Conducted

All of the identified provincial oral health managers indicated that school brushing programmes; fissure sealants programmes and oral health education strategies are conducted in their respective provinces (Table 9.9.). However the provincial oral health manager in Mpumalanga province indicated that oral health education is now the only oral health promotion activity that is present in the Ehlanzeni District. All other community oral health programmes that were previously conducted in the district have been terminated. The availability of community oral health promotion programmes is critically reviewed in relation to the current availability of oral hygienists in the Discussion Section.

Table 9.9. Presence of Oral Health Promotion Activities

Province	School brushing	Fluoride Mouth rinsing	Fissure Sealants	Oral Health Education
KZN	Yes	No	Yes	Yes
N. WEST	Yes	Yes	Yes	Yes
FREE STATE	Yes	No	Yes	Yes
MPUMA	Yes	No	Yes	Yes
N. CAPE	Yes	Yes	Yes	Yes

The records suggest that school brushing programmes are not uniformly conducted at a provincial level and that only a percentage of the schools are covered by community oral health services (Table 9.10.). Only 412 of the 1137 schools are involved in the school brushing programmes in Gauteng while 45 of the 1151 schools in the North West province conducted tooth brushing programmes in 2000/2001. These statistics have important implications for oral health planning.

Table 9.10. Records on Number of Children involved in School OH Programmes - 2000/2001

Province	Screening	No. in need of Treatment	Tooth brushing sessions	No. of Schools	Fluoride Mouth rinse	Fluoride Tablets	Total No. of Schools
W. CAPE	18328	8536	23524	N/A	3302	0	1159
N. CAPE	15000	0	400	0	300	0	319
FREE STATE	8323	5418	7190	109	0	0	0
KZN	79820	17136	48350	N/A	0	0	4123
GAUT	92459	15208	64809	412	0	0	1137
N. WEST	51129	19923	2000	45			1151
N. PROV	21317	13014	17014	207			322
MPUMA	3184	591	3864	76	0	0	1560

Source: Department of Health – Annual Report for Oral Health Services – 2002c. Page 13.

Data also indicated that of the 79459 children screened in Kwa-Zulu Natal, 22% of children were identified as in need of requiring treatment (Table 9.10.). These statistics suggest that screening is given precedence at community oral health level. This information will be compared to the province's draft proposals on oral health promotion activities.

The results indicate that there is an uneven distribution of oral hygienists, with an emphasis on urban settings to conduct oral health promotion activities (Table 9.11.).

Table 9.11. Provincial Distribution of Oral Hygienists

Province	Urban	Rural
KZN	10	5
N. WEST	5	0
FREE STATE	7	0
MPUMA	2	2
N. CAPE	1	0

The distribution of oral hygienists recorded on the questionnaires differs slightly from the statistics presented in the Annual Report for Oral Health 2001/2002 (Department of Health 2002c). This discrepancy in recordings could be possibly due to ongoing staff changes within the Department of Health.

9.4. Oral Health Promotion-Related Decision-Making

As stated previously interviews with the identified national health directorates were conducted using a convenience sample. Only specific directorates were contacted to participate in the research. All national directorates approached, participated in the study. An in-depth, face-to-face interview was conducted with the National Directorate of Oral Health (n=1). An in-depth telephonic interview was set up with the National Directorate of Health Promotion (n=1). Standardised telephonic interviews were conducted with the National Directorate of Child and Youth Health, Mental Health, Nutrition, Chronic Diseases and Disabilities, HIV/Aids and Maternal Health (n=6). Therefore the response rate for the national directorate's interviews was 100%.

Provincial managers in Health Promotion, HIV/Aids, Nutrition and Maternal, Child and Women's Health in all nine provinces in South Africa were selected for the questionnaire phase of the research. A single directorate administers the Child and Nutrition Programme in the Free State Province. Therefore the study sample consisted of 35 health managers. Only 18 of these 35 provincial health managers (50%) responded to the questionnaire phase of the research (n=35).

Interviews were set up with those health managers that had difficulty in completing the questionnaire. Fifteen provincial health managers participated in the interview phase (n=15). Five of these provincial health managers that participated in the interview had in addition, returned their completed questionnaires. Thus five health managers participated in both the questionnaire and interview phase.

No interviews were conducted with provincial oral health managers. The purpose of the interview phase was to clarify any unclear information on oral health activities. Provincial oral health managers provided clear information and unambiguous statements in the questionnaires. Thus there was no need to set up interviews with provincial oral health

managers. The following results are an integration of the various responses obtained from national and provincial health directorates to specific questions presented in the research.

9.4.1. Oral health promotion in other health policies and programmes

Fourteen provincial health managers (40%) indicated that oral health promotion elements are included in their respective policy documents (n=35). However managers referred to national policy documents for supporting evidence. Four respondents believed that oral health should be considered a part of the primary health care system.

The results indicate that oral health promotion programmes have not been formally evaluated for their effectiveness. The National Directorate of Oral Health stated that there were no criteria for the selection of proposals on oral health promotion. This is reflected in the following quotation.

“So far we have no measuring tools that measure the effectiveness of the interventions but the tooth brushing programmes might be measured using the Plaque Index. Also using the KAPB [knowledge, attitudes, perceptions and beliefs] method will help us in the future. No measuring tool except the National Oral Health Survey” (Interview with the National Directorate of Oral Health).

The themes that arose out of qualitative analysis indicate that there is exclusive reliance on the results of the National Children’s Oral Health Survey as the primary source of epidemiological data to guide policy development in South Africa. The literature on the other hand suggests that the National Children’s Oral Health Survey focused on dental caries levels in children, periodontal diseases in 15-year-olds, the prevalence of dental fluorosis and malocclusion, epidemiological data on other oral conditions, such as oral manifestations of HIV/Aids, oral cancer and trauma is scant. A lack of updated and reliable epidemiological data on commonly occurring oral conditions would create a false picture on the oral health profile in South Africa. This in turn would misinform oral health policy-makers and could have a significant impact on resource allocation.

The reliance on past experiences and policies for oral health promotion would also have serious implications. The delivery of oral health services in the apartheid era was riddled with inequities in service provision (Myburgh 1998). This continued reliance would suggest that historical inequities would persist in the current delivery of oral health services.

When asked whether the inclusion of viable policy proposals on oral health promotion could contribute to improved oral health status, the response was that policy statements ‘can get peoples’ attention to take action’ (Interview with National Directorate of Oral Health). The Directorate did concede however, that it is difficult to project what kind of impact this would have on oral health status and long-term behavioural changes.

The National Directorate of Oral Health believed that success in oral health promotion could be achieved through a well-structured and properly executed policy on integrated oral health and that there is a need for community participation in oral health-related programmes. This is reflected in the following response:

“ On their own they are not effective but if they are integrated within other programmes, then these interventions will be effective. If we advise people on the right diet we will be talking about good health. General health can have an impact on oral health. An integrated strategy will work. Another example is breastfeeding. From a nutritional perspective, HIV positive mothers can be advised on breastfeeding. Advise bottle feeding. Should include the dangers of adding sugar to the bottle. We have shortage of staff in oral health. We need other programmes and staff from other programmes to assist in oral health in order to improve oral health in South Africa” (Interview with National Directorate of Oral Health).

The National Directorate for Health Promotion, on the other hand, believed that efforts on health promotion are successful but that it was also necessary to examine the context in which programmes are being implemented at district level. Some of the perceived challenges facing health promotion in South Africa are that health promotion is still a relatively new concept as a health discipline in South Africa. The impact of health promotion activities is long term and provinces are at different levels of implementation.

The National Directorate for Health Promotion indicated that the delivery of health promotion could be improved through community participation in health interventions. The director identified skills development and multi-sectoral collaboration as potential areas to improve the delivery of health promotion in South Africa. Several other themes arose out of the analysis for improving the delivery of health promotion in South Africa. These included the need to improve health literacy, improve community participation and promote public-private partnerships. The need for public-private partnerships highlights the fact that given the limitations in resources, government alone cannot be responsible for health care. Therefore improved health literacy would be an important strategy to enable healthier choices to be made. A multi-sectoral approach to health care would contribute to overall health-related development (Petersen 2004). The philosophies expressed by the Directorate are thus in accordance to the overall principles of health promotion. However the Directorate did not expand on how these ideologies could be translated into practice in South Africa.

The literature has established that the nature and development of human resources in health service provision would be an important aspect of health policy development (Walt 1994). Therefore issues such as staffing norms, training, skills development and availability of appropriate health workforce would be important considerations in health planning and policy development. The Directorate discussed the issue of different provinces being at diverse levels of implementation. However no mention is made of the need for equity in supporting the health transformation process at provincial and district levels.

Furthermore there is acknowledgement that behavioural changes are long term processes. However this also suggests a perception that the evaluation of health promotion programmes is focused mainly on health outcomes as an indicator for improved community health. No mention is made of measuring the processes involved in reaching these desired health outcomes. Furthermore the interviews suggest further limitations in the quality of records. The following quotations were taken from the interviews with provincial health managers:

“There should be indicators in the minimum data set when looking at statistics for all health activities including oral health and all other programmes. Health Promotion on the District Information System is very general. It doesn’t outline what is being individually done in Health Promotion at a district level” (Health Promotion: Gauteng).

“Oral health should be a part of policy development and also in terms of helping with the development of health education materials for communities and mothers. Ensure that it [oral health] is incorporated into routinely collected data (monthly statistics). Identify and develop indicators” (MCWH: Free State).

These statements imply that the current reporting systems are not reflective of the actual health activities that occur at district level. This in turn would increase difficulties in attempts to monitor, measure and evaluate the effectiveness of health programmes. Thus the development of proper indicators would play an important role in process evaluation in health care.

There were varied responses to whether there is a direct reference to oral health in other specific national health policy documents. National directors stated that policy statements on Mental Health and HIV/Aids are broad-based and that there are no direct references to oral health in these policy documents. Oral health promotion is included in the supportive educational material on chronic diseases and disabilities but is not mentioned in policy documents. All directorates, with exception of the Directorate of Mental Health, stated that their policy documents make provision for lifestyle induced risk factors. These include issues of dietary intake, hygiene, substance and medicine abuse.

Various responses were obtained with regard to national support for oral health promotion-related issues in policy (n=6). The Directorate of Mental Health and HIV/Aids believed that it would be difficult to include oral health promotion at national policy-making level because of the current structure in their health policies. This response is addressed in detail in the Discussion Section. The Directorate of Chronic Diseases and Disabilities on the other hand, believed that it was not their responsibility to provide support for oral health promotion. They suggested that oral health promotion efforts should to be located within the National Directorate of Health Promotion’s Healthy Lifestyle Approach.

The Sub-Directorate of Child and Youth Health stated they are presently conducting workshops in various provinces to roll out the Policy Guidelines on Youth and Adolescent Health (2001). However structural capacities and constraints in financial and human resources needed to be taken into account.

Apart from the Directorate of Mental Health, all other directorates indicated their support for oral health promotion (n=6). A summary of the extent to which oral health promotion could be supported at a national health policy level is presented in Table 9.12.

Table 9.12. Response to Support for Oral Health Promotion in Policy

Directorate	Response
Mental Health	No impact. HP component addresses rehabilitation and stigmatisation.
Chronic Diseases and Disabilities	HP should assume the responsibility for co-ordinating Healthy Lifestyle Approach.
HIV/Aids and STDs	Focuses on communication, support and acceptance.
Nutrition	Efforts are now being made to include statements on sugar consumption.
Maternal Health	OH can play a role in self-care and pregnancy. Can integrate messages.
Child and Youth Health	Covered in Policy Guidelines for Youth and Adolescent Health (2001), Draft School Health Policy (2002) and Draft Guidelines developing Health Promoting Schools (2000).

The results of qualitative analysis suggest that health policy-making is very much a vertical process in South Africa. Policy proposals are identified, formulated and then circulated for comment. The selection of health priorities appears to be focused exclusively on the identified health area. All other influences or impacts on that identified health concern would have to be seen as being relevant. Even if the relevance of this association is recognised, there is no guarantee that these influences or impacts will be included in policy. Policy makers recognise the link between oral health and their respective health units yet the results indicate that the onus is left upon the National Oral Health Directorate to motivate for inclusion in other health policy efforts. On the other hand when there is a recognised need for specific involvement, then the policy process changes. The Sub-Directorate of Child Health highlighted that the National Oral Health Directorate was involved right from the policy formulation process through the formation of tasks teams and quarterly meetings. This reflects a contradiction in the health formulation process in South Africa.

9.4.2. Oral health messages in district health programmes

The questionnaire and interview phase of the research yielded slight differences in the response rates. Eleven respondents in the questionnaire phase indicated that oral health messages are included in health programmes at district health level and seven health managers indicated that this does not occur (n=35). Only seven of the respondents interviewed, indicated that oral health statements were included in their policy documents (n=15). Collectively, 18 provincial health managers (51% of combined response to interviews and questionnaires) stated that oral health messages are included in their respective health programmes at district level. Only one manager (MCWH – Mpumalanga province) provided statistical data to support the inclusion of district oral health messages in Maternal, Child and Women’s Health care. None of the provincial managers in HIV/Aids indicated that oral health messages are included in their district activities. Respondents were asked to list the category of health worker that is responsible for implementing oral health messages at district level. Three respondents indicated that only the oral health worker is responsible while another three respondents said that both the oral health and the community health worker were responsible for implementing oral health messages. Thirteen respondents stated that their policy statements included identification of risk factors to health (n=15). However different responses were obtained for the perceived support for oral health promotion on a provincial policy level (Table 9.13.). Apart from including oral health in key health priority areas, there was also a perceived need to increase resources provide skills development at district level.

Table 9.13. Provincial Response to Support for OHP (Results from Interviews)

Province	Programme Manager	Response
E. CAPE N. CAPE	Nutrition Health Promotion	Promote health messages to include oral health promotion
N. CAPE E. CAPE W. CAPE N. WEST	Nutrition Nutrition MCWH MCWH	OH to be integrated into key health priority areas
N.WEST N. CAPE	Health Promotion HIV/Aids	Priority programmes take precedence in these provinces.
N. PROV. (Limpopo) Limpopo	Health Promotion HIV/Aids	Advocate and plan OH awareness campaigns as part of health programmes
Limpopo	Nutrition	Collaborating with oral health workers
N. CAPE W. CAPE GAUT	MCWH HIV/Aids MCWH	Provide training and increase availability of resources

Respondents indicated that oral health promotion interventions could only be effective if they are integrated within other health programmes. This was in response to whether the current strategies, interventions or programmes on oral health promotion were adequate or sufficient to contribute to improved community oral health. An example of an integrated programme was given: Oral health messages on breastfeeding could be included in HIV/Aids awareness programmes or that similar messages could be included in nutrition programmes (Interview with National Directorate of Oral Health).

