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Executive Summary

Introduction

No modern society is wealthy enough to eliminate the societal risk arising from all infectious conditions and/or communicable diseases. As a result, all governments across the world have made judgements (either explicitly or implicitly) regarding the acceptable level of risk to the public arising from various activities and the degree to which legislation can minimise those risks.

In the case of hairdressing, beauty therapy and skin penetrating activities, societal health risk management is implemented through Parts 5 and 15 of the *Health Regulation 1996*.

The purpose of this report is to set out the findings of the public benefit test assessment into the restrictions imposed on participants undertaking activities within the hairdressing, beauty therapy and skin penetration industries (e.g. tattooing, body piercing and acupuncture).

The identification of the causal factors influencing the transmission of diseases has proven that regulatory measures based on broad industry classifications are unwieldy and inappropriate. Mechanisms to minimise infectious conditions or communicable disease transmission from hairdressing, beauty therapy and skin penetration services should focus on the individual activities in question.

Definitions

The following definitions were used to assist in the identification and classification of activities during the risk assessment process and have been formed through a consensus opinion of what **should** be captured by any legislation seeking to minimise the risks associated with these types of activities.

Skin Penetrating Activities - Any activity involving the piercing, cutting, puncturing, tearing or shaving of the skin, mucous membrane or conjunctiva of the eye.

Non Skin Penetrating Activities - Any activity that does not fall into the category of skin penetrating activities.

For the purposes of this study, *"risk" has been defined as the potential exposure of the community to the possibility*

of harm arising from infectious conditions/communicable diseases.

Higher Risk Activities - Any risk activity that causes blood or other body fluid to be released as a consequence of its operation.

Moderate Risk Activities -

Any Activity that:

- Has the potential to cause blood or other body fluid to be released accidentally; or
- Results in such small quantities of blood or body fluid being released that a lower to moderate risk exists; or
- As a result of the equipment being used, mitigates the risk of contamination arising from the activity being undertaken.

Lower Risk Activities - Any activity that does not cause blood or other body fluid to be released as a result of its execution but may still create the opportunity for the transmission of infectious conditions or communicable diseases through inappropriate infection control practices.

No Risk Activities - Any activity that effectively generates no *material*¹ risk of infectious conditions or communicable disease transmission.

The following definitions of non-skin penetrating activities were utilised to define the scope of the project:

Hairdressing - The cutting, styling or undertaking of any similar activity involving facial or scalp hair for the purposes of maintaining or enhancing a person's appearance.

Beauty Therapy - The provision of any non-skin penetrating service (excluding hairdressing) for the purpose of enhancing a person's appearance (e.g. use of cosmetics).

It should be noted that the activity based approach to the study makes the definitions of particular industries redundant for the purposes of establishing a new legislative model. This approach was designed to facilitate the identification of services provided by existing participants. This was done by adopting non-prescriptive definitions based on specific tasks or functions which enables demarcation based on activity. It is recognised that, in practice, some participants in these industries undertake activities that span across these definitions.

¹ For the purposes of this study, materiality was deemed to mean the risk of any activity causing the transmission of those diseases which could in all likelihood be transmitted through blood and result in severe sickness or death.

The Public Benefit Test Process

The governing principle underlying any legislative review is that any legislative restrictions on competitive behaviour shall be removed unless it can be shown that:

- the benefits of the restriction to the community as a whole, outweigh the costs of the restriction; and
- the objectives of the legislation can only be achieved by restricting competition.

In order to answer these questions, a Public Benefit Test (PBT) was undertaken to assess the cost-effectiveness of the hairdressing, beauty therapy and skin penetration regulations of the *Health Act 1937*.

In undertaking a PBT, Queensland Treasury Guidelines² stipulate a number of key tasks that should be completed. These are:

- clarify the objectives of the legislation;
- identify the nature of the restriction;
- analyse the likely effect of the restriction on competition and on the economy generally;
- assess and balance the costs and benefits of the restriction; and
- consider any alternative means for achieving the same result, including non-legislative approaches.

The project's methodology embodies these fundamental requirements and extended the analysis to incorporate an assessment of risk to clients, operators and the broader community. This was undertaken in order to identify the relative effectiveness of the alternative models under consideration.

The project was completed in two primary stages:

- Risk Assessment; and
- The Public Benefit Test Process.

The risk assessment stage resulted in the production of a separate risk assessment report which forms the foundation for the analysis contained in this report. A copy of the risk assessment report is provided under a separate cover.

² Queensland Treasury - Public Benefit Test Guidelines, 1994

The Existing Legislation

The current legislation administered by Queensland Health consists of:

- *Health Act 1937; and*
- *Health Regulation 1996.*

Sections 33 and 100A of the *Health Act 1937* enables Parts 5 and 15 of the *Health Regulation 1996* respectively. These parts of the *Health Regulation 1996* have the following effect on participants within the hairdressing, beauty therapy and skin penetration industries:

- requires the licensing/registration of premises at which hairdressing, beauty therapy and skin penetration activities are conducted, as well as the licensing of mobile hairdressing operators;
- prescribes the means of cleaning, disinfecting and sterilising equipment and items used in the conduct of these businesses;
- prescribes the minimum hygiene standards for the conduct of affected business activities; and
- sets minimum building standards for premises.

The objectives of Queensland Health's Public Health Program are to:

- reduce levels of preventable morbidity and mortality resulting from disease and injury; and
- create social and physical environments that support and enhance health.

The objective of the current hairdressing, beauty therapy and skin penetration legislation is to support these broad corporate objectives by preventing the transmission of disease and infection from these activities.

The proposed objective of the *new* legislation will be to *minimise the risk of infection and the transmission of disease from the activities undertaken in hairdressing, beauty therapy and skin penetration activities.*³

³ Queensland Health Discussion Paper - *Review of Hairdressing, Beauty Therapy & Skin Penetration Legislation*, 1998

Other Jurisdictions

Hairdressing has been, and remains subject to public health regulation by most health authorities through the application of premises' licensing or registrations and/or regulations about health related standards.