9.4.3. Perceptions on Oral Health Programmes

Provincial health managers were requested to comment on the extent of their awareness on district oral health promotion activities. Fourteen respondents in the provincial health questionnaire phase indicated that they were aware of tooth brushing programmes being conducted in their province (n=35). Eight respondents indicated that they were aware of fluoride mouth rinsing being conducted in the province while five health managers did not respond to this question. Six respondents indicated that they were not aware of efforts in community water fluoridation being conducted in their province.

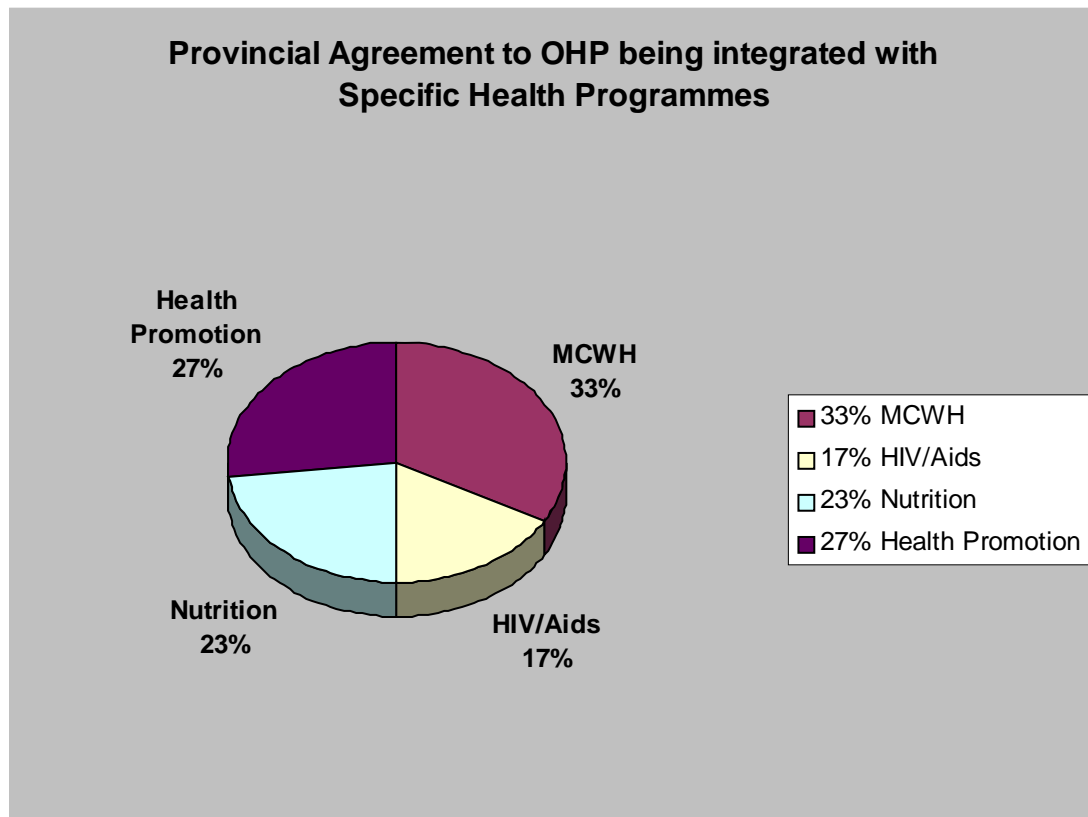
In contrast all respondents indicated that they were aware of oral health education activities in oral health promotion. Only one respondent (Health Promotion: KZN) was aware of a fissure sealant programme being carried out in the province. Ten respondents indicated that they were aware of strategies addressing nutrition or sugar intake.

9.4.4. Integration of District Health Services

All oral health managers except those in KZN indicated that integration of oral health promotion strategies have already occurred. This information was not be verified by other health managers within the same province.

There was almost universal agreement among provincial health managers (86%) that oral health promotion activities could be integrated with their respective health programmes at district level. A graphic illustration of provincial health programme managers' response to oral health promotion integration with their respective programmes is illustrated in Figure 9.1. All respondents with the exception of the Directorate of HIV/Aids in KZN indicated that oral health could be integrated with their respective programmes at a district level.

Figure 9.1. Provincial Agreement to Oral Health Promotion being integrated with Specific Health Programmes



This suggests that health managers in general recognise the importance of integrated health service delivery as a mechanism to improve community health status. This observation is reflected in the following quotation taken from the self-administered questionnaire:

“HIV/Aids, Nutrition and MCWH Programmes all include oral health education. Health promotion programmes include all aspects of health, including oral health” (Health Promotion Manager: Kwa-Zulu Natal).

When asked to what extent integration had occurred or has been envisaged to occur, different responses were obtained. Responses ranged from oral health being already a part of the primary health care system and that oral health collaborates with other health programmes on the Health Calendar, to that of co-operation between oral health and other programmes beginning to occur. This is reflected in the following quotations.

“ The Primary School Nutrition Programme takes nutrition education to primary schools. Oral health has relevance here because a healthy mouth and a healthy diet are both necessary. We come into direct contact with oral health workers at present” (Free State Manager on Nutrition and Health Promotion).

“Oral health is included in Maternal, Child and Women’s Health efforts. This is to show that oral health addresses the needs of the primary dentition and not just the permanent dentition...however the success of the policy implementation is heavily dependent on who is providing the services. Our National Directorate’s view is that oral health is a priority that must be carried to the provinces and the districts” (National Sub-Directorate of Child and Youth Health).

This also implies that the philosophy underlying health decision-making is very much in line with the overall political sentiments on health care in South Africa (Figure 9.1). The difficulty in translating this vision into practice is discussed in the next chapter.

9.4.5. Strategies to Improve Community Oral Health

Four respondents (n=9) indicated that oral health and media campaigns are carried out to advocate awareness in community water fluoridation and to mobilise support for other community issues. This identified need for fluoridation committees and media communications have important implications for advocacy in community water fluoridation efforts. However it was not stated if these committees would include private-public partnerships.

The oral health manager in KZN indicated that their programme has little input into the activities of oral health personnel and that oral hygienists are located within the establishments of hospitals and clinics therefore would have limited input in social mobilisation efforts.

Oral health managers in the Free State and Mpumalanga provinces believed that a lack of resources, especially oral hygienists, has had an impact on efforts to improve community oral health. This was in response to whether the capacity for current oral health promotion activities had contributed to improved community health. Three oral health managers

indicated there were improvements in oral health but that improvements can only be acknowledged if all other determinants are taken into account. Three themes arose out of qualitative data analysis. The first two themes focused on clinical statistics as an indicator to improved community health. The oral health manager in Mpumalanga province indicated that there was an improvement but that the situation has now deteriorated. Managers in the North West and Mpumalanga provinces, on the other hand, stated that increased clinical statistics provided evidence for improved community oral health.

The reliance on the availability of statistics to show improvements in community oral health implies that improvements can only be measured by quantifiable data. The literature has provided evidence that rejects this perception. Similarly the reliance on increased clinical statistics as an indicator for increased awareness in oral health is also debatable.

The third theme focused on deteriorating oral health status. This suggests that demographic changes, the impact of urbanisation and changing disease patterns such as HIV/Aids, would have an impact on oral health (Petersen 2004). These issues need to be considered in oral health planning efforts. Oral health managers perceived other population wide strategies (Table 9.14.). These included tooth brushing and fissure sealant programmes, and the use of mobile clinics for outreach programmes.

Table 9.14. Response to Other Population-Wide Strategies for Improved Community Oral Health

Province	Other Population-Wide Strategies Considered
KZN	Drinking water fluoridation
N. WEST	Using nurses and community committees
FREE STATE	None
MPUMA	Tooth brushing and Fissure Sealant Programmes
N. CAPE	Use of mobile clinics for outreach programmes

With reference to the proposed implementation of community water fluoridation, all respondents indicated that they either did not know or were not sure when community water fluoridation will be implemented. The oral health manager in KZN province indicated that community water fluoridation has been proposed for 50% of urban municipalities and 5% rural communities.

All non-responses or missing information have been indicated in this chapter. The non-responses or missing information in the questionnaires provides an indication of the difficulties experienced by the respondents in providing the data required for the research. This further reflects the gaps in understanding the dynamics surrounding oral health promotion in South Africa.

9.5. Barriers to Health Policy Integration

Some of the perceived barriers to the integration process included staff shortages, increased patient loads and low staff morale. Other barriers included a lack of knowledge in oral health promotion interventions and strategies and the need for technical support to assist health programmatic integration. The issues of sustainable and integrated health programmes were also raised. There were concerns that the current delivery of health services is dominated by curative services and that there is still gender discrimination in health services delivery.

There was agreement that provincial budgetary allocation has a negative impact on the provision for oral health promotion. The oral health manager in KZN commented that there is no dedicated budget for oral health promotion activities. There was general agreement that other health priorities also have a negative impact on oral health promotion. These priorities included cholera, HIV/Aids and poverty alleviation. Therefore it would be important to ensure that oral health is recognised as a priority in both planning and implementing efforts. The link between oral health and other key health programmes will have to be clearly demonstrated both at a policy and programmatic level.

In summary the results suggests that the selection of water community fluoridation in the national oral health policy document is consistent with literature on evidence-based oral health care. The selection of population-based initiatives to address risk factors to oral health also is consistent with international approaches to address oral health efforts. However there is a need to ensure that the selection of these strategies take into account local conditions in implementation and evaluation. Contradictions were noted between policy proposals on the value of health education in school-based programmes and the actual delivery of school oral health programmes. Fifty percent of the national health policy documents examined did include statements on oral health. Other national policy statements have a health-promoting component that could address health-related risk factors. These

provisions provide opportunities to incorporate oral health efforts. Provincial draft oral health policy documents showed variations in the identification of human resources for oral health promotion activities. Oral health-related decision-making highlighted the need for adequate manpower, proper health integration efforts, focus on health-related risks, and a comprehensive approach to district health care and multi-sectoral collaborative efforts. These issues are discussed in depth in the next chapter.

Chapter 10

Discussion

The central aim of this research was to identify policy proposals on oral health promotion that have the potential to contribute to health sector reform in South Africa. The research examined the viability of these proposals in comparison to literature on evidence-based oral health practices. The feasibility of implementing evidence-based policy efforts in oral health promotion was also examined. This chapter provides an interpretation of the research findings by comparing policy proposals and perceptions to oral health promotion-related service delivery in South Africa. This chapter also includes an evaluation of the strengths and weaknesses of the study.

The results indicate that there are distinct contradictions in oral health promotion-related policy development and decision-making in all of the identified health areas. The results also suggest that there are contradictions between national and provincial oral health promotion-related policy development. The research findings further indicate a contradiction within and between all of the identified health areas.

10.1. Locating the Form and Context of Oral Health Promotion in Health Policy Documents

Analysis of national policy documents on Health Promotion, Nutrition, Maternal, Child and Women's Health and HIV/Aids indicates that 50% of these documents include statements on oral health or oral health promotion. Apart from the Policy Guidelines on Youth and Adolescent Health (2001) and the national guidelines on the management and treatment of HIV/Aids (Tables 8.2. and 9.4.), all other references to oral health or oral health promotion were vague and incomplete. National policy guidelines on HIV/Aids make specific references to the management of oral infections and include recommendations on HIV-related infant feeding practices in South Africa (Table 9.4.). An example of vague references to oral health promotion is evident in the draft policy document on the National School Health Policy and Implementation Guidelines (2002). The document merely states "oral health checks" under the health assessment section (page 22) without defining the parameters or supporting structures for oral health examination in schools (National School

Health Policy and Implementation Guidelines 2002). One example of a policy document that has clear rhetoric on oral health promotion is the South African National Oral Health Strategy Document (Appendix 1). It states the importance of employing a common risk factor approach, population-based strategies for health promotion (including policy integration), emphasises the use of evidence-based interventions where possible and provides a flexible framework for oral health planning at local level. However, the technical strength of this document appears not to have reached other levels of the health system or key decision makers in other health programmes or directorates. It is perhaps a classic example of rhetoric and reality not connecting in health policy. Where the study did find evidence of other health policy or programme commitment to oral health promotion, there was usually no evidence of its implementation. This is reflected in the national Policy Guidelines on Youth and Adolescent Health (2001) and the national guidelines for the management and treatment of HIV/Aids (Tables 8.2. and 9.4). Ogunbodede and Rudolph (2002) conclude that the *“weakness, gaps, and constraints in these policies [HIV/Aids] and their implementation easily reveal that the oral health aspects have been totally neglected”* (Ogunbodede and Rudolph 2002: 474).

10.2. Oral Health Service Delivery

The literature reviewed suggests that integrating key policy elements designed to address oral disease risk factors and other known determinants of oral health into broader health policy, can actually lead to improvements in community oral health. Of course this assumes that each policy element can and is implemented and is then capable of achieving a real oral health gain for those in the community who need it, compared to what they had before.

The preamble to the draft national oral health policy for South Africa (Undated) points out that only 6-8% of the population utilises public oral health services despite the implementation of free primary health care services (Department of Health 1994-2000). The national statistics for oral health services are supported by the literature, which suggests that clinical services, especially extraction of teeth or the relief of pain and sepsis, dominate service delivery in South Africa (Department of Health 2002c; Bhayat and Cleaton-Jones 2003; Gugushe 1998).

The reported lack of updated and reliable epidemiological data on commonly occurring oral conditions has contributed to the unclear picture of oral health in South Africa. This suggests that actual policy formulation, decision-making and oral health care resource allocation is happening without sound epidemiological information or community needs assessments. This complicates the allocation of very limited resources and already poor accessibility to health services (Barron 2000). This lack of reliable information also obscures the differences between need and demand perceived by oral health planners, service providers and the communities that utilise public oral health services (Tickle, Milsom and Blinkhorn 2002).

Some of the possible reasons for the contradiction between health policy statements and oral health service delivery could be that oral health policy planners are not in direct consultation with service providers involved in the actual implementation of oral health services (Schierhout and Fonn 1999). A paternalistic approach to health care is still prevalent despite efforts to change the paradigms in public health initiatives. While community participation on the one hand, may be reflected through the existence of health forums, questions can be raised as to whether these health forums are truly representative of actual community needs (Rifkin 1996). This mismatch between perceived need and actual need would manifest in the public oral health service utilisation rates.

10.3. Human Resources in Oral Health Promotion

Oral health promotion related-policy development appears to be way ahead of the current implementation processes. The reported shortages in human resources and the current imbalance in the urban/rural distribution of oral hygienists could further complicate this area of service delivery. There is no absolute shortage of oral health workers in South Africa but a relative shortage in the availability of posts within the Department of Health (Department of Health 2002c; Bhayat and Cleaton-Jones 2003). Therefore apart from the option of compulsory community service there is also a need to attract more oral hygienists to the public health sector. This would require a re-assessment of current employment benefits in the public health sector. Singh (2000) presents a counter-argument that an increase in oral health personnel is not a viable solution but rather that there is an urgent need to re-orient health service delivery with an emphasis on integrated service provision. While this argument is valid, an increase in oral hygienists could assist in strengthening efforts to

advocate and mobilise integrated oral health promotion efforts. Therefore allocation of human resources in would be an integral aspect of health policy development.

10.4. Gaps between Policy and Practice

The recognition of legislation and health policy to guide the oral health process in South Africa could be regarded as a success story. However policies and practices during the apartheid era do appear to have an impact on the current policy process. Historical imbalances, in terms of urban and curative focus, still persist in the current delivery of oral health promotion services. Secondary and tertiary oral health services have not improved since 1994. This is reflected in the statistics on clinical service provision that explicitly indicate limited practice in conservative treatment procedures (Department of Health 2002c). Statistics on oral health care also indicate that tertiary oral health services have decreased (Department of Health 2002c). This could be due to a lack of funding or through changes in policy focus. Thus the private sector would be the most likely provider for comprehensive oral health services that would cover primary, secondary and rehabilitative needs. The private-public split in oral health services is thus an important factor to consider in oral health-related policy development and planning. The bio-medical influences on undergraduate training would mean that more people would opt for a lucrative private market that is dominated by competitive monopoly. This is also reflected in the attrition of the public sector workforce for the private sector or for overseas work contracts. However the bureaucracy in the public health sector could also act as a hindrance to improving the public sector oral health workforce through barriers in employment opportunities and affirmative action policies.

The results suggest that even the technically strong content of the national oral health policy document may not have the kind of impact it hoped for (Department of Health 2004). To successfully influence the processes of oral health promotion requires more than simple, document-based policy reforms that are strong on rhetoric and good ideas, but have not achieved the widespread stakeholder support necessary to carry them through to funding and implementation. It is therefore important that oral health promotion strategies are re-assessed and re-structured so that real gains in dental public health can be attained.

The failure of oral health policy to have a marked influence on other areas of health policy could be due to a number of factors. The study shows that oral health has struggled to find recognition in broader health and social development programmes. Historically, improvements in oral health have been measured and recognised by decreased caries rates, improved plaque indices, and healthier periodontal tissues but very little emphasis has been placed on the social, economic and environmental implications of oral health. One of the most important of these outcomes is equity, but this was not reflected in any of the oral health policy elements researched. Where rhetorical introductory statements did indicate an awareness of equity, no indicators by which to measure success or failure could be found. This is a surprising omission from health policy in a post-apartheid environment. Apartheid resulted in 10% of the population holding 60% of the country's wealth in South Africa (Strachan 2000a). In a post-apartheid and democratic South Africa, only about 16% of the population makes use of the private sector for health services while the remaining 84% of the population is dependent on public health services (Health Systems Trust 2002).

It is debatable whether population-wide strategies or equity driven approaches according to local need would yield greater health gains. Ultimately selection of an appropriate strategy will depend on the context of health care delivery. Thus the clash between population-wide strategies and equity would have important policy implications. Given the historical imbalances in health care in South Africa and persistent health inequalities, there is a greater need to focus on equity-driven policies in accordance to local needs as opposed to population-based strategies. This debate will be further explored with regard to policy proposals on community water fluoridation. An equity-led approach to health policy would therefore need to focus on private-public financing, distribution of personnel and services, quality of care and the use of strategic health indicators to ensure that health service delivery is contributing to improved community health (Sanders 1998).

10.5. Oral Health Priorities

As stated before, only five oral health managers out of nine provinces had participated in the research despite numerous follow-up efforts. The annual report on oral health services 2000/2001 also has information missing from certain provinces (Department of Health 2002c). This reflects the difficulties experienced in collecting data from the various provinces.

10.5.1. Periodontal Disease

Oral health managers in the Northern Cape and Kwa-Zulu Natal perceived a high prevalence of periodontal disease and a high occurrence of smoking in their respective provinces. Traditional perceptions of the relationship between periodontal disease and poor oral hygiene need to be urgently re-examined. Research suggests that smoking is a far more convincing predictor of periodontal disease than poor oral hygiene practices (Vered et al 2003; Wickholm et al 2003; Hujoel 2003; Hujoel et al 2003). This understanding in the aetiology of periodontal disease has important implications for health policy development (Hujoel 2003). Despite the evidence there is little public exposure on the oral implications of smoking. This lack of emphasis could be due to the fact that oral health planners may not be aware of the latest evidence-based developments in oral health promotion activities. This highlights the need to communicate evidence-based developments in oral health care through all levels of the health system in South Africa and to include all stakeholders in this process.

10.5.2. Early Childhood Caries

All provincial oral health managers with the exception of the Free State province perceived a high prevalence of dental caries in their respective provinces. Similarly provincial oral health managers gave varying responses to the perceived impact of dental caries as a burden on health resources. The research evidence suggests that the impact of early childhood caries is largely neglected in oral health promotion activities in South Africa yet the literature suggests that early childhood caries would have important social and policy implications (Department of Health 2003b; King 1998; Weinstein and Riedy 2001; Milnes 1996; Okada, Kawamura and Miura 2001; Kowash et al 2000; Milgrom 1998; Watt et al 2001b; Dini, Holt and Bedi 2000). The literature also highlighted the limitations of focusing primarily on school oral health services for improved community health (Milgrom 1998; Pine et al 2000). A comprehensive approach to maternal and child health care, involving efforts in community water fluoridation, nutritional intake and safe breast feeding practices could provide a better platform to address the impact of early childhood caries as opposed to individual strategies (Watt et al 2001a and b; Milgrom 1998).

10.5.3. HIV/Aids

There were noted differences in the perceived prevalence of oral manifestations in HIV/Aids. The oral health manager in Kwa-Zulu Natal considered oral HIV infections to be high while oral health managers in the Northern Cape and Mpumalanga provinces perceived oral manifestations of HIV/Aids to be low in their respective provinces. Developing integrated policies on HIV/Aids would therefore be a more viable and comprehensive option to addressing the prevalence of HIV/Aids in South Africa. There is potential for HIV/Aids-related efforts to support oral health promotion initiatives both from policy and programmatic perspectives.

10.6. Oral Health Community Services

10.6.1. School Oral Health Programmes

Forty percent of provincial oral health managers indicated that school brushing programmes were conducted in their respective provinces. 61% of schools in the North West indicated records on oral health promotion activities in 2002. Only 5% of schools in Mpumalanga province recorded oral health activities in that year thus indicating a significant diversity in school oral health programmes. An interpretation of these records is that there is an uneven distribution of school oral health services at provincial and regional levels. There was also a lack of information on the number of schools that receive oral health programmes and whether these programmes were continuous or had interrupted service delivery. Therefore national records on school oral health promotion services cannot be considered valid because these records are not a representation of all regions in South Africa.

Strategies and interventions on oral health promotion need to be directed primarily to women receiving antenatal, mothers and children, and youth and adolescents (Pine et al 2004; Milgrom 1998; Preston, Davies and Craven 2001). School oral health programmes could be retained as a secondary focus. However these programmes need to be drastically re-oriented in order to avoid the current inequalities in school oral health services in South Africa (Lalloo and Solanki 1994; Petersen and Mzee 1998; Honkala et al 1997).

10.6.2. Health Promoting Schools

The Health Promoting Schools Initiative may provide opportunities for school oral health programmes to be integrated into a comprehensive approach to health care at schools (Sheiham and Watt 2003; Watt 2002; Mukoma and Flisher 2004; Center for Health Improvement 2004a). These issues could include school policies on nutrition and oral health implications in the Primary School Nutrition Programme (PSNP) in South Africa. Despite the current limitations, The Primary School Nutrition Programme reflects one area of successful policy translation in South Africa. This success could have been partly due to political pressure to reduce infant and child nutrition-related morbidity rates. There are also opportunities for creating awareness to oral health-related risks and advocacy in oral health-related life skills (Petersen 2004a).

10.7. Oral Health-Related Decision-Making

This study found gaps in communication between national and provincial health directorates. Oral health management at both national and provincial levels provided interesting insights to confirm the known shortcomings in the current delivery of oral health promotion activities. These identified shortcomings included perceived financial constraints, lack of manpower and oral health being a low priority on the health policy-making agenda.

10.7.1. Integrating District Health Services

There was general agreement that it was necessary to integrate oral health promotion with other district health activities to ensure improved effectiveness and sustainability of oral health care. The research evidence suggests that there is a lack of clear understanding among the identified health managers at national and provincial levels, on the dynamics, limitations and processes of oral health promotion service delivery. There were no clear directives on how health programmes will be integrated, who will take the initiative to integrate programmes, what will be the new roles of existing oral health personnel? More importantly what happens when oral health personnel are not available in a particular district or region? The implications are that the burden of integrating district health programmes is left upon district health personnel (Ntanyiya et al 1998). This lack of accountability could be one of the leading contributory factors in the delay surrounding the

integration of district health services in South Africa (Lush et al 2001). The questions that arise out of this research is why has district health integration not occurred, why has there not been a reallocation of resources, given South African's historical imbalances in health care, and why has there been limited focus on prevention despite political commitment to comprehensive primary health care efforts in South Africa?

10.7.2. The Impact of Process and Power on Health Integration

The extent to which the neo-federal structure of the South African health system has the potential to accentuate this, and introduce conflicts of interest and power across provincial and national stakeholders needs to be examined. Perhaps further research is needed to assess the principal role players and the extent to which they influence the process of policy development (Walt 1994; De Leeuw 1993; Brugha and Varvasovszky 2000). The health policy process in South Africa appears to be dominated by power, protection of professional interests and maintenance of autonomy. National health management decision-making may be driven by political pressure and the need to conform to national policies. Provincial health managerial decision-making on the other hand, appears to be driven by protecting professional interests and preserving autonomy. Both levels of decision-making are therefore driven by different agendas and influences. This might account for the poor communication between national health planners and provincial managers. Another potential way of holding onto professional power would be to accept and not challenge the existing processes in oral health promotion in South Africa.

A clearer understanding of this picture is evident when one examines the nature of dental undergraduate training. Dental degrees are essentially clinical degrees with a component on community oral health. Despite vast and concerted academic effort to improve community oral health research and service delivery, academic community oral health departments at universities have had little impact on changing these paradigms in dental training. Thus health planners, decision-makers, managers and service providers entering the public health sector would be very much influenced by the bio-medical approach to oral health care. Furthermore there are not enough specialists or leaders in community oral health that could advocate for shifts in paradigms in undergraduate training at a 'high political' level.

The scarcity of resources would mean that institution-based curative or clinical interventions would naturally feature high on a health planner or manager's agenda of health priorities. Research shows that the bulk of resources are directed to health personnel's salaries, drugs and institutional management (Department of Health 2002b). Thus lesser money would be made available for preventive measures. Furthermore an institutional-based focus on health care can be measured quantitatively and can show defined health outcomes such as patient attendance, records on treatment procedures carried out, and the drugs used. Hence quantified data on health services provided and health utilisation rates would provide a sound rationale and justification for the allocation of health resources. Preventive and promotive health efforts are directed towards community development and empowerment. These efforts are long term, complex and cannot be easily reduced to quantifiable data. Health planners could also be under political pressure to show quick results that the new government is making visible success in achieving improved community health in South Africa. This would thus account for the persistent delays in district health integration, despite the availability of sound rhetoric in policy.

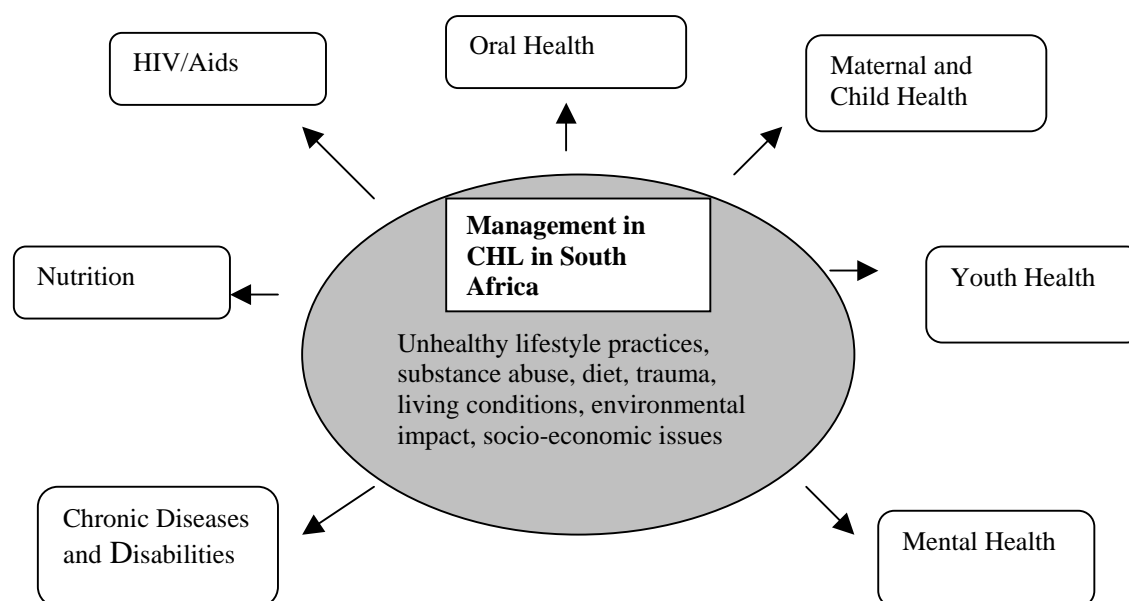
According to this study, health policy development appears to follow an underlying vertical process despite all efforts to project this process as an integrated effort. This interplay between health process and power in policy formulation needs much closer scrutiny in future. The impact of Apartheid policies has had a significant impact on perpetuating health inequalities in historically disadvantaged communities. However the current situation in South Africa suggests that the changing disease patterns, the impact of demography and professional control in health service delivery is very much typical of other developing countries (Bell, Ithindi and Low 2002; Segall 2003; Okuonzi and Macrae 1995).