Generally, skin penetration has not historically been the subject of occupational regulation, or "operator" based regulation, although it has been the subject of premises' regulation and legislation about health related standards.

Currently, the type and extent of the regulation of hairdressing and skin penetration activities across the States and Territories varies considerably. Some jurisdictions have commenced, or will soon commence, National Competition Policy (NCP) reviews of their regulation of the hairdressing, beauty therapy and skin penetration industries.

The ACT and Tasmania have recently enacted new public health legislation with schemes for the regulation of certain activities categorised as "public health risk activities". The legislation in these States is similar in that it addresses and regulates certain activities (on a public health risk basis) rather than businesses or occupations.

In Tasmania, in determining an application for licence, the applicant's competency to undertake the activity in accordance with relevant guidelines is considered. If so declared by public notice, operators may also have to register their premises. Separate guidelines have been issued in respect of the activities of ear and body piercing, tattooing and acupuncture. These require registration of premises with local government; compliance with infection control and related measures.

Market Structure

There are a number of participants that are affected by the hairdressing, beauty therapy and skin penetration legislation, as identified in **Table E.1**. Due to the diversity and mobility of stakeholders, accurate data on the number of participants and the extent of consumption of services is difficult to obtain.

Table E.1: Key Stakeholders

<input type="checkbox"/> Operators (i.e. hairdressers, beauty therapists, tattooists,	<input type="checkbox"/> Consumers
	<input type="checkbox"/> Queensland Health

acupuncturists, body piercers etc.) conducting their activities from fixed premises.	<input type="checkbox"/> Local Authorities
<input type="checkbox"/> Mobile operators	<input type="checkbox"/> Health Professionals (registered/unregistered)
<input type="checkbox"/> Unregistered practitioners	<input type="checkbox"/> Other Government Departments

The requirement for licensing/registration of participants/premises represents a restriction on potential entrants into the market. In addition, the requirement to build structures in accordance with specified construction standards could act as a potential barrier to entry and reflects a restriction on participant's competitive conduct.

These restrictions impose additional transaction costs on some participants; increasing their cost structures and limiting their competitive position relative to other operators (e.g. medical practitioners) undertaking the same activities in the conduct of the profession.

The restrictions placed upon competition and employment within the affected activities not only reduce the scope of services provided but are also potentially discriminatory in nature.

The underlying questions are therefore:

- whether the current legislation is effective in minimising the risk of disease or infection transmission;
- whether the costs of the legislative restrictions outweigh the benefits to the community; and
- whether there are any more cost-effective alternatives to achieve the same or better outcomes.

Risk Assessment

Given that the primary objective of the existing legislation is to minimise the risk of infection from the activities associated with the hairdressing, beauty therapy and skin penetration industries, the primary benefit to the public would arise from the cost-effective control of these risks.

A key finding of the risk assessment was the formal recognition that different activities give rise to different risks. Any legislation that intends to minimise the risk associated with infectious conditions and communicable diseases should therefore focus on the activities that give rise to those risks.

The profile of activities and risks developed for this report indicates that the major risks to public health lie with blood borne diseases and therefore those activities that are bloodletting in nature. The risk assessment found that the premises of any given operator are not directly relevant to preventing the transmission of infectious conditions/communicable diseases arising from activities undertaken in the industries subject of this study.

This outcome was reinforced in the cost benefit assessment which found that there was not a net public benefit from the maintenance of the existing hairdressing, beauty therapy and skin penetration legislation.

The risk assessment concluded that moderate risk activities were those activities that give rise to potential body fluid exposure through the accidental actions of the operator. Thus, they do not generate the same level of risks associated with higher risk activities that generate body fluid exposure as a *consequence* (i.e. unavoidable result) of their activities. However, the report also recognised that higher risk activities could be undertaken in a manner that mitigates the risk of transmission.

Higher risk activities, e.g. body piercing (excluding closed gun piercing), tattooing and hair implantation are activities likely to generate significant health risks to the community.

A major issue facing operators and consumers of hairdressing, beauty therapy and skin penetration services is the information asymmetry that exists between those who are aware and those that are not aware of infection risks and what constitutes appropriate control practices, and those that do not have the knowledge and/or awareness.⁴

For the purposes of classification, Queensland Health considered whether the disease or condition was acute, chronic, whether it imposed financial costs on society and the social/emotional costs of contracting the disease or condition.⁵ A list of probable diseases/infectious conditions that could arise from the industries are shown in **Table E.2.**

The risk assessment found that the current regulation's effectiveness in addressing the potential infectious conditions/communicable diseases arising from the

⁴ Refer to the Risk Report

⁵ Communicable Diseases Unit, Queensland Health - Ranking of diseases/conditions in health & beauty industry, 1999

hairdressing, beauty therapy and skin penetration industries is limited. The risk assessment found that the potential cost to the community from the existence of infectious conditions/communicable diseases is unlikely to be significantly different to an unregulated model under the current legislation.

Table E.2: Communicable Disease and Infectious Conditions arising from activities undertaken in the Hairdressing, Beauty Therapy and Skin Penetration Industries

<input type="checkbox"/> HIV	<input type="checkbox"/> Herpes virus (both genital and oral)
<input type="checkbox"/> Hepatitis B (HBV)	<input type="checkbox"/> Fungal skin and nail infections
<input type="checkbox"/> Hepatitis C (HCV)	<input type="checkbox"/> Pseudomonas
<input type="checkbox"/> Hepatitis D (HDV)	<input type="checkbox"/> Staphylococcus
<input type="checkbox"/> Other chronic blood borne diseases	<input type="checkbox"/> Streptococcus
<input type="checkbox"/> Human papillomavirus infection (both skin and genital)	<input type="checkbox"/> Bacterial and viral conjunctivitis
	<input type="checkbox"/> Head Lice

Source: Communicable Diseases Unit, Queensland Health; 1998

An analysis of the mode of transmission for these diseases was undertaken as part of the risk assessment. The effective management of these infections/diseases involves the following:

- knowledge of infectious agents, major routes of transmission and methods of interruption of transmission;
- skills to apply the above knowledge in practice;
- monitoring and surveillance of outcome of activities; and
- support from management to implement the required techniques (e.g. use of disposable gloves, equipment, cleaning procedures etc.), time and resources.

It was apparent from assessing the identified diseases and modes of transmission that premises have little or no influence over the spread of these diseases. However, the risk assessment acknowledged the role played by the environment in facilitating the conduct of appropriate infection control practice. The risk assessment found that infectious diseases for which the general public are at greatest risk are those which fulfil the following criteria:

- 1.No effective treatment;
- 2.No effective immunity in normal (non-immunocompromised) hosts;
- 3.No preventative vaccine;
- 4.Highly contagious;

-
- 5.Highly virulent (pathogenic);
 - 6.Easily spread (e.g. aerosolisation); and
 - 7.Difficult to control (aerosol spread, natural reservoirs).

Diseases which meet criteria 1 to 3 are HIV/AIDS, Hepatitis C (HCV) and Hepatitis D (HDV). All of these diseases are blood borne viruses that are spread primarily by inoculation, vertical spread and/or direct blood contact⁶. Infection with these agents may lead to shortened life span and severe morbidity prior to death. In order to determine the total level of risk associated with individual activities, the risks of each individual procedure were considered as to whether they involve the inoculation of the skin, whether bloodletting occurs accidentally or as part of the procedure, and the knowledge and skill of the operator.

Those activities that generate higher risks should be subject to stricter controls than those activities that do not. It is apparent that requirements to control bloodborne diseases would also generally encompass requirements to control bacterial and other infectious conditions.

However, the imposition of standard controls across all disease types irrespective of their potential risk will impose unnecessary costs on moderate to lower risk activities without generating any additional benefits to the community. The separation of activities into different risk categories will assist in developing a better targeted, more cost-effective risk management approach.

Table E.3 summarises the number of consumers that could potentially be affected based on the estimated incidence rates for available blood-borne disease types and the level of participation in each of these industries.

⁶ The methods of spread and mechanisms for transfer are discussed in detail in the Risk Report.

Table E.3: Illustrative example of persons potentially infected per annum (Qld)⁷

Disease	No. of persons potentially infected
HIV	2.73
HBV	2,051.10
HCV	410.22

Note: Calculation based on actual prevalence rates supplied by Queensland Health.

Source: SKM Economics and CDU

As can be seen from this data, the potential risk arising from these activities could be quite significant depending on the disease/infectious condition being assessed. As a result, there appears to be a *prima facie* case for the imposition of some mechanism to control the spread of diseases from these activities.

Whilst enforcement of the current hairdressing, beauty therapy and skin penetration legislation appears to focus on the structural design and construction of premises used in the provision of these services, the existing legislation also prescribes means of cleaning, disinfecting and sterilising equipment and minimum hygiene standards for the conduct of affected businesses.

The majority of infections that occur in the affected activities appear to be the result of poor operator knowledge of appropriate infection control or from poor patient after-care. This was reiterated by the findings of the risk assessment and the feedback obtained through the project's consultation process. **It is apparent that the primary cause of infectious conditions and/or the transmission of communicable diseases is the operator's lack of knowledge and skill in applying appropriate infection control practices.** The current legislation fails to address this issue. Further, a review of the effectiveness of the current prescriptive means of cleaning and hygiene standards did not find a significantly different outcome to that which would have occurred in the absence of the legislative requirements. Therefore, it became apparent that the current legislation is not providing an appropriate mechanism to effectively minimise risks.

⁷ Calculations based on probability of disease transmission * number of services performed per premises * number of premises * prevalence rate.

Reform Options

Alternative mechanisms can either be voluntary (i.e. through industry based initiatives) or regulatory (i.e. legislative enforcement). For the purposes of this review, five (5) regulatory model options were considered in detail:

1. Option 1: No Regulation;
2. Option 2: Negative Licensing;
3. Option 3: Two-tier model⁸;
4. Option 4: Premises model; and
5. Option 5: Premises model and licensing of individual service providers.

Option 1: No Regulation

Under this option, all direct regulatory controls on hairdressing, beauty therapy and skin penetration activities would be removed.

The assessment of the costs and benefits under a no regulation model suggests that the maximum benefit is gained when the risks associated with any given activity is low. As such, it is best suited to the lower and no risk activities where control and enforcement costs are unlikely to be less than the benefits of reduced health risks and associated costs.

The application of an unregulated model for higher risk activities is likely to generate significant health consequences. Furthermore, potential direct health costs could be in the vicinity of \$32 million per annum⁹. As such it would be inappropriate to implement such a system for higher risk activities. The existence of effective self regulation and voluntary standards of infection control would assist the reduction of risks associated with hairdressing, beauty therapy and skin penetration activities under this model. At present, no effective means of self regulation exists across the majority of participants affected by the legislation.

The inability of an unregulated market to distinguish between the varying risks of activities and the need to implement some form of control over higher risk activities, eliminates the "no regulation" option as a

⁸ The two-tier model is a combination of negative licencing for lower to moderate risk activities and infection control licencing for higher risk activities. It is based on the level of risk associated with each activity and targets requirements towards the causal factors of disease transmission.

⁹ Calculated on the basis of number of potential infections for body piercing, acupuncture and tattooing and the estimated cost per patient for HIV, HBV and HCV.

viable alternative for consideration for moderate and higher risk activities. However, no regulation for no risk or lower risk activities appears to be the most practical method (in terms of costs) of addressing these activities as, over time, market forces will dictate the optimal standard to minimise the risks to the public. This outcome is consistent with the stakeholder feedback which saw no submission in support of this option.

Option 2: Negative Licensing

Negative licensing imposes specific behavioural requirements (e.g. compliance with standard infection control guidelines) that if not followed, would result in a statutory offence and the imposition of specific statutory penalties. This model could also involve an enforcement body having powers to apply to a Court for an Order that an individual be prohibited from undertaking a specific activity.