10.8. Reorienting Health Service Delivery in South Africa

The literature suggests that complexities and apparent dualities in defining health promotion practice in South Africa have serious implications for health policy development (Ntiyaya et al 1998; Reddy and Tobias 1994; Kelleher 1996; Reddy et al 1995). Although policy and programmatic integration would provide invaluable opportunities to improve oral health-related service delivery, this is insufficient. A shift in paradigm is required to challenge the traditional delivery of oral health promotion and other related primary health care efforts (Blinkhorn 1993; Corrigan et al 2001; Forrest and Miller 2001a and b; Hobdell et al 1997;

Myburgh 1999; Hobdell et al 2003). The current delivery of health promotion services is disorganised and fragmented in South Africa despite concerted efforts to integrate district health services. There is an urgent need to restructure management in health promotion and to redefine health priority settings. The results indicate that each of the identified health directorates have a built-in health-promoting component that focuses on risks to health as a result of lifestyle practices. These practices include unhealthy behaviours such as substance abuse, dietary intake, unhealthy sexual encounters and trauma. It is therefore proposed that a combination of the Healthy Lifestyle Approach and the Integrated Common Risk Factor Approach (Sheiham and Watt 2000) to health promotion might provide a foundation to establish a committed and functional health management structure in South Africa. A directorate on Comprehensive Healthy Living could function at all levels of the health system (from national to district levels) and could embrace all health programmes involved in this approach. Thus the health promoting component of oral health, maternal, child and women’s health, nutrition, HIV/Aids, chronic diseases and disabilities and mental health (programmes addressing substance abuse are located here) would be located within this directorate (Figure 10.1.). This directorate could also focus on advocacy for health action, mobilising and strengthening community action, creating supportive environments and empowering communities on health-related social development. The directorates in health promotion could be absorbed into this management structure.

Figure 10.1. Illustrating a Health Management Structure on Comprehensive Healthy Living (CHL)



Both the literature and the research findings highlight the impact of limited resources on health care in South Africa (Barron 2000). An identified directorate or management structure on Comprehensive Healthy Living would be part of allocative health planning and would therefore qualify for a dedicated budget. Issues of resource allocation, which includes financial and human resources, could thus be directly addressed within this management. It would also be easier to communicate with management in different health areas within the same directorate or management structure. Furthermore this directorate or management could network with all other directorates involved in social and economic development. Provincial and district management structures on Comprehensive Healthy Living would need to consider local needs and appropriateness of programmes, infrastructure and capacities for service delivery in addition to the current inequities in health service provision.

Partnerships in health care could also be developed with the private sector and all other stakeholders in community development (Scott 1999; Walt and Gilson 1994). Thus the prevention of disease and promotion of healthier lifestyles is integrated into overall community and social development. This comprehensive approach to oral health promotion could increase potential health gains and accountability as opposed to the current (dis)organisation in public health promotion in South Africa.

10.9. Evidence-Based Oral Health Care versus the Research Findings

The next objective of the research was to determine if proposed strategies and interventions on oral health promotion are consistent with published, evidence-based research. The policy on community water fluoridation is an example of a policy that has entered legislation but has still not been implemented.

10.9.1. Implications for Community Water Fluoridation in South Africa

While the impact of community water fluoridation cannot be overstated, its relevance as a national programme must be re-assessed. The results of the National Children's Oral Health Survey 1999-2002 suggest that dental caries rates are not uniformly distributed on a geographical basis within the provinces (Department of Health 2003b). If the primary reason for implementing community water fluoridation is to decrease the incidence of dental

caries then the question that needs to be addressed is whether there is a need for community water fluoridation to be implemented in all municipalities. This question is pertinent because the literature does provide supporting evidence on the diffused effects of community water fluoridation (Griffen et al *cited in* Coulter, Moss and Newman 2001). Furthermore the implementation is proposed in municipalities that already have existing infrastructures in terms of access to safe drinking water (Government Gazette Number 18960, 1998). Historical burden to inadequate living conditions including access to safe drinking water and sanitation is still being addressed in many parts of South Africa (Coulson 2000; Rothberg, Magennis and Mynhart 1999). Implementing community water fluoridation in better-resourced communities while excluding disadvantaged communities could further perpetuate existing inequalities in health care in South Africa.

The issue of community water fluoridation raises another pertinent debate between population-based strategies and the need for equity in health service provision that is directed to local health needs. The research has shown that applying population-based strategies to community water fluoridation would not address the issue of equity in oral health service provision and this would be a far more important issue to tackle in terms of addressing historical imbalances in oral health care. Fluoridated toothpaste that is freely available at a cost that disadvantaged communities can afford would be another viable method of introducing additional fluoride uptake to communities in South Africa. Therefore the value of subsidised fluoridated toothpaste is an issue that needs to be entered into policy discussions as an alternate to community water fluoridation.

10.9.2. Fissure Sealants and the ART Technique

Fifty percent of provincial oral health directorates indicated that fissure sealant programmes are conducted in their respective provinces. Fissure sealant applications are effective against dental caries but this intervention would require periodic re-application (Parnell et al 2003; Louw et al 2002; Ferguson 1998; Morgan et al 1997; Ferguson 1998). The need for re-application, the lack of human resources and technology therefore challenges the selection of fissure sealant programmes as a viable population-wide strategy in South Africa.

The Mpumalanga Provincial Directorate of Oral Health was the only respondent to mention the use of the ART technique in service provision. The ART technique is considered a viable option in addressing early caries prevalence in both developing and industrialised countries (World Health Organisation 2004; Frencken, Makoni, Sithole 1996; Helderma et al 1999; Louw et al 2002).

10.9.3. Dietary Implications for Policy

The literature suggests that while it may be difficult to show an exclusively direct causal relationship between sugar consumption and dental caries, the frequency and concentration of sugar consumption is considered a confounding factor in the development of dental caries (Sheiham 2001; Burt and Ismail *cited in* Sheiham 2001; Watt et al 2001b; Duggal and van Loveren 2001; Ismail, Tanzer, Dingle 1997). Studies indicate the need to develop country-specific and community-specific strategies for reducing the amount of free sugars towards the recommended maximum of no more than 10% of daily energy intake (Moynihan and Petersen 2004; Petersen 2004a).

One success story for oral health policy integration has been reported since the initial research was completed (Steyn, Myburgh and Nel 2003). The inclusion of a dietary guideline on sugar consumption was finally approved by the National Directorate for Nutrition and reflects a direct response to the National Oral Health Strategy (Department of Health 2004) and may provide a case study for replication for other initiatives in oral health policy integration. Although Steyn, Myburgh and Nel (2003) make a compelling argument for including a food-based dietary guideline on reduced sugar consumption in South Africa, their postulations highlight other policy implications. The limitation of this argument is that a proposed reduction in sugar consumption would have to be expressed in relative terms and this could result in confusing health messages. Therefore it is necessary to not only advocate for oral health proposals to be included in other health policy agendas but to ensure that health messages are unambiguous.

Research suggests that isolated individual interventions directed towards modifying specific oral health-related behaviours have not been successful in achieving long-term changes in behavioural practices (Locker 2000). Thus there is a need to develop integrated and collective health action through the development of committed healthy public and social

policies (WHO 1986; WHO 1997). The availability and cost of healthier foods as well as providing information on food labels are all seen as important influences on food choices (Watt and Fuller 1999; van Loveren and Duggal 2001).

10.9.4. Oral Health Awareness Strategies

The research findings suggest that there is enormous reliance on health education and oral health education efforts to address community health needs in South Africa. There is general agreement in the literature that oral health education could be effective in instituting changes in people's knowledge but that behavioural changes require more than just information (Kay and Locker 1998). The literature also suggests that long-term behavioural changes would require collective and cohesive health action (Leake, Main and Woodward 1997; Schuller 1999). Therefore the design of oral health education programmes is very important because it is unrealistic to expect a single campaign to reach all sections of a community or population (Tones and Tilford 2001). There should be a responsibility for conveying accurate information and using appropriate methods according to social, cultural and environmental considerations, and through the promotion of self-esteem and autonomy, non-coercion and voluntarism (Hugo 1996; French 1990).

10.9.5. Information, Education and Communication

An evidence-based review of printed educational material suggests that its impact on behavioural changes are minimal and of uncertain clinical significance (Freemantle et al 1998). It is therefore necessary to pre-test educational material during the planning phase to ensure that the health worker utilises the information presented on a regular basis for health presentations and motivations (Blinkhorn 1993). Advocacy for integrated oral health promotion action could include political, social, cultural and economic support for addressing oral health-related risks, specifically lifestyle induced health risks. This could include addressing unhealthy behavioural practices such as smoking and its impact on periodontal disease, heart disease and lung cancer; alcohol consumption, the oral implications of foetal alcohol syndrome; and the oral implications of early detection, clinical diagnosis and support for HIV/Aids infected people (Hujoel et al 2003; Etienne and Merchant 2001; Heslin et al 2001). Health policy initiatives could provide stronger support for these integrated district health efforts.

Evidence-based oral health research does not support mass media as an effective strategy in oral health promotion initiatives (Blinkhorn 1993; Rise and Sogaard 1988). However the media could be influential on policy debates. Mass media could therefore be used as a public health tool to advance social or policy initiatives and could thereby strengthen community action (Beaglehole and Bonita 1997; Dibb 1996). Mass media could also be utilised for setting health agendas on oral health-related priorities, mobilising support and action for community water fluoridation and emphasising the need for policy commitments and solutions.

10.10. Practicality of implementing Evidence-based Policies on Oral Health Promotion

Despite limitations in research techniques and poor quality in study designs, evidence-based findings in oral health provide a viable alternative to the current prescriptive and disorganised delivery of oral health promotion services in South Africa. This section focuses on the last objective of the research, namely, to examine the practicality of implementing evidence-based oral health promotion policies in South Africa. This section also examines the overall barriers to implementing integrated health policies and presents some practical ways of improving health policy implementation efforts.

10.10.1. Barriers to implementing Integrated Health Policies

The literature has established that differences in provincial infrastructures and capacities to deliver and sustain health action are important considerations in programmatic integration (Barron 2000; Shung King 1999). The level of knowledge in oral health promotion, the availability of human resources, the willingness of service providers to take on more responsibilities and the health priorities of a particular province, region or district will all have an impact on the implementation of integrated health programmes (Gugushe 1998; Singh 2000; Pillay 1999).

Health policies have the potential to raise awareness on the necessity for specific health interventions but there is no guarantee that such a policy can be effectively translated and implemented at district level. The vagueness in some of the provincial health policy documents raises concerns for the successful implementation and more importantly, sustainability of district health services.

The limitations of the Health Impact Assessment (HIA) and the importance of information-related and value-related barriers was also highlighted as other possible reasons for policy failure (Krieger et al 2003; Lavis, Farrant and Stoddart 2001). Overcoming the barriers on policy information pertaining to health consequence cannot guarantee an effective translation into practice (Krieger et al 2003).

Evidence-based health policies could also face the same barriers as integrated health policy efforts (Van den Ven and Aggleton 1999). A well-expressed, evidence-based health policy that supports the overall philosophy of health care in South Africa, and in essence appears to be a perfectly defined policy, could still face barriers in the implementation process. Gaps in the communication process within the health system could impede the implementation of these policies. Evidence-based health policies could still fail even if communication gaps are addressed. The role of health service providers has been outlined and it is important that these providers understand and support health policy efforts (Walt and Gilson 1994).

A poorly defined policy on the other hand could be easily implemented if there is sufficient support. Political, economic and social influences could support the policy implementation process even though the policy content is undesirable (Walt 1994). All these factors mentioned highlight the need to develop health policies that focus on oral health promotion-related efforts within the social, economic and political realities in health care provision (Speller 2001; Raphael 2000).

10.11. Oral Health Promotion Planning in South Africa

There is also a need for a paradigm shift in the way policy is developed in South Africa. Instead of focusing exclusively on vulnerable populations, there is a need to focus on developing and evaluating whole social and organisational systems as a strategy to implementing and sustaining health interventions (Harrison 1999).

10.11.1. National and Provincial Policy and Planning Efforts in OH Promotion

The general strategies in oral health promotion include the need to identify and develop mechanisms that would ensure that oral health promotion activities are in response to the underlying determinants of ill-health. This would require integrated oral health promotion

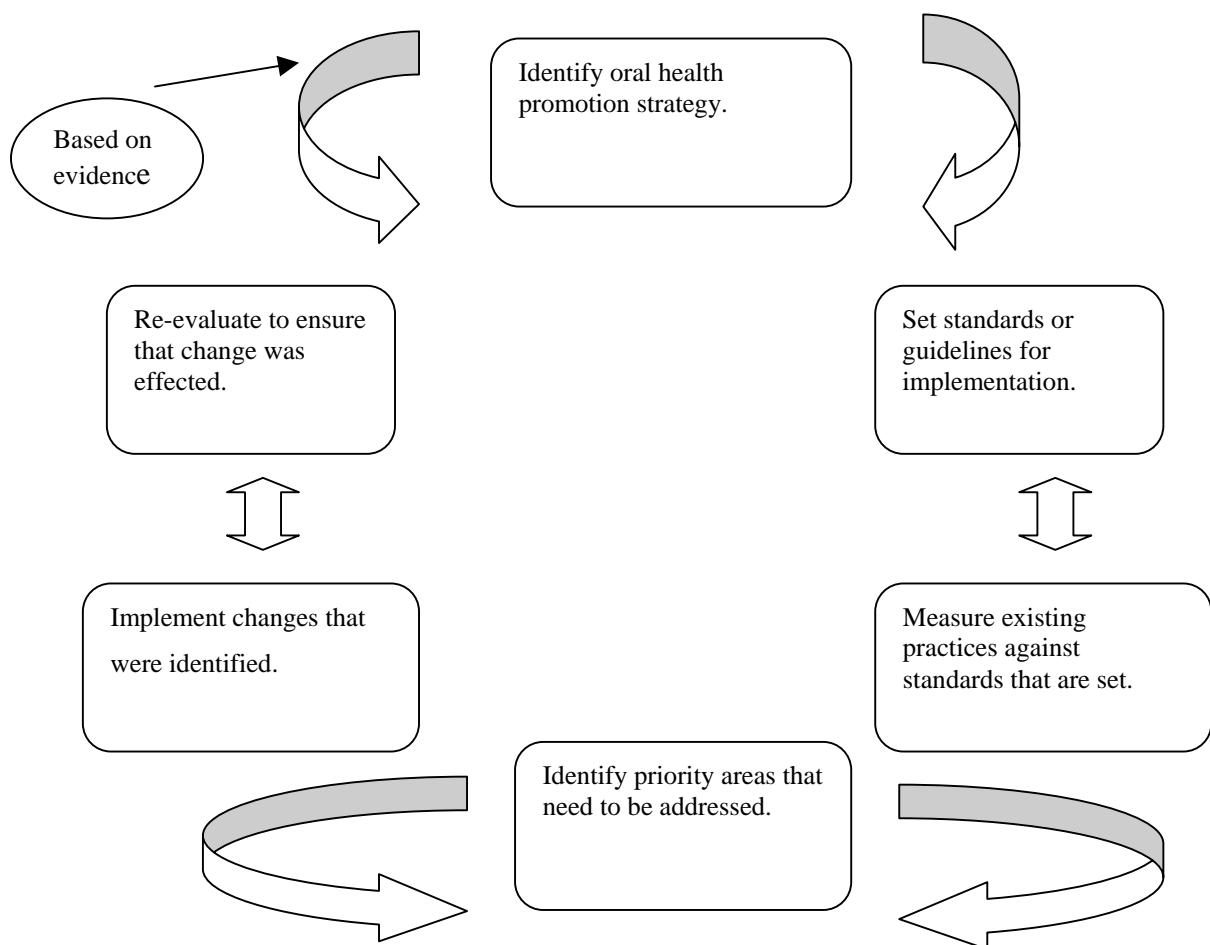
efforts both from a policy and programmatic perspective. The influences and barriers to health integration need to be identified and addressed through appropriate settings. There is also a need to develop effective evaluation strategies that could examine the inputs, outputs, process, impact and outcomes of oral health promotion activities. Apart from ensuring that oral health promotion interventions and strategies are integrated, there is also a need to ensure that all health interventions are grounded and evaluated within the social systems that they occur in.