The negative licensing model provides a useful tool in establishing minimum criteria for the practice of infection control. However, its inability to address training, skill and knowledge of the operator and infection control procedures limits its effectiveness in minimising infection control.

The ability to separate activities according to their risk profiles provides a better model for minimising health risks. The incremental costs of implementing the model are less than the existing legislation but marginally higher than an unregulated market, primarily because an enforcement body is involved and the removal of licence fee income.

The marginal costs of implementing the model are outweighed by the anticipated improvements in the disease costs associated with the higher risk activities. As a result, the model will provide a better overall result for the community than either the existing regulatory model or an unregulated market.

Support for this model was marginal in recognition of the marginal improvement in consumer protection, with 4 of the 75 submissions supporting this option¹⁰.

¹⁰ It should be noted that there were 18 other submissions which were either unclear in their support for a particular model or suggested combinations of elements within the previous models. The remainder (ie. 16 out of 75) did not comment on a preferred regulatory model.

Option 3: Two-Tier Model

A Two-Tier Model would combine the elements of a negative licensing system for lower/moderate risk activities with a licensing system for higher risk activities.

The risk assessment found that the most effective means of minimising the risks to the public from blood borne virus infections would be to ensure that all persons involved in skin penetration activities have undergone a course of instruction/certification in infection control.

The two-tier model is the most effective method of reducing infectious conditions/communicable disease risks to consumers from hairdressing, beauty therapy and skin penetration activities. As a result, it is highly probable that the net benefits of risk reduction would far outweigh the anticipated costs of implementation.

Assuming an annual \$200,000¹¹ regulation administration and maintenance budget and no income, the reduction in the number of infections from HIV alone would need to be less than 1 case per annum at an average cost of \$600,000 per case. In reality, the income associated with licensing of higher risk activities would reduce this to less than one case.

With maximum annual direct disease cost savings of \$62.5 million, this option will generate the most-cost effective solution to mitigating the risks of these activities.

This conclusion was consistent with stakeholder responses which resulted in the largest number of submissions (30 of the 75) supporting this option.

Option 4: Premises Based Model

Under this option, the legislation would require the licensing of premises and the imposition of enforceable codes of practice. Under a premises based model, the costs and benefits are similar to that of the existing legislation. The key distinction between this option and the existing legislation is the incorporation of industry codes of practice and the placement of building/premises requirements within the *Building Code of Australia*.

The restrictions placed upon competition within the affected activities appears to reduce the scope of services provided and are not based on the risks associated with the service provision.

This model is unlikely to be as cost effective as either Option 2 or Option 3 as the requirements do not address the differences in risk levels associated with the different activities provided within the hairdressing, beauty therapy and skin penetration industries.

The lack of any material benefit associated this model was reflected in the support provided by stakeholders, with only 7 of the 75 submissions supporting this option.

¹¹ Estimated costs may be marginally higher than the existing regulatory cost for skin penetration activities which is estimated at \$160,000 based on current charges. For the purposes of the study, a 25% premium on existing costs have been identified.

Option 5: Premise Based Model plus licensing of individuals

A number of proposals indicated that variations to the above models may provide better outcomes than either of the four options presented earlier. Option 5 provided such a variation by adding the licensing of individuals to the framework established by Option 4. All of the costs and benefits associated with Option 4 remained applicable to this option, although the licensing of individuals strengthens the ability of a premises based model to meet objectives of the legislation. Option 5 resulted in a better outcome than Option 4 but was not as cost effective as Option 3. One submission proposed this model.

Overall Assessment of Reform Options

Cost Benefit Assessment of the Reform Options

A cost benefit assessment of the alternative models was undertaken to ascertain the relative merits of each option. The outcomes of this assessment found that a two-tier model that categorised activities into four major risk groups (refer **Table E.4** on the following page) provided the most cost effective solution to mitigating the potential health risks associated with hairdressing, beauty therapy and skin penetration activities.

Only Options 3 and 5 were able to meet the primary legislative objective of risk minimisation. Option 3 is the preferred model. This option removes any regulatory requirement on those activities that generate no risk.

Conclusions

The assessment of the reform options identified different strengths and weaknesses in all models. However, it became apparent from the outcomes of the risk assessment that the selection of a two-tier system of administration for activities under the hairdressing, beauty therapy and skin penetration legislation will deliver the least cost method to effectively minimise risk to the public from infectious diseases/conditions.

No net public benefit could be demonstrated with the retention of the existing regulations. Furthermore, it was found that the benefit to the community would be greater under an alternative model. The assessment of the reform options identified different strengths and weaknesses in all models proposed and these are summarised in **Appendix C**. The alternative associated with the

highest net public benefit is a model that is based upon a two-tier regulatory system targeted at specific hairdressing, beauty therapy and skin penetration activities on the basis of risk of disease transfer.

Table E.4: Activities categorised by risk

Higher Risk	Moderate Risk	Lower Risk	No Risk
<input type="checkbox"/> Acupuncture	<input type="checkbox"/> Acupuncture (using pre-sterilised, single use needles).	<input type="checkbox"/> Application/Mending of Acrylic full nail sets	<input type="checkbox"/> Blow wave/Blow drying
<input type="checkbox"/> Body Piercing/Pleasure Piercing	<input type="checkbox"/> Burning/scarring/ branding (with heated instruments)	<input type="checkbox"/> Application of cosmetics (eg. eyes etc)	<input type="checkbox"/> Electromagnetic therapy
<input type="checkbox"/> Collagen Implantation	<input type="checkbox"/> Cuticle Cutting	<input type="checkbox"/> Body Wrap	<input type="checkbox"/> Lash perm and extensions
<input type="checkbox"/> Extractions	<input type="checkbox"/> Electrolysis <input type="checkbox"/> Hair cutting	<input type="checkbox"/> Diathermy/Red Vein Treatment	<input type="checkbox"/> Lymphatic drainage without skin penetration
<input type="checkbox"/> Finger prick testing	<input type="checkbox"/> Piercing using closed piercing guns and disposable cartridges. ¹²	<input type="checkbox"/> Face and skin peels <input type="checkbox"/> Facial Scrub	<input type="checkbox"/> Liposculpture (Non-Surgical)
<input type="checkbox"/> Implantation (eg. hair or other substance)	<input type="checkbox"/> Shaving (using cut throat or other non-disposable instruments)	<input type="checkbox"/> Filing and cleaning nails	<input type="checkbox"/> Massage provided no contact with open lesions occur.
<input type="checkbox"/> Lymphatic drainage through the use of skin penetrating devices.	<input type="checkbox"/> Waxing	<input type="checkbox"/> Hair 'styling' with brush	<input type="checkbox"/> Perming
<input type="checkbox"/> Microdermabrasion		<input type="checkbox"/> Massage	<input type="checkbox"/> Shampooing
<input type="checkbox"/> Micropigmentation		<input type="checkbox"/> Other manicure services	<input type="checkbox"/> Shaving using single use disposable razors
<input type="checkbox"/> Red Cross Blood Services			<input type="checkbox"/> Tinting/Colouring (Hair)
<input type="checkbox"/> Scarring/Cutting/ Bleeding (using a knife or other skin penetrating instrument)			
<input type="checkbox"/> Tattooing			

¹² Whilst ear piercing invariably results in blood loss, the actual blood loss appears to be accidental rather than deliberate. Further, the 'risk' associated with ear piercing is regarded as moderate as ear piercing utilises disposable equipment, and the 'gun' is sterilised between clients. Therefore, ear piercing has been regarded as a moderate risk activity and not a higher or lower risk activity.

Overall, the PBT assessment concluded that Option 3 is the most effective method of achieving the legislative objective for the following reasons:

- Removes barriers to competition imposed under the existing and proposed premise based approaches;
- Impedes competition only to the extent that businesses undertaking higher risk (ie. skin penetrating) activities must meet certain licensing criteria that are clearly related to risk minimisation;
- Addresses the factors implicated in the risks of infection/communicable disease transmission (eg. operator skill and knowledge);
- Minimises the costs of disease to the community from the activities undertaken in the hairdressing, beauty therapy and skin penetration industries by recognising that significantly higher personal, social and economic costs arise from blood borne diseases than from other infections;
- Focuses on activities rather than industries, allowing more effective targeting;
- Addresses the weaknesses identified in the other alternative models and/or provides the same level of consumer protection more cost-effectively;
- Clearly focuses on the roles of operators and business proprietors in minimising the risks from communicable diseases/infectious conditions;
- Regulators are no worse off under this model as those businesses requiring monitoring are liable to pay for any audit/investigations undertaken; and
- Instills a market incentive on participants to minimise adverse behaviour by imposing costs of investigations/audits on the non-compliant party.
- Provides an effective level of protection to the public from (a) Bloodborne diseases and conditions and (b) Other infections by:
 - i. Requiring businesses that provide higher risk activities to be licensed according to specified risk minimisation criteria, and by requiring persons who provide higher risk services to have completed approved infection control training or examination; and
 - ii. Requiring all service providers (irrespective of risk classification) to take reasonable steps to minimise the risks of infections/communicable diseases.

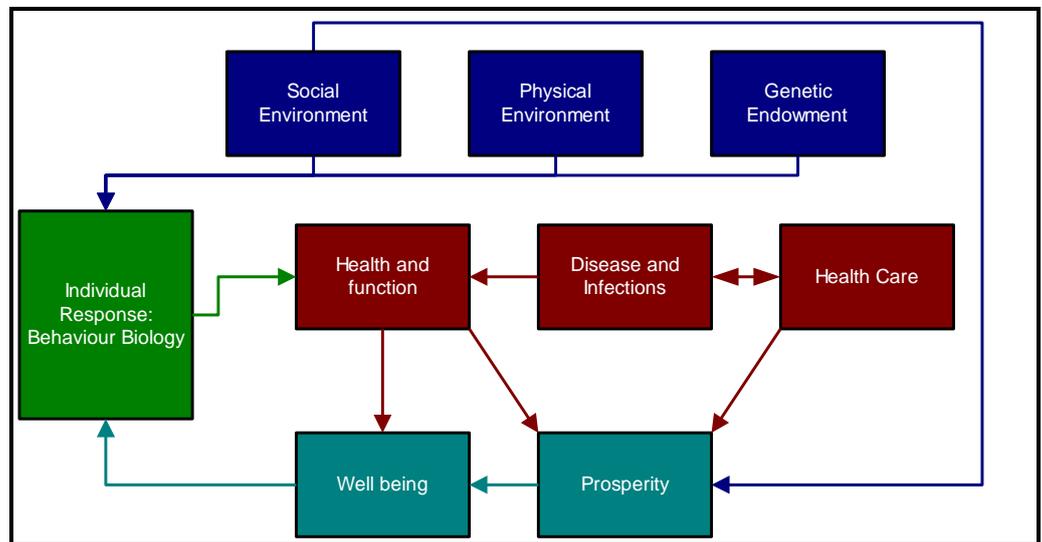
Further, Option 3 also minimises the impacts on employment within the affected industries and maximises access to services by potentially disadvantaged groups (eg. infirm, aged, rural and remote communities).

Finally, this outcome is consistent with feedback obtained during the consultation process which resulted in the this option receiving the support of the largest number of respondents.

1. Introduction

As shown in **Figure 1.1**, health, well being and economic prosperity are interrelated as health care contributes to the productivity of the population through the reduction of lost productive capacity through illness and disease, which in turn promotes economic growth and additional wealth. As a result, health care involves a trade-off between this potential improvement in productive capacity and the costs of supplying health services.