Policies aimed at individual behavioural changes amounts to victim blaming. It is therefore important to develop specific policies that are directed to industry in an attempt to create supportive environments. These specific strategies in oral health promotion include the need to develop policies on integrated nutrition at macro, meso and micro levels of the health system. These policies need to address the impact of non-milk extrinsic sugar consumption through an integrated approach in dietary intake as opposed to isolated risk factor approaches. There is a need to develop macro policies addressing non-milk extrinsic sugars in food manufacture. This would also include the need to advocate legislation on regulating food standards, pricing and nutrient labelling. It is important to advocate the removal of non-milk extrinsic sugars from infant medication and baby foods. It is also necessary to advocate a reduction of sugar content in confections and drinks. It is also important to network with other countries to develop global strategies on addressing the impact of diet on oral diseases. Catering policies for hospitals and other government institutions could be developed. There is a need to provide subsidies for or regulate the manufacture and distribution of fluoridated toothpaste in South Africa.

Apart from a focus on industry there is also a need for the following in oral health promotion efforts advocate the oral implications of smoking into national and district campaigns. There is a need to engage in vigorous media communications and foster political support for creating supportive environments in unhealthy behavioural practices. It is important to advocate oral health promotion inclusion in the development of health promoting school policies. Oral health promotion could play an important role in developing policies in school nutrition, life skills and creating supportive and healthy environments. Most of oral health policy focuses on mothers, children and adolescents. Apart from the need for universal access to emergency relief of pain and sepsis, there is a need to include other vulnerable groups such as geriatric rehabilitative oral care. Barmes (2000) points out

that policies for the elderly are generally neglected in favour of young children. The elderly would form an important part of the continuum of health care. The success of policies to address oral health in children and the youth would thus reflect in the care for the elderly. The following model (Figure 10.2.) depicts one way in which evidence-based findings could be applied to oral health priority areas in order to develop appropriate strategies for implementation. This cyclical approach to evaluating programmes on oral health promotion could help to ensure that oral health-related priorities are identified and addressed against a set of standards, norms or guidelines (Gray 1997). An evidence-driven programme would then identify the health priority areas and devise appropriate strategies (Figure 10.1.). Guidelines or standards would then be set for implementation or existing practices could be measured against these guidelines. There is a need to implement the changes that were identified and re-evaluate the programme for effectiveness and efficiency, thus demonstrating the importance of process evaluation.

Figure 10.2. An Evidence-Driven Oral Health Promotion Programme



Adapted from Gray (1997). Page 100.

However it should be noted that developing an evidence-based oral health promotion programme would not be a simple process in practice. External and contextual influences on oral health promotion would also impact on service delivery (Minkler 1989). These influences could include the attitudes of service providers towards evidence-driven health programmes as well as the social perceptions and expectations of communities (Van den Ven and Aggleton 1999). Budgetary constraints could also threaten the sustainability of evidence-based programmes on health promotion (Speller 2001).

Oral health planning has recognised the need for oral health to be integrated into the social context of health care. Perhaps one of the greatest limitations in oral health and oral health promotion is the lack of motivation to be innovative and to assume leadership roles in health development in general. This lack of motivation could be due to a lack of social science skills that is visibly absent in dental training. This requires a paradigm shift in the very ethos of oral health care and how we view oral health and its contributions to social development. The next section evaluates the strengths and weaknesses of the study.

10.12. Strengths and Weaknesses of the Study

The analysis of health policy is an inherently complex research process and the conceptual model used here illustrates the value of a multi-level approach, incorporating both quantitative and qualitative research techniques. This section presents an evaluation of the strengths and weaknesses of the study methods, including the strengths and limitations of the conceptual framework.

10.12.1. Strengths of the Study

The conceptual framework for data collection and analysis was useful in providing a well-defined direction for the research area. The framework was also useful in providing diversity in data analysis and interpretation. The conceptual framework helped to contextualise oral health promotion within other health policy efforts and within general health decision-making processes. The preliminary process of setting up interviews, defining the purpose of the study and conducting telephonic follow-ups have indirectly acted as an advocacy tool in creating awareness to the value of oral health promotion-related activities in South Africa. The framework provided a systematic problem-solving approach to health policy analysis.

Apart from problem solving, the framework could also be used to identify current systems problems within health service provision. Thus the framework could assist health planners and decision-makers to identify if health policy is being effectively translated at various levels within the health system. One could also identify the barriers to that would inhibit effective policy translation. Like any research it has provided a baseline and several indicators against which to compare future developments in health policy and oral health promotion elements in particular.

This systematic approach to health policy development would ensure that health policy-making is grounded in an understanding of the realistic consequences of health policy efforts and its impact on health provision. Although this framework has been built to examine policy and decision-making within the public health services, it can also be adapted to include public-private health care analysis, public-non-governmental and private sector health care analysis.

The study developed models (Figures 10.1. and 10.2.) to help re-structure health service delivery and to guide evidence-based oral health promotion activities. These models of health service delivery could be applied to other relevant areas of health care provision.

The study has also generated a list of core definitions in oral health promotion, the most important of which is the definition of healthy public oral health policy. This definition challenges the current belief that oral health promotion efforts need to constantly identify ways of fitting into general health policies, strategies and interventions. A healthy public oral health policy implies that oral health promotion is fundamentally capable of setting trends in health and social development.

10.12.2. Weaknesses of the Study

The study identified participants at various levels of the public health system to provide different perspectives on oral health promotion-related policy and planning. However the study did not examine the possible impact and influence of the private sector on oral health promotion. The research findings suggest that the private sector could provide valuable support for community oral health promotion and a follow-up study needs to explore realistic public-private partnerships in oral health promotion in South Africa.

The study did not focus on the role of trade and industry in oral health-related policy development. The literature has established the value of public health policy as an advocacy tool to regulate the commercial industry on issues that impact on oral health such as sugar consumption. Furthermore this limitation was also noted in health policy efforts in South Africa and further research is required in this area to tackle the impact of industry on oral health promotion.

The research used the inductive approach to allow for the creation of new dimensions in oral health-related policy development and planning. However this approach also has its limitations. Issues such as barriers to health policy implementation and district health integration were not extensively uncovered. The study focused on identifying the barriers to effective policy implementation, but did not focus on whether these identified barriers operated independently of other barriers or was of relative importance in comparison to others. Thus the data obtained from the questionnaires and interviews did not yield in-depth information on the barriers to policy implementation. The study used on a range of research instruments and therefore did not focus exclusively on the responses obtained from qualitative data analysis. However an in-depth analysis of the barriers to effective policy implementation would be required in a further study, given the complexities in policy translation in South Africa.

Apart from the conceptual framework, the research process also included some fundamental assumptions, each of which presents a substantial barrier to effective service delivery in South Africa. One assumption was that inclusion of oral health promotion proposals or strategies could help to improve oral health status by raising awareness for health action. The results suggest that oral health promotion issues first need to be placed onto other key policy agendas. This needs to be done at a level where health action can be initiated. The results further suggest that this process is currently fragmented and that there is little evidence of success rates in policy integration. The next assumption was that if oral health promotion activities were properly executed then these interventions would contribute to improved oral health status. The research findings suggest that the content, nature and process of oral health promotion activities, together with the availability of resources and capacity building, are urgently required if current strategies are expected to impact on health status. The third assumption examined whether improvements in community oral health could be achieved without oral health promotion being expressed in policy statements. The

evidence suggests that certain oral health promotion activities are carried out despite these activities not being explicitly outlined in national and provincial health policy documents. These assumptions could not be adequately addressed in this research. Thus further research is required to uncover the complexity between policy proposals and programmatic practice in South Africa.

Another weakness of this framework is that its detailed components are bound to the South African health care context, but many of the key questions will retain their value in any health system in which such an analysis is carried out. Van den Ven and Aggleton (1999) rightfully conclude that the strongest basis for evidence comes from a variety of research investigations using diverse research techniques and employing different theoretical perspectives. Despite its limitations, the use of the conceptual model has helped to gain a better understanding of the complex process in health policy development.

10.13. Suggestions for Future Research

The following suggestions are included for future research in health policy studies. There is a need to focus on the impact and influences of a changing society on health policy development. There is also a need for further analysis of the dynamics in health decision-making in relation to health policy development and planning. These findings could then be used to bridge the communication gap between the different levels of health policy development.

10.14. Dissemination of Results

The research findings will be disseminated through the following mechanisms:

- Summarised policy briefs will be presented to key decision-makers at national and provincial levels.
- Efforts are being made to have the research findings published in a peer-reviewed journal.
- A copy of the abbreviated research report is available on Health Systems Trust's website: www.hst.org as part of the research-funding obligation.

10.15. Strategies to ensure that Policy Rhetoric does get implemented

Some practical suggestions are included to ensure that a supportive environment is created for policy rhetoric to be implemented. There is a need to increase political commitment to district health integration efforts through local legislation. Health advocates need to ensure that health integration efforts are advocated onto other developmental policy efforts such as social and economic policies. There is a need to increase communication between provinces and the national levels of health provision. Provincial and district health managers need to be co-opted onto the national health policy-making agenda through the formation of sustainable task teams.

Thus the relevant stakeholders would be an integral component of the health policy process and not simply be asked to comment on completed policy efforts. Health policy development needs to be facilitated through an integrated effort and not through a top-bottom or bottom-up approach. This interdependence requires active participation at all levels of policy development. There is a need to recognise the impact of micro-politics on policy implementation. Effective strategies need to be built to address these influences.

In summary the research findings indicate that oral health promotion is not given prominence in health policy development or implementation in South Africa. There is no evidence to suggest that current strategies in oral health promotion activities have been successful in achieving improvements in community health. Strategies on awareness to oral health-risks would however, need to consider the social, economic and political barriers to achieving improved in oral health. One of the marked limitations in health policy development is that there is no distinct link between public and private oral health service delivery in South Africa. The value of partnerships involving public-private, public-public and public-non-governmental organisations has also not been explored in existing health policy efforts. The process of integrating health services has not been clearly defined in the identified health policy documents. The research therefore suggests that it would be very difficult to integrate and sustain current efforts on oral health promotion within other district health activities unless there is true re-orientation of service provision. Furthermore the impact of process and professional power must be taken into account. There is no evidence to indicate the use of evidence-based research in oral health planning at provincial level. There is also an urgent need to include a well-defined evaluative component in the process

of health policy development so as to monitor its appropriateness and progress in relation to policy proposals. The final chapter focuses on the conclusions drawn from the research findings and attempts to provide an overall picture of the synthesised results in comparison to the study's aims and objectives.

Chapter 11

Conclusion and Recommendations

The research findings have provided clarity on the study's original aims and objectives. The first and second objective of the study was to identify oral health promotion proposals and strategies in specified health policy documents and to examine and locate the form and context of oral health promotion-related activities within these documents. The research evidence suggests that most health policy development in general, fails to integrate elements or strategies that are known to improve oral health in South Africa. There are distinct gaps between policy formulation and implementation of programmes. Oral health promotion is clearly not enjoying much support or prominence and is almost entirely absent from policy and programmes, with few exceptions. Conversely the results indicate that some integrated health awareness activities are in existence but that they are not based on any existing policy statement.

The third objective of the research was to determine if policy proposals on oral health promotion are consistent with evidence-based research literature. The inclusion of community water fluoridation was found to be one meaningful example of an evidence-based, population-wide strategy that is included in oral health-related policy efforts at national level. However this strategy is yet to be implemented. Thus lip service is given to evidence-based strategies because the actual capacity to deliver these services was not found.

The last objective of the research was to determine the practicality of implementing evidence-based oral health promotion policies. Evidence-based health policies face constraints in implementation because issues on resources, technical support, provincial capacities and community support are not adequately addressed in policy or practice.

The main aim of the study was to examine the potential for policy proposals to contribute to improved community health. The study indicates that potential opportunities to integrate health service delivery have not been adequately explored. Rhetorical statements on primary health care philosophies, and commitments to integration and multi-sectoral collaboration are universally included in the documents examined. However this rhetoric has not been

translated into pragmatic policy formulations or implementable programmes and strategies. This creates serious doubt on whether these proposals could contribute to improved community health. The research findings suggest that the health policy process for the various health disciplines remains a vertical process despite the inclusion of these rhetorical statements. Thus the study clearly shows that the research hypothesis was not true.

The assumption on the value of getting key health decision makers involved in the policy development and planning of oral health promotion services was supported by the research findings. There is a clear need for a specific strategy to link policy makers across sectors, departments and provinces to facilitate integration of service provision where it is known to be capable of improving health, including oral health. The research findings suggest that a re-orientation of health service delivery would be a more viable solution to the current challenges in health service provision in South Africa. The findings strongly support a re-organisation of health promotion service delivery from national to district health level.

A serious rethink on the importance of health promotion and oral health promotion seems to be required. Even the most technically correct policy documents, written in politically correct language, requires a carefully thought out implementation process, if the community is finally to see the health gains promised. A further understanding of the multidimensional influences is required in all other aspects of health care in South Africa to bridge the gap between policy and practice.

Recommendations

- ❖ Opportunities do exist for oral health promotion to be effectively integrated into other key health policy development efforts. There is however a need to consider the context, content and appropriateness of oral health promotion services in South Africa.
- ❖ There is also a need for a clear strategy to link policy makers across sectors, departments and provinces to facilitate health policy and programmatic integration. This would require political support and advocacy.
- ❖ It is important that effective evaluation strategies are developed to measure inputs, outputs, process, outcomes and impact of oral health promotion services within the social system.