Figure 1.1: Interrelationship between health, well being and prosperity



Source: Australian Institute of Health and Welfare, 1995

No modern society is wealthy enough to eliminate the societal risk from all infectious conditions and/or diseases. As a result, debate about health priorities and how to implement them is not new. All governments across the world have made judgements on what health services they can afford and the instruments used to operationalise them.

In the case of hairdressing, beauty therapy and skin penetrating activities in Queensland, societal health risk management is implemented through Parts 5 and 15 of the *Health Regulation 1996*.

Medical literature indicates that the health consequences to consumers and operators in these industries are potentially serious. Skin penetrating procedures can give rise to very serious infectious conditions and/or communicable diseases including Hepatitis and HIV. Similarly, various bacterial infections ranging from minor

to serious can occur through the various activities undertaken by hairdressers and beauty therapists.

The purpose of this report is to assess the need for, and benefit arising from the current *legislation*, and to identify the costs and benefits to society of proposed alternative regulatory models in order to maximise the social benefits arising from Government intervention.

2. The Public Benefit Test Process

2.1 National Competition Policy

After years of separate and sometimes conflicting legislation governing the business activities between States, all levels of government in Australia agreed to a cooperative framework for addressing inconsistent, ineffective and/or anticompetitive legislation within their individual jurisdictions.

The agreement known as the Competition Principles Agreement was based on the recommendations arising from the Hilmer Report on National Competition Policy in 1993.

As part of this agreement, any regulation that sought to continue, extend or introduce restrictive provisions on particular market participants had to be reviewed and an assessment of its impact on the net benefit to the community made.

This assessment process was formalised into what has become known as the Public Benefit Test (PBT). The PBT process has been used to assess the cost-effectiveness of the hairdressing, beauty therapy and skin penetration regulations of the *Health Act 1937*.

Under this process, the governing principle underlying any legislative review is that any legislative restrictions on competitive behaviour shall be removed unless it can be shown that:

- the benefits of the restriction to the community as a whole, outweigh the costs of the restriction; and
- the objectives of the legislation can only be achieved by restricting competition.

2.2 Project Methodology

In undertaking a PBT, Queensland Treasury Guidelines¹³ stipulate a number of key tasks that should be completed. These are:

- clarify the objectives of the legislation;
- identify the nature of the restriction;
- analyse the likely effect of the restriction on competition and on the economy generally;
- assess and balance the costs and benefits of the restriction; and
- consider any alternative means for achieving the same result, including non-legislative approaches.

¹³ Queensland Treasury - Public Benefit Test Guidelines, 1994

As illustrated in **Figure 2.1**, the project's methodology embodies these fundamental requirements and extends the analysis to incorporate a risk assessment in order to identify the relative effectiveness of the alternative models under consideration.

The project was completed in two primary stages:

- Risk Assessment; and
- The Public Benefit Process.

The risk assessment stage resulted in the production of a separate risk assessment report which forms the foundation for the analysis contained in this report.

2.3 Consultation and Interstate Comparisons

In undertaking the Public Benefit Test, a number of key stakeholders were identified and a consultation process was established to elicit their views and ideas regarding the potential impacts of the current legislation and any proposed changes on their activities.

This consultation process involved the distribution of a detailed discussion paper outlining issues to be considered by stakeholders in framing their submissions to the process. Approximately 75 submissions were received during the project and a summary of the submissions has been included in **Appendix A**.

A Stakeholder Reference Group consisting of affected parties was also established to discuss issues raised in the discussion paper and to assist the project team by providing advice and explanation of the procedures undertaken in their respective businesses. This working group, coordinated and facilitated by Queensland Health, consisted of members from industry, local government and the community.

A Value Management Workshop was held to assist the project team and stakeholders gain an appreciation of the health risks arising from the activities undertaken by industry participants. This workshop assisted the identification of the key diseases/infectious conditions that may arise from the activities undertaken and the mode of transmission of those diseases. The outcomes of this workshop are incorporated into this report.

In addition, a number of individual meetings were held in Toowoomba and Brisbane to clarify various elements of the risk assessment and cost benefit analysis contained in

this study. This information has been incorporated into the body of the study.

Further, a comparison of similar legislation in other states was undertaken to 'test' the practicality and comparability of the proposed approach (refer to Section 9). Finally, the outcomes of the study have been reviewed by a Project Steering Committee consisting of a number of Government Departments.

INSERT A3 FIGURE

3. The Existing Legislation

3.1 Identification of Affected Provisions

The current legislation administered by Queensland Health consists of the following pieces of legislation:

- *Health Act 1937; and*
- *Health Regulation 1996 (Parts 5 and 15).*

Sections 33 and 100A of the *Health Act 1937* enables Parts 5 and 15 of the *Health Regulation 1996* respectively. These parts of the *Health Regulation 1996* have the following effect on participants within the hairdressing, beauty therapy and skin penetration industries (refer **Table 3.1**):

- require the licensing/registration of premises at which hairdressing, beauty therapy and skin penetration activities are conducted, as well as the licensing of mobile hairdressing operators;
- prescribe the means of cleaning, disinfecting and sterilising equipment and items used in the conduct of these businesses;
- prescribe the minimum hygiene standards for the conduct of affected businesses; and
- set minimum building standards for premises.

Table 3.1: Affected Provisions

Legislation	Section	Description/Purpose
<i>Health Act 1937</i>	s.33	Enables the application of Part 5 of the Health Regulation 1996.
	s.100A	Enables the application of Part 15 of the Health Regulation 1996.
Health Regulation 1996	Part 5	Defines Hairdresser
	Div. 2	Provides for licensing by local authorities
	Div 3.	Sets out the structural requirements for a hairdresser's shop and, where a mobile service is operated from a building or caravan, the premises in respect of which a mobile hairdressing licence is sought.
	Div. 4	Identifies the sanitary provisions which the licence holder must comply
	Div. 5	Prescribes methods for cleaning & disinfecting equipment.
	Div. 6	Prohibits persons knowingly suffering from an infectious skin disease or parasitic infestation of the hair or skin from entering the licenced premises and prohibits hairdressers from carrying out services on any person they know or suspect is suffering from those conditions.
	Part 15	Skin Penetration
	Div. 2	Provides for licensing by local authorities
	Div. 3	Sets out the building and sanitary requirements of a skin penetration establishment.

Div 4	Sets out restrictions on the conduct of operators with respect to cleansing and infectious people.
Div 5	Sets out building and sanitary requirements for those operators only conducting closed ear piercing activities.

Source: Queensland Health Discussion Paper - Review of Hairdressing, Beauty Therapy & Skin Penetration Legislation, 1998

A copy of the relevant legislative extracts have been included in **Appendix B**.

3.2 Objectives of the legislation

The objectives of Queensland Health's Public Health Program are:

- to reduce levels of preventable morbidity and mortality resulting from disease and injury; and
- to create social and physical environments which support and enhance health.

The objective of the current hairdressing, beauty therapy and skin penetration legislation is to support these broad corporate objectives by preventing the transmission of disease and infection from these activities.

The proposed objective of the new legislation will be to *minimise the risk of infection and the transmission of disease from the activities undertaken in hairdressing, beauty therapy and skin penetration activities.*¹⁴

3.3 Nature of Restrictions

In a free market, unfettered by regulatory constraints, the supply of goods and services is determined through a cost-benefit decision taking into account the demand characteristics of purchasers and the costs of production. All direct costs (i.e. private costs) are embodied in the production process and are therefore fully reflected in the price charged to consumers of that particular good or service.

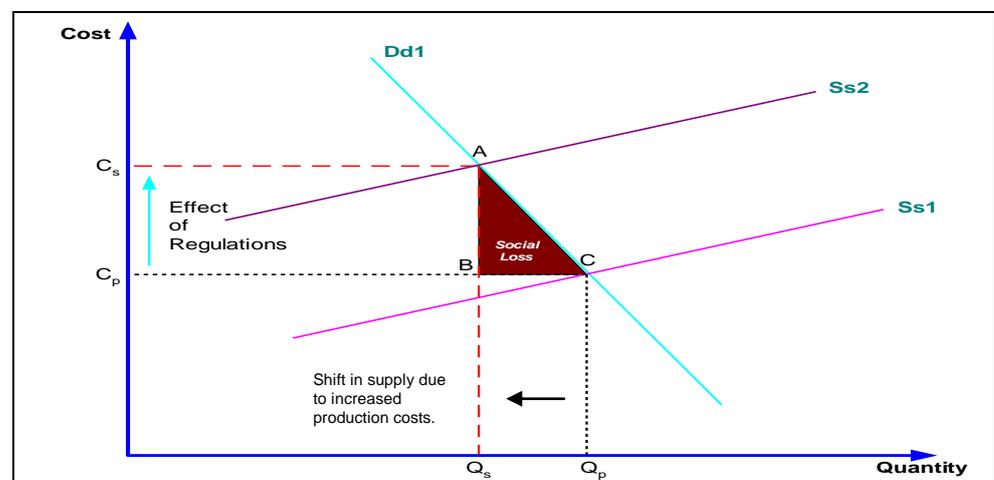
However, in the case of a social good, that is, a good where the costs of provision do not fully incorporate the true costs (e.g. potential health costs of treating an infected person) of the service or good, the market is unlikely to produce an optimal result for society.

It is often argued that in these situations, government intervention is justified. If we assume that the 'private'

¹⁴ Queensland Health Discussion Paper - Review of Hairdressing, Beauty Therapy & Skin Penetration Legislation, 1998

production cost of supplying skin penetrating services is C_p and consumer demand is represented by the curve $Dd1$ (as shown in Figure 3.1), the market would supply Q_p services. However, the actual 'social' cost of supply is C_s and not C_p . If the services were properly costed, then the market would provide only Q_s services. This is an example of market failure¹⁵ and is illustrated in Figure 3.1.

Figure 3.1 Social vs. Private Costs



Source: SKM Economics

This is often referred to as *market failure* and is a fundamental requirement for government intervention. Government intervention in these circumstances is designed to provide sufficient incentives to incorporate social costs by market participants. It is argued that in the absence of this intervention, a social loss illustrated by the triangle ABC in Figure 3.1 would occur.

In the case of the hairdressing, beauty therapy and skin penetration activities, this social loss is the potential costs imposed on society by not implementing appropriate and effective infection control practices¹⁶.

In line with this general philosophy, the current legislation imposes restrictions on a number of aspects of business activity undertaken by operators within the hairdressing, beauty therapy and skin penetration industries.

¹⁵ Where the supply is represented by curves Ss1 and Ss2 respectively.

¹⁶ Illustrative examples of the costs of individual diseases are discussed later.

The requirement for licensing/registration of participants/premises represents a restriction on potential entrants into the market. Furthermore, the requirement to build structures in accordance with specified construction standards could act as a potential barrier to entry and reflects a restriction on participant's competitive conduct.

As shown in **Table 3.2**, the definitions for hairdressing, beauty therapy and skin penetration contained in the legislation specify a number of activities that are undertaken by participants within those industries. However, these definitions fail to encompass the full range of services performed by existing operators and exclude other operators (e.g. medical practitioners, pharmacists, chiropractors, physiotherapists¹⁷ etc.) who undertake similar services (e.g. acupuncture and massage) in the conduct of their professions.

Table 3.2: Definitions contained in the existing legislation

Term	Definition
Hairdressing	means every person who shaves, cuts, trims, dresses, waves, curls, stains or dyes or who in any way treats the hair of any person for a fee or reward performs scalp or facial massage, manicure, pedicure, or in any other way whatsoever treats or otherwise deals with the head, scalp, face, hands, skin, fingernails, toenails, or feet or manipulates any form of electrical treatment, but does not include a medical practitioner, physiotherapist or podiatrist whilst engaged in the conduct of his or her profession.
Skin Penetration	means tattooing, ear piercing, acupuncture, or any other process by which the skin of a living person is penetrated.