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Appendix 1

SOUTH AFRICAN NATIONAL ORAL HEALTH STRATEGY

PREAMBLE

Most oral diseases are not life-threatening but affect almost every individual during his and her life time, resulting in pain and discomfort, expenditure on treatment, loss of school days, productivity and work hours, and some degree of social stigma. Oral conditions are important public health concerns because of their high prevalence, their severity, or public demand for services because of their impact on individuals and society.

Oral disease levels appear to be increasing in major sectors of the South African population, especially the underserved, disadvantaged and urbanising communities.

Basic health and social services are a human right and oral health is a significant component thereof. Individual oral health treatment options are not available to most people, with few oral health promotive and preventive activities. State dependent people should have access to basic oral health treatment services. Oral diseases are largely preventable and therefore oral health promotion and primary prevention are a top priority.

Although national goals are of some value it is recognised that communities and the circumstances in which they live are extremely diverse. This strategy also provides guidelines to oral health care workers at district level to make the best decisions on what oral health strategies to implement. It allows for the most effective oral health interventions to the specific needs, infrastructure and resources available to each community.

AIM

The aim is to improve the oral health of the South African population by promoting oral health and to prevent, appropriately treat, monitor and evaluate oral diseases.

NATIONAL, PROVINCIAL AND DISTRICT FUNCTIONS

These functions are in the National Health Bill, 2002.

Specific oral health functions of importance at each level are as follows:

National

- National oral health strategy process (formulation, implementation and review)
- National water fluoridation programme and alternative fluoride measures (formulation, implementation, monitoring and evaluation in collaboration with the National Fluoridation Committee)

- National norms and standard for oral health service delivery. Refer to the following documents:
 - A Comprehensive Primary Health Care Service Package for South Africa
 - The Primary Health Care Package for South Africa – A set of norms and standards.
 - National Norms, Standards and Practice Guidelines for Primary Oral Health Care
- Essential national oral health research (support executing such research)
- National oral health data set:

For monitoring and evaluation, specific data has to be collected from the District Health Authorities via the Provinces to the national Department of Health (Appendix 5)

- National and international oral health matters liaison

Liaise with health related national associations, statutory councils, training institutions, media and public as well as internationally with the World Health Organization, International World Federation, US Centers for Disease Prevention and Control etc.
- Integration of oral health into other health programmes

e.g. HIV/AIDS, Maternal and Women’s Health, Child and Adolescent Health, Nutrition, Chronic Diseases, Disabilities and Geriatrics.

Provincial

- Provincial oral health operational strategy (formulation, implementation and review)
- Prevention of oral diseases and promotion of oral health as priority:
 - Involved with the implementation of water fluoridation and alternative fluoride programmes
 - Identify and develop collaborative approaches to initiatives that address oral disease common risk factors such as tobacco, sugar, alcohol, unsafe sex, chronic medication, violence and vehicle accidents.
 - Raising the awareness of oral disease risk factors and appropriate means of oral self care.

- Integrate oral health strategy elements and strategies into programmes and policies of all sectors that have an impact on community health like maternal and women's health, child and adolescent health, nutrition, chronic diseases, disabilities and geriatrics.

- Co-ordination of the oral health care system in the province
- Planning, supporting and evaluating district oral health services
- Collection of data from districts for own and national use
- Implement national norms and standards for oral health service delivery

District

The communities and the circumstances in which they live are diverse. Prepare a customised set of intervention strategies and targets selected according to the specific needs, determinants and other circumstances for each community. Match oral diseases with the best intervention strategies and available resources.

- As a minimum ensure:
 - ❖ the provision of appropriate disease prevention and health promotion measures,
 - ❖ the provision of basic treatment services,
 - an examination
 - bitewing radiographs
 - scaling and polishing
 - simple (1-3 surface) fillings
 - emergency relief of pain and sepsis, including dental extractions
 - ❖ the implementation of cost-effective and evidence-based strategies
- The following steps must be taken to ensure that an appropriate oral health plan is devised for each health setting:
 1. Assess the oral health condition of the community (Appendix 1)

2. Prioritise the problems identified according to their prevalence, severity and social impact (Appendix 2)
 3. Identify the resources available (Appendix 3)
 4. Select the most appropriate interventions (Appendix 4)
 5. Implement, monitor and evaluate the selected strategies.
- Collect appropriate data for Provinces and the national Department of Health.
 - An adequate referral system should be established for advanced and specialised oral health services

NATIONAL GOALS FOR 2010

- Increase PHC-facilities, through the provinces, delivering oral health care services by ensuring that these services are being (made) available in the following order of priority:
 - District Hospitals
 - Community Health Centres, and
 - Clinics or Mobile Dental Units or Portable Dental Units
- Increase the percentage of children at age 6 who are caries free to 50% (in line with WHO 2010 goals).
- Reduce the mean number of Decayed, Missing and Filled Teeth (DMFT) at age 12, to 1.0 (in line with WHO 2010 goals).
- That 60% of the population on piped water systems receive optimally fluoridated water.
- That 100% of clinics offer the primary oral health care package.

Resources

Human Resources

Oral health human resources will form part of an integrated health human resource plan.

Financial Resources

The national Directorate: Oral Health has its own budget.

Oral health at provincial level should have cost centres for budgeting purposes.

They have to, according to the MTEF, budget for oral health service delivery. Financial management must comply with the PFMA.

For the upgrading and refurbishing of oral health facilities and equipment, provinces have to budget through the MTEF, according to the needs determined by the provincial oral health programme managers in each of the provinces.

The provinces will be responsible for the capital expenditure and appropriate equipping of dental facilities in health facilities.

Oral health patients will be charged for services rendered according to the Uniform Patient Fee Schedule.

Physical Facilities

In the building of clinics and upgrading programme, oral health programme managers must be consulted at the planning stage. All accommodation plans and needs for public oral health services will be dealt with in accordance with the health facilities planning directives.

Transport

Appropriate transport should be made available where necessary for oral health service delivery.

LINKS BETWEEN NATIONAL AND PROVINCIAL HEALTH AUTHORITIES

In order to facilitate better communication between the national and provincial health authorities it is important for:

- The national Directorate: Oral Health to meet with the Oral Health Programme Managers of the provinces at national office at least three times annually.
- The national Directorate: Oral Health to visit the provinces to assist and guide provincial oral health services.

Strategy Review for Development

The national Department of Health is required to convene a strategy review panel annually, to assess the implementation and outcomes of this strategy, and make recommendations accordingly. It is also responsible for collating the information provided by provincial health authorities and the regular dissemination of summary data and reports on the review process.

Assessing The Oral Health Of A Community

Data for oral health programme management must be gathered at the level where programme implementation and decision-making takes place. They provide a basis for planning, monitoring and evaluation.

Appendices One and Two contain some examples of questions and formats to assist you in selecting questions and relevant information for a local oral health appraisal process. Adapt or restructure similar data sheets to suit your local circumstances.

When all such local data are aggregated then they also provide justification for the allocation of financial and other resources to the oral health sector. To be useful for this purpose such data must reflect community priorities in oral health. For this purpose, *the 12-year-old DMFT, is rarely adequate alone.* Of far greater relevance, is the number of people suffering from toothache at any one time, or the number of days of school or employment lost because of oral ill-health. These types of data show constituents' concerns, are measurable and are understandable by those whose support for specific policies is essential.

Sample questions to assess the local impact of oral diseases											
1.	Age	<input type="text"/>									
2.	Gender	<input type="checkbox"/> Male	<input type="checkbox"/> Female								
3.	Do you have anything wrong with your mouth at this moment or have you experienced any problems with your mouth in the past month?	<input type="checkbox"/> Yes <input type="checkbox"/> No									
4.	If yes, which of the following conditions best describes what you think was wrong?	<input type="checkbox"/> Toothache <input type="checkbox"/> Difficulty with chewing <input type="checkbox"/> Pain <input type="checkbox"/> An ulcer/sore <input type="checkbox"/> Appearance of teeth <input type="checkbox"/> Bad breath <input type="checkbox"/> Bleeding gums <input type="checkbox"/> Difficulty opening/closing your mouth <input type="checkbox"/> Cold sore <input type="checkbox"/> Difficulty in speaking <input type="checkbox"/> other...									
5.	Have you been treated for anything wrong with your mouth in the past month?	<input type="checkbox"/> Yes <input type="checkbox"/> No									
6.	Have you experienced any pain from your teeth or mouth within the past month?	<input type="checkbox"/> Yes <input type="checkbox"/> No									
7.	If yes, for how long have you experienced this pain?	<input type="text"/> Days <input type="text"/> Weeks <input type="text"/> Months									
8.	How bad was the pain?	<input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe									
9.	The impact of the pain: The pain stopped me from	1. <input type="checkbox"/> Eating. Drinking or chewing 2. <input type="checkbox"/> Sleeping 3. <input type="checkbox"/> Going to school or work 4. <input type="checkbox"/> Doing my normal daily activities									
10.	What did you do to stop or control the pain?	1. <input type="checkbox"/> Nothing 2. <input type="checkbox"/> Took pain pills or medicine 3. <input type="checkbox"/> Visited the doctor/dentist or clinic									
11.	What did the health worker/clinic do?	1. <input type="checkbox"/> Nothing 2. <input type="checkbox"/> Gave me medication 3. <input type="checkbox"/> Extracted a tooth 4. <input type="checkbox"/> Other.....									
12.	Estimated DMFT	<table border="1"> <thead> <tr> <th>D</th> <th>M</th> <th>F</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>		D	M	F	Total	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
D	M	F	Total								
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>								
<i>Etc...</i>											

Few if any accurate data exist for regions in South Africa on the impact of oral diseases on peoples' daily lives (pain, appearance, comfort, eating restrictions, bad breath etc). It is recommended that as part of the general data gathering process simple community based surveys to determine the frequency of oral health problems should be carried out. These data should be gathered using a rapid appraisal approach such as the questionnaire shown in the box above.

Priority Oral Conditions And Determinants

Most oral health programme managers have a rough idea of the oral health conditions prevalent in their local communities. National and province-wide surveys are complex, expensive and take a very long time for the results to return to local level, so a simpler and quicker form of assessment is required to verify the manager's rough estimate.

Step One

Interview a number of reliable community informants such as clinic staff, general practitioners and others, on their perception of how common (the prevalence) and how serious (social impact) the community views the conditions listed below. The accepted morbidity and mortality of each condition is given.

Indicate your assessment of Social Impact and Prevalence as High, Medium, Low or None in the blocks provided.

The prevalence and severity of oral conditions

Oral condition	Social Impact	Prevalence	Morbidity	Mortality
Bad breath			Low	None
Benign oral tumours			Medium	Low
Bleeding gums			Medium	None
Congenital abnormalities			Medium	Medium
Early childhood caries			High	Low
Fluorosis			Low	None
Harmful practises			Medium	Medium
Loose teeth			Low	Low
Mouth sores			Medium	Medium
Noma			High	High
Oral cancer			High	High
Oral HIV			High	High
Oro-facial trauma			Medium	Medium
Pain			High	Low
Tooth decay			Medium	Low
Tooth loss			Medium	Low
Other..				

Note: This is only an example. You might add other conditions or delete some of these in your own list.

Step Two

Rank the listed conditions depending on how many times they score a High or Medium rating in their row of the table. Those conditions you move to the top of list on this basis will represent the priority oral health conditions in your particular community.

Step Three

This same group of community informants can assist you to identify the most prominent determinants or risk factors for oral disease present in their community.

Factors known to affect the risk of oral disease	How widespread is this?
Tobacco use	
Sugar consumption > 10kg/year	
Use of fluoride toothpaste	
Access to fluoridated water	
Other e.g. areca or betel nut chewing, disability etc.	

Indicate the responses as High, Medium, Low or None.

Oral Health Resource Assessment

An absence or limitation on resources does not need to mean non-delivery of services but simply means alternative strategies that are less resource or technology-intensive must be provided. For this reason a series of decision table illustrating an approach to matching resources and interventions, is presented in Appendix Four.

However before proceeding to that stage of the process, it is first necessary to determine the level of resources available to implement the interventions you are considering. The following questions are designed to assist you in making this assessment.

		Yes	No	Don't Know
Finance				
1.	Is there an oral health budget?			
2.	Are there sufficient capital funds for equipment & instrumentation?			
3.	Are there sufficient recurrent funds for salaries and materials?			
Personnel				
4.	Are there sufficient, appropriately trained personnel?			
5.	Are there sufficient personnel to manage, monitor and evaluate the intervention?			
Equipment and Instrumentation				
6.	Is the equipment available appropriate?			
Infrastructure				
7.	Has a needs assessment been carried out in sufficient detail to select the intervention?			
8.	Are there clear lines of communication to the community?			
9.	Are there clear lines of communication for the acquisition of resources?			
10.	Are there clear lines of communication for reporting?			
11.	If yes, are they functional?			
12.	When some form of transport is necessary, (for people or goods), can you rely on the transport system to provide it?			

Interpreting the responses you get

Number of questions answered YES	Availability of resources
If there are less than six	LOW
If there are between six and nine questions	MODERATE
If there are more than nine questions	HIGH

Decision Tables To Match Oral Diseases With Best Interventions And Available Resources.

After determining local oral disease priorities, each separate condition must be assessed in terms of the intervention options available and the resources or infrastructure necessary to deliver them. Based on this a selection of the best locally viable strategy (S) can be made and implemented. The outcome of each strategy may be measured using selected indicators such as the suggested targets included below each oral disease table.

The Oral Health Targets suggested for each of the listed oral disease or health conditions, are intended to provide a framework for health strategy makers at different levels – national, provincial, and local. They are not intended to be prescriptive. It is hoped these Targets will be mixed and matched according to prevailing local circumstances.

The tables are not provided for every conceivable condition and others will need to be constructed as they become necessary. Future tables might include malocclusion, and orthodontic treatment, occupational hazards such as erosion or abrasion, and others.

Always ask: Is the intervention based on best practice, i.e. is it evidence-based? (Refer to Appendix 6 for some examples).

Pain	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	
Adults	S1	S2	S3	S1= Provide pain relief with analgesics and/or antibiotics (See Essential Drugs List: EDL); extraction S2 = emergency endodontics of anteriors where indicated S3 = emergency endodontics of posteriors where indicated; pulpotomy
Children <6 years	S1	S2	S3	
Suggested indicator				Your target
A reduction in episodes of pain of oral and craniofacial origin of				%
A reduction in the numbers of days absent from school, employment and work resulting from pain of oral and craniofacial origin of				%
A reduction in the numbers of days of difficulty in eating, and speaking/ communicating resulting from pain or discomfort of oral and craniofacial origin of				%
A reduction in the numbers of days of difficulty in participating in social and cultural activities resulting from pain or discomfort of oral and craniofacial origin of				%

Oral HIV	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	
				S1 = Advocacy and support for the health system's response to the HIV pandemic: Universal Infection

Existence of HIV	S1	S2	S2	response to the HIV pandemic; Universal Infection Control; Prevent oral lesions amongst HIV ⁺ people with chlorhexidine; Development of a local protocol for all oral health workers. S2 =S1 + specific treatment of oral mucosal lesions (See current treatment protocols and EDL).
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Suggested indicator	Your target
To reduce the incidence of opportunistic oro-facial infections by	%
To increase the numbers of health providers who are competent to diagnose and manage the oral manifestations of HIV infection by	%
To increase the numbers of strategy makers who are aware of the oral implications of HIV infection by	%

Dental Caries	RESOURCES			INTERVENTION STRATEGIES (S)
	Low	Medium	High	
Severe	S2	S3	S3	S1 = Oral hygiene education, provide analgesics (See EDL), tooth extraction for patients with pulpitis S2 = S1 + Assessment of level of fluoride in water supplies and level of fluoride toothpaste use. Advocate for implementation of water fluoridation or distribute subsidised fluoride toothpaste. S3 = S2 + Fissure sealants, Atraumatic Restorative Technique, Preventive Resin Restorations, Simple endodontic therapy for patients with pulpitis of anterior teeth and extraction of posterior teeth with pulpitis, Use of rotary instruments to place restorations if viable.
Moderate	S2	S2	S3	
Mild	S1	S1	S3	

Suggested indicator	Your target
To increase the proportion of caries-free 6-year-olds by	%
To reduce the proportion of children with severe dental caries at age 12 years, with special attention to high-risk groups within populations, by	%
To reduce tooth loss due to dental caries at ages 18 years by	%
To reduce tooth loss due to dental caries at ages 35-44 years by	%
To reduce tooth loss due to dental caries at ages 65-74 years by	%

Fluorosis	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	
High prevalence of fluorosis	S1	S1	S3	S1 = Identify alternative water source; Advocacy and social mobilisation for de-fluoridation using appropriate technology. S2 = No intervention S3 = Clinical intervention for selected severe cases.
Moderate or low prevalence	S2	S2	S2	

Suggested indicator	Your target
To reduce the prevalence of disfiguring fluorosis with special reference to the fluoride content of food, water and inappropriate supplementation by	%

Chronic periodontal disease	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	
High priority Attachment Loss or pockets >5mm	S2	S2	S3	S1 = self-care and education; Occupational health and safety measures. S2 = S1 + identify those at risk; Advocacy to reduce risk factors like poor nutrition, smoking, immuno-

Low/moderate Attachment Loss or pockets <5mm	S1	S1	S1	suppression; Extraction of teeth with pain and mobility; Treatment of critical teeth to retain at least 5 posterior occluding pairs; Scaling when necessary. S3 = S1 + S2 More complex evidence-based treatment to treatment to delay/slow progress, where appropriate.
Suggested indicator				Your target
To reduce tooth loss due to periodontal diseases at ages 18 years with special reference to smoking, poor oral hygiene, stress and inter-current systemic diseases by				%
To reduce tooth loss due to periodontal diseases at ages 35-44 years by				%
To reduce tooth loss due to periodontal diseases at ages 65-74 years by				%
To reduce the incidence of necrotizing forms of periodontal diseases by reducing exposure to risk factors such as poor nutrition, stress and immuno-suppression by				%
To reduce the incidence of active periodontal infection in all ages by				%

Noma	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	<i>S1 = immunisation, nutrition, education, feeding schemes (short-term), oral cleaning, chlorhexidine, mouthwash during acute infectious diseases, develop a local protocol for the acute phase of noma.</i> <i>S2 = S1 + reconstructive surgery.</i>
Existence of noma	S1	S1	S2	
Suggested indicator				Your target
To increase reliable data on noma from populations at risk by				%
To increase early detection and rapid referral by and respectively				% and %
To reduce exposure to risk factors with special reference to immunization coverage for measles, improved nutrition and sanitation by				%
To increase the number of affected individuals receiving multidisciplinary specialist care by				%

Oral Cancer	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	S1 = Train Primary Health Care (PHC) Workers in the detection of oral pre-cancer and cancer; Early diagnosis by PHC workers for oral pre-cancer and cancer; Advocate for a functional referral system if none exists; Train general pathologists in oral cytology and classification of oral cancers; Measures to limit occupational risk factors; Advocate for registration of all oral cancers in a national register; Adopt and use standardised treatment protocols.
Existence of Oral Cancer	S1	S1	S1	
Suggested indicator				Your target
To reduce the incidence of oro-pharyngeal cancer by				%
To improve the survival of treated cases by				%
To increase early detection and rapid referral by and respectively				% and %
To reduce exposure to risk factors with special reference to tobacco, alcohol and improved nutrition by				%
To increase the number of affected individuals receiving multidisciplinary specialist care by				%

Benign Tumours	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	S1 = Training PHC workers in the detection of oral pre-cancer and cancer; Early diagnosis by PHC workers for oral pre-cancer and cancer; Adopt and use standardised treatment protocols based on the availability of resources
Existence of Benign Tumours	S1	S1	S1	

Suggested indicator	Your target
To increase the numbers of health care providers who are competent to diagnose and provide emergency care by	%
To increase early detection and rapid referral by and respectively	% and %

Cleft Lip &/or Palate	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	S1 = Counselling, Ante-natal care; Surgical treatment of condition; Train PHC workers in early recognition and referral for speech therapy etc. S2 = S1 + orthodontic and prosthetic treatment based on the availability of resources
Occurrence of Cleft Lip & Palate	S1	S2	S2	
Suggested indicator				Your target
To increase the number of affected individuals receiving multidisciplinary specialist care by				%

Oro-facial Trauma	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	S1 = Advocacy and support for programmes that: a) enhance social development; b) decrease alcohol and drug abuse; c) improve infra-structural development and d) create legislation for occupational health and safety and road safety; Adopt and use standardised treatment protocols based on the availability of resources.
Existence of Oro-facial Trauma	S1	S1	S1	
Suggested indicator				Your target
To increase early detection and rapid referral by and respectively				% and %
To increase the numbers of health care providers who are competent to diagnose and provide emergency care by..... to				% to %
To increase the number of affected individuals receiving multidisciplinary specialist care where necessary by				%

Tooth loss	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	S1 = Health Promotion and education; Advocacy and support for programmes that enhance social development S2 = S1 + Denture construction, based on the availability of resources and according to current protocols.
Partial edentulism	S1	S2	S2	
Complete edentulism	S2	S2	S2	
Suggested indicator				Your target
To increase the number of natural teeth present at ages 18 years by				%
To increase the number of natural teeth present at ages 35-44 years by				%
To increase the number of natural teeth present at ages 65-74 years by				%

Harmful practises	RESOURCES			INTERVENTION STRATEGIES
	Low	Medium	High	S1 = Health Promotion and education; Advocacy and support for programmes that enhance social development; Education and training of health workers; Treatment of severe complications S2 = S1 + Education and training of existing health workers to recognise and advocate for the eradication of harmful practises; Education and training of existing oral health personnel to use only evidence-based interventions.
High	S1	S2	S2	
Low	S1	S2	S2	

Suggested indicator	Your target
A reduction in the numbers of individuals experiencing difficulties in chewing, swallowing and speaking/communicating arising from a variety of harmful practises of	%

National Monitoring And Evaluation

The following information needs to be submitted annually by the provincial health authorities to the national Department of Health.

1. National oral health programmes in place

1.1 Is there a provincial oral health operational strategy? Yes No

If no, why not? _____

When is it expected to have such a strategy finalised? _____

Attach a list of all health Districts, indicating (i) whether an oral health plan has been prepared or the stage of the planning process that has been reached, and (ii) the extent to which each plan has been implemented.

1.3 National water fluoridation programme.

Number of water providers in province

Number of water providers fluoridating water supplies

Number of water providers exempted from fluoridation

Attach a list of all water supply agencies/municipalities in the Province, indicating (i) the stage of the fluoridation planning process that has been reached, (ii) the extent to which fluoridation has been implemented, and (iii) the number of people receiving fluoridated water.

2. Population strategies carried out

2.1 Are there oral health education and promotion programmes? Yes No

If no, why not? _____

Attach a list of all programmes of this kind that have been implemented, indicating (i) the nature of the programme, (ii) where they have been implemented, and (iii) the beneficiaries of the programme..

- 2.2 Are oral health strategies integrated with other health programme e.g. HIV/AIDS, health promotion, maternal and women's health, child and adolescent health, and nutrition.

Yes No

If no, why not? _____

3. Oral health strategies prepared and interventions implemented

List of oral health conditions	Estimated prevalence	Priority ranking	Number of LHA'S with intervention strategies in place for these conditions

Total number of Local Health Authorities (LHA's) in province

Attach copies of this table for each of the health districts in your Province.

4. Community oral health assessment data

Has community oral health assessment data per LHA been collected? Yes No

If no, why not? _____

Attach the data set for each health district in your Province for which this has been collected.

5. Resource assessment

Attach a completed copy of the form in Appendix Three for the province.

Some Evidence-Based Practices for Dentistry

The table below contains some examples from published systematic reviews that have assessed the evidence for the listed oral health interventions. The national Department of Health is tasked with disseminating current research information, such as that illustrated below, to all Provinces. More oral health conditions will subsequently be added to this list along with the interventions proven to be affective ways to address them.

Oral Health Strategy	Evidence
Oral Health Promotion	There is clear evidence that oral health education/promotion can be effective in bringing about changes in people's knowledge. This process must be ongoing for maximum effect.
Water Fluoridation	Very effective at preventing caries
Mass Media Programmes for Oral Health	There is no evidence that mass media programmes significantly alter any oral health related outcome
School based health education programmes aimed at improving oral hygiene	There is no convincing evidence that these programmes had any effect on plaque levels in the participants mouths, even when daily brushing was done. School based programmes run by dental professionals, teachers, older pupils, etc have not been demonstrated to affect oral hygiene.
Toothbrushing	Good evidence to recommend brushing twice daily with fluoride toothpaste for caries prevention and gingivitis
Dental Flossing	Good evidence to recommend flossing as an adjunct to toothbrushing for control of gingivitis in adults Not effective in preventing gingivitis in children
Scaling	Good evidence to recommend against subgingival scaling in sites with no signs of disease. Good evidence to recommend scaling for initial therapy in patients with active periodontitis when combined with maintenance therapy.
Root planing	No evidence regarding additional benefits of root planing in periodontal therapy. There is a lack of scientific evidence regarding the effects of root planing beyond the effects that can be achieved with sub-gingival scaling alone.
Polishing	Good evidence to recommend against polishing prior to topical fluoride application Good evidence to recommend against polishing for control of gingivitis
Recall	No evidence that 6 monthly recall is optimal frequency
Prophylactic removal of impacted third molars	There is little justification for the removal of pathology free impacted third molars
Fissure Sealants	Effective in preventing dental caries. Effectiveness decreases with time-so periodic reapplication is advisable Self-curing sealants more effective than light cured sealants. Water fluoridation appears to increase effectiveness.

Some References (including websites for evidence based dentistry)

1. Brothwell DJ, Jutai DKG, Hawkins RJ. An Update Of Mechanical Oral Hygiene Practices: Evidence-Based Recommendations for Disease Prevention. J Can Dent Assoc 1998; 64(4): 295-304.
2. McDonagh MS, et al. Systematic review of water fluoridation. BMJ 2000; 321: 855-859. Also available on <http://www.bmj.com>
3. Locker D, Kay E. A systematic review of the effectiveness of health promotion aimed at improving oral health. Comm Dent Health 1998; 15: 132-144.
4. Song F, Landes DP, Glenny AM, Sheldon TA. Prophylactic removal of impacted third molars: an assessment of published reviews. BDJ 1997; 182: 339-346.
5. Netting the Evidence: <http://www.shef.ac.uk/~scharr/ir/netting/>
6. Centre for Evidence-Based Medicine <http://cebm.jr2.ox.ac.uk/docs/adminpage.html>
7. Cochrane Collaboration <http://www.cochrane.org/cochrane/general.htm>

Appendix 2

Definition of Relevant Terms used in the Research

Community

An identified group of people that have been targeted for health interventions. Since health interventions would mostly likely be conducted at district level, references to the term “community” are directed to identified populations living within a district.

Comprehensive Healthy Living

Could function as a dedicated health directorate within the public health system in South Africa. Thus the health promoting component of oral health, maternal, child and women’s health, nutrition, HIV/Aids, chronic diseases and disabilities and mental health (programmes addressing substance abuse are located here) would be located within this directorate. This directorate could also focus on advocacy for health action, mobilising and strengthening community action, creating supportive environments and empowering communities on health-related social development. Issues of resource allocation, which includes financial and human resources, could thus be directly addressed within this management.

District

A geographically defined area in which health activities are conducted. This could be seen as bringing health closer to communities that need these facilities.

District Health Services

District health services involve a diverse range of health service provision that includes primary and secondary health care. However the management and accountability of health services could be undertaken by different health management structures. Municipalities in South Africa would be the most likely government structure to manage and co-ordinate primary and promotive health services in a district.

Health Decision-Making

This involves decisions that are made at all levels of the health system with regard to health priorities, agenda-settings, resource identification and allocation, and the implementation of health interventions.

Healthy public oral health policy

This is a political commitment to develop public oral health policies involving all relevant stakeholders to create supportive environments, through the equitable distribution of resources by facilitating community participation, and multi-sectoral collaboration in pursuit of oral health goals within a broader framework of social development.

Health Policy Document

The research used the term policy document to describe any policy statement, strategic plan or policy guideline that has been developed by the Department of Health in South Africa after 1993.

Health/Oral Health Manager

These are decision makers at the provincial level of government in South Africa. They serve as links between the national directorates of health and district health management and service provision. They are responsible for translating national health policies into operational health plans for specific health disciplines at provisional level.

Integration of District Health Services

This is a process of bringing together all health programmes that have common health goals in an effort to provide comprehensive services at district level. Integration could occur at a functional, administrative or structural level. Apart from promoting community participation it is important to determine health service providers' attitudes and perceptions towards proposed integration efforts in order to ensure sustainability of integrated health programmes.

Oral health care

This is defined as initiatives that are directed towards promoting and supporting oral health self-care practices within appropriate general health strategies that are in response to the prevailing social, economic and environmental influences on health and well-being.

Oral Health Promotion

Oral health promotion is any planned effort to promote oral health-related goals through the development of healthy public policies, the creation of supportive environments within the context of social development, the need to strengthen community action through empowerment strategies and the need to

reorient health service delivery to achieve improved community oral health.

Post-Apartheid South Africa

This refers to the period following political transformation in South Africa (1994). Health policy development in South Africa after 1993 is based on principles of the primary health care approach. Policies developed before this period was based on philosophies supporting separate development along racial lines.

School Oral Health Programmes

This refers to oral health promotion activities that are conducted within the school environment. These activities could include tooth brushing programmes, fluoride mouth rinsing, oral health examinations and oral health education.

Appendix 3

List of Documents related to Health Policy and Planning

Changing the Face of Dentistry in South Africa. Recommendations made by the Symposium. Wits University. 1994.

Department of Health. Annual Report 1998-1999.

Department of Health. Annual Report 1999/2000.

Department of Health (2001). Health Research Policy in South Africa: 1-18.

Department of Social Development. Annual Report 2003-2004.

Health Care in Gauteng. Implications for Planning. Health Systems Trust and The Department of Health. 1996.

Health Care in KwaZulu- Natal. Implications for Planning. Health Systems Trust and The Department of Health. 1996.

Health Care in Northern Province. Implications for Planning. Health Systems Trust and The Department of Health. 1996.

Health Care in The Free State. Implications for Planning. Health Systems Trust and The Department of Health. 1996.

Health Care in The North West Province. Implications for Planning. Health Systems Trust and The Department of Health. 1996.

Myburgh N.G. (1995). [Editor]. A Future for South African Oral Health Policy. Medic Africa '95 Oral Health Policy Workshop. UWC Faculty of Dentistry and WHO Collaborating Centre for Oral Health.

National Health Bill. Second Draft. 2001.

National Norms, Standards and Practice Guidelines for Primary Oral Health. Department of Health. Undated.

North Central and South Central Local Councils, Durban. Health Department Annual Report 1998-1999.

Oral Health Plan for the Free State Branch. Dental Association of South Africa. 1995.

Policy Guidelines for Community [Based] Health Workers in South Africa. National PPHC Network. Draft 12. 1997.

Report on Oral Health in South Africa (1999/2000).

Review of Fluoride Benefits and Risks. Report on the AD HOC Sub-Committee on Fluoride. USA Department of Health and Human Services. 1991.

TITLE OF THESIS: A Critical Analysis of the Provision for Oral Health Promotion in South African Health Policy Development

Questionnaire for Provincial Oral Health Managers

Oral health policy development plays an important role in the health transformation process in South Africa. It is therefore important that health policy development and oral health policy and planning are accompanied by systematic policy analysis.

The aim of this study is to determine if the oral health promotion elements that are mentioned in South African oral health policy documents have the capacity to provide meaningful impact on community oral health. The study also sets out to determine if the provision for oral health promotion is adequate, if there is a rational basis to the selection of these elements and if there viable alternatives to the selection and execution of oral health promotion efforts?

This study strives to make a significant contribution to oral health promotion policy and planning efforts. It explores the concepts of evidence-based dentistry and integrated service delivery. Your response will contribute immensely in determining how improvements in community oral health can be achieved through appropriate and cost-effective oral health promotion strategies and interventions.

All information is strictly confidential and will only be used for academic purposes.

Thank you.

Shenuka Singh – M.Sc.[Dent] UWC

Student – PHD (UWC)

Supervisor: Dr N.G. Myburgh

Province: _____

Designation: _____

Date: _____

Section One

Oral Health Priority Needs

1. Please rate the prevalence of the following oral conditions in your province. Use categories: High (H); Medium (M); Low (L) or Not Sure (NS) to indicate your response. Insert H;M;L or NS in the column provided.

Oral Condition	Response
Dental Caries	
Periodontal Disease	
Oral HIV	
Oral Cancer	
Early Childhood Caries	
Dental Fluorosis	
Harmful effects as a result of lifestyle	
Other (Specify)	

2. How would you rate the severity of these oral conditions in terms of social impact and effect on oral health resources? Oral health resources include financial, manpower and logistical implications. Please use categories: High (H); Medium (M); Low (L) or Not Sure (NS) to indicate your response.

Oral Condition	Social Impact	Impact on Resources
Dental Caries		
Periodontal Disease		
Oral HIV		
Oral Cancer		
Early Childhood Caries		
Dental Fluorosis		
Harmful effects as a result of lifestyle		
Other (Specify)		

3. How would you rate the following risk factors or determinants for the oral conditions that you have identified? Please use High (H); Medium (M); Low (L) or Not Sure (NS) for your response.

Determinants of Risk Factors	How wide spread is it?
Smoking	
Dietary Intake	
Lifestyle Practices	
Lack of access to fluoride uptake	
Other	

4. What epidemiological evidence is available to support your response to Section One. Please explain.

Oral Health Promotion Programmes

1. Which of the following oral health promotion programmes are being currently conducted in your province? Please indicate if the programme is: Present (P); Absent (A); Terminated (T) or if you are Not Sure (NS), in the column provided.

Programme	Response
School Brushing Programme	
Fluoride Mouth rinsing	
Fissure Sealant Programme	
Oral Health Education	
Other (Specify)	

2. Please state the number of oral hygienists that are employed in your department (excluding those that are based in academic institutions).

Distribution	Number of Hygienists
Urban	
Rural	

3. How do you evaluate these identified oral health promotion programmes in your province? Please explain.

4. Which evaluation methods do you use to evaluate the progress of your oral health promotion programmes? Please explain.

5. How many municipalities will commence with the Community Water fluoridation/Defluoridation Programme in 2002?

6. What percentage of the population will have access to fluoridated water?

Urban	
Rural	

Section Two

Oral Health Policy Development

1. Is there an operational oral health policy plan in your province? Please indicate Yes or No in the Box provided.

2. Are oral health strategies integrated with other health programme? Please indicate Yes or No.

3. If yes, to what extent has integration occurred or has been envisaged to occur in your province? Please explain

4. Taking each oral health promotion strategy into account how would you plan to promote advocacy and social mobilisation in addressing oral health issues eg. how would you mobilise support for water fluoridation or reduction in unhealthy behavioural practices?

5. Evidence-based dentistry uses sound research evidence to identify oral health promotion activities, interventions or strategies that are capable of making a significant difference to community oral health. How would you describe the capacity of oral health promotion programmes conducted in your province to improve community oral health? Please explain.

6. In your opinion, has the identified oral health promotion programmes in your province been successful in contributing to improved community oral health? Please comment on each individual oral health promotion programme in detail.

7. What evidence do you have to support your statement? Please explain.

8. Are there any population wide strategies or other oral health promotion programmes that you would consider to achieve the stated goals of improving community oral health? Please explain in detail.

Contextual Influences on Oral Health Promotion

1. How does budgetary allocation impact on the implementation of oral health promotion programmes? Please explain

2. How does the identification of other health priorities on the health policy agenda impact on the provision for oral health promotion? Please explain in detail.

Thank you for your co-operation

TITLE OF THESIS: A Critical Analysis of the provision for Oral Health Promotion in South African Health Policy Development

Questionnaire for Provincial Managers in Maternal, Child and Women's Health, Integrated Nutrition Services, Health Promotion and HIV/Aids Unit

Oral diseases are a major public health concern in South Africa and oral disease levels appear to be increasing particularly in the underserved, disadvantaged and urbanising communities. Oral health interventions and strategies should be designed to address the underlying determinants of risk factors for oral diseases. These risk factors include dietary consideration, behavioural practices or lifestyle and basic living conditions. The availability of fluoride uptake is also shown to have an impact on improved community health. Oral health promotion efforts can be enhanced if oral health messages are reiterated in other health programmes or interventions. Concurrently oral health messages can also contribute to improved community health by reinforcing specific health messages.

Oral health policy development plays an important role in the health transformation process in South Africa. It is therefore necessary that health policy development and oral health planning is accompanied by systematic policy analysis.

The aim of this study is to determine if the oral health promotion elements that are mentioned in South African oral health policy documents have the capacity to provide meaningful impact on community oral health. The study also sets out to explore the extent to which oral health promotion is included in other health programmes or policy statements.

All information is strictly confidential and will only be used for academic purposes only.

Thank you.

Shenuka Singh – M.Sc [Dent]

Student – PHD (UWC)

Supervisor: Dr N.G. Myburgh

Province: _____

Designation: _____

Component: _____

Health Priorities

1. What health priorities does your programme address at a provincial or district level?

2. Please list the strategies or health interventions that are designed to meet the health priority areas in your country.

Integration

1. Oral health services have a clinical and community component. Oral health community programmes consist mainly of visits to schools, communities and special institutions. The following is a list of oral health promotion activities. Which activities are you aware of that are being conducted in your province? Please use categories: Aware of (AW); Not Aware of (NAO) or Not Sure (NS) for your response. Please insert your response in the column provided.

Programme	Response
School Brushing Programme	
Fluoride Mouth rinsing	
Community Water Fluoridation	
Oral Health Education	
Fissure Sealant Application	
Nutrition/Sugar education Strategies	
Other (Specify)	

2. The key elements in oral health promotion strategies are sugar consumption, fluoride uptake, oral health education and reduction in unhealthy behavioural practices. Does any part of your programme address any one or more of these key oral health promotion elements at a primary health care level? Please answer Yes or No in the box provided.

If yes, please explain in the space provided.

3. Does your policy statements mention improvements in oral health as one of your programme's health goals? Please answer Yes or No.

4. If yes, where and in what way are the statements that mention improved oral health included. Please explain.

5. Are oral health messages included in the implementation of your programme? Please indicate Yes or No.

6. If yes, which category of health worker is responsible for implementing health messages that includes oral health goals at a district level? Please explain your response.

7. Is there any evidence (statistical, annual reports or records) to support your statement that oral health messages are included and implemented in your programme? Please indicate Yes or No.

Please explain.

8. Integrated health service delivery is one of the requirements for the transformation of health Services in South Africa. Do you believe that some elements of oral health promotion can be integrated with your programme? Please indicate Yes or No.

Please explain your response.

9. If yes, how would you envisage such an integrated programme? What factors should be considered to ensure an integrated programme? Please explain in detail.

10. How can oral health promotion issues be placed on your programme's health policy agenda? Please explain in detail.

*Please attach a copy of your policy or programme document when you return the questionnaire.

Thank you for your co-operation.

Appendix 5

a. Interview with National Oral Health Directorate

Face to face, structured and non-standardised

Interviewees: Dr Johan Smit

Ms Edith Kgabo

Date: 19 May 2002

Time: 10H00-11H30

Oral Health Programmes

1. How were the proposals on oral health promotion selected for oral health policy development? What criteria were used to select these proposals?
2. To what extent does the programmes/strategies on oral health promotion work? Are these programmes or strategies effective?
3. What evidence do you have that these strategies/programmes on oral health promotion does work?
4. Do you believe that the current strategies/programmes/interventions are sufficient or adequate to contribute to improved community oral health? Does these strategies/programmes/interventions have the capacity to deliver?

Oral Health Policy Development

1. Does your Directorate liase with other health directorates during policy formulation and development?
2. Is the Oral Health Directorate consulted for other health policy formulation and development?
3. How can oral health promotion issues (proposals, strategies, interventions) be placed on the policy agenda of other health directorates?
4. How practical is it?

General

1. To what extent will the inclusion of viable oral health promotion proposals; strategies and interventions in oral health policy development contribute to improved community oral health?
2. Research shows that health promotion interventions can contribute to improved community health. To what extent will a properly executed oral health promotion programme impact on improved oral health status?
3. If oral health is adequately expressed and incorporated into policy does this mean that it will be easily implemented?
4. How can oral health promotion policy statements and activities have an impact on the African Continent?
5. Is there any other related oral health promotion issues that you would like to discuss?

Thank you.

b. Interview with National Directorate: Health Promotion

Telephonic, structured and non-standardised

Interviewee: Ms Zanele Mthembu

Date: 9th November 2002

Time: 18H00-19H00

Questions Asked

1. What are the current strategies/interventions/programmes in health promotion in South Africa?
2. Do you believe that these current strategies/interventions/programmes are successful in improving community health?
3. How can we improve the delivery of health promotion in South Africa?
4. Is there a direct reference to oral health in your policy document?
5. If yes, to what extent is it covered?
6. To what extent is the Directorate of Oral Health consulted during your policy formulation and development?
7. Is oral health messages included in health promotion programmes at a district level?
8. Is there any evidence (annual reports, statistics) to support your response?
9. How can your Directorate provide support for policy and programmatic integration at a provincial and district level? This includes support for oral health promotion activities.

c. Interviews with National Health Directorates

Telephonic, structured and non-standardised

List of Directorates Interviewed

Directorate	Person Interviewed	Date
Nutrition	Mrs Ann Behr	23 rd May 2002
HIV/Aids	Selicia	28 th May 2002
Chronic Diseases and Disabilities	Mrs Christelle Kotzenburg	31 May 2002
Mental Health	Prof. Freeman	16 th July 2002
Child and Youth Health	Mrs De Klerk	24 th July 2002
Women's Health and Human Genetics	Ms Nancy Nytakazi	2 nd July 2002

Questions Asked

1. Is the Directorate of Oral Health consulted during your policy formulation and development?
2. To what extent does this occur?
3. Is there a direct reference to oral health in your policy document?
4. Does your policy guideline address specific risk factors such as dietary habits, sugar intake, smoking, alcohol consumption?
5. How can oral health promotion issues be placed on your policy agenda?

d. Interviews with Provincial Health Managers

Telephonic, structured and non-standardised

List of Interviewees

Directorate	Province	Person Interviewed	Date
Nutrition	N. Province	Margorie Mongwe	10 th June 2002
Health Promotion	Gauteng	Beth Douglas	12 th June 2002
HIV/Aids	W. Cape	Marlene Puleman	14 th June 2002
MCWH	W. Cape	Liana van der Walt	19 th June 2002
MCWH	E. Cape	Ms Chueli	20 th June 2002
HIV/Aids	N. Province	Sileilo	21 st June 2002
Health Promotion	E. Cape	Mandisa Khulu	9 th July 2002
HIV/Aids	N. Cape	Elda Musia	18 th July 2002
HIV/Aids	N. Cape	Elda Musia	18 th July 2002
Health Promotion	N. West	Prudence Monyelo	26 th July 2002
MCWH	N. Cape	Amanda Groenwald	27 th June 2002
Nutrition	Free State	Patience Legoale	31 July 2002
Nutrition	E. Cape	Nobahle Ndubula	6 th August 2002
Nutrition	N. Cape	Maretha Le Roux	14 th August 2002
MCWH	N. Province	Ms Mabitsela	25 th August 2002

Questions Asked

1. Does your policy document cover any statements on oral health?
2. Does your policy address any specific risk factors?
3. Are oral health messages included in your programme at a district level?
4. Do you believe that oral health promotion or some elements of oral health promotion can be integrated with your programme?
5. How would you envisage such an integrated programme?
6. How can you provide support for oral health promotion in your province?
7. What could be the possible barriers to integrating health programmes?

Appendix 6

Letters of Ethics Approval