Source: Parts 5 and 15, Health Regulation, 1996

The existing restrictions impose additional transaction costs on some participants, increasing their cost structures and limiting their competitive position relative to other operators e.g. undertaking activities that give rise to similar risks.

The underlying questions are therefore:

- whether the current legislation is effective in minimising the risk of disease or infection transmission;
- whether the costs of the legislation outweigh the benefits of implementation; and
- whether there are any more cost-effective alternatives to achieve the same or better outcomes.

¹⁷ Provided the services are undertaken in the conduct of their profession. The legislation does not exempt persons from conducting activities unrelated to their profession.

4. Market Structure

Before assessing whether the legislation is effective in reducing public health risks, it is useful to consider the parties affected by the legislation and the nature of the industries involved.

4.1 The Stakeholders

As shown in **Table 4.1**, there are number of participants who are affected by the hairdressing, beauty therapy and skin penetration legislation. Due to their diversity and mobility, accurate data on the scale and participation is difficult to obtain.

Table 4.1: Key Stakeholders

<input type="checkbox"/> Operators (i.e. hairdressers, beauty therapists, tattooists, acupuncturists, body piercers etc.) conducting their activities from fixed premises.	<input type="checkbox"/> Consumers
<input type="checkbox"/> Mobile operators	<input type="checkbox"/> Queensland Health
<input type="checkbox"/> Unregistered practitioners	<input type="checkbox"/> Local Authorities
	<input type="checkbox"/> Health Professionals (registered/unregistered)
	<input type="checkbox"/> Other Government Departments

The Australian Bureau of Statistics (ABS) collects information on hairdressing and beauty salon businesses. However, this classification does not capture all service providers as some are contained within the ABS classification for personal care services which also incorporates tattooing, body piercing, baby sitters and other categories too small to collect in isolation.

4.2 Hairdressing and Beauty Therapy Industries

4.2.1 Consumer characteristics

According to industry stakeholders, the industry is characterised by consumers who view price, convenience and quality as their primary determinants for selecting a service provider. Further, hairdressing services appear to be a discretionary expenditure item with many low to moderate income earners undertaking the activity themselves.

Hairdressing and beauty therapy are services that attract a significant level of participation across a broad cross-section of the community. As shown in **Table 4.2** expenditure on services in these industries within Australia was approximately \$1.5 billion during 1993-94. Total Queensland household expenditure on hair dressing and other personal care services (including beauty therapy

services and ear-piercing) exceeded \$155 million during 1993-94.

Hairdressing services in Queensland accounted for approximately \$128 million of this expenditure during 1993-94, reflecting an average annual household expenditure of approximately \$191 or \$38 per person.¹⁸ Based on an assumed average cost of approximately \$20 per visit, these expenditure figures suggest that around 6.4 million hairdressing services were provided in Queensland during 1993-94.

Table 4.2: Annual Household Expenditure on Hair Dressing and Personal Care Services by State and Territory, 1993-94

	State					Territories			
	QLD	NSW	VIC	SA	TAS	WA	ACT	NT	AUST
Hair Services (Male)	\$38.0	\$29.1	\$38.0	\$31.2	\$24.4	\$35.4	\$50	\$31.2	\$34.3
Hair Services (Female)	\$114	\$77.0	\$111	\$115	\$74.9	\$108	\$124	\$85.8	\$98.8
Hair Services (Undefined)	\$38.5	\$84.0	\$41	\$50.0	\$61.9	\$39.5	\$41.6	\$48.4	\$57.2
Totals	\$191	\$190	\$192	\$196	\$161	\$183	\$216	\$165	\$190
Other personal care services	\$40.4	\$38.8	\$29.1	\$17.7	\$13.5	\$32.8	\$39.0	\$26.0	\$31.7

Source: ABS Catalogue 6535.0, 1996

4.2.2 Supplier Characteristics

There are currently a number of primary professional associations within the hairdressing and beauty therapy industry, including:

- Australian Federation of Beauty Therapists (350 Members);
- Advanced Association of Beauty Therapists (300 Members);
- Hairdressing Federation of Queensland Union of Employers (450 Members); and
- Queensland Master Hairdressers' Industrial Union of Employers (320 Members).

Other relevant organisations of equal importance but for which data was unavailable include the:

- Australasian Federation of Aestheticians and Beauty Therapists Inc;
- Association of Professional Aestheticians of Australia; and

¹⁸ Population and household data from ABS catalogue 2016.3, 1996.

□ Australian Professional Fingernail Association.

According to the Australian Bureau of Statistics¹⁹, there were approximately 2,700 business locations that supplied hairdressing and beauty therapy services within Queensland as at September 1998. Listings in the 'Yellow Pages' indicated 338 operators existed in the Brisbane area.

A survey conducted by Queensland Health in 1995 suggested that there were approximately 270 licenced mobile hairdressers across the State (excluding Brisbane City), reflecting at least a 10:1 ratio between licenced fixed and mobile operators.²⁰ This suggests that the market for mobile hairdressing and beauty services is quite small relative to the overall market for these services. These figures are based on registered locations and ignore unregistered practitioners and mobile operators. Therefore, the number of participants (both mobile and fixed) in these industries may well be significantly higher than those indicated by available statistics.

Despite these measurement difficulties, available statistics and industry opinion suggest that the majority of hairdressing and beauty therapy salons have less than five (5) employees (including the owner) with over 98% of registered businesses having less than 10 staff (as shown in **Table 4.3**).

Table 4.3: Hairdressing and Beauty Salon Business Location Count, Queensland as at September 1998

	Number of Employees					Total
	<5	5 to 9	10 to 19	20 to 49	50 to 99	
Queensland	2,219	421	40	2	1	2,683

Source: Australian Bureau of Statistics, unpublished data, 1998.

The actual cost of shop fitouts in these industries is dependent on operator preferences and target markets. The average cost of establishing a beauty salon has been estimated at approximately \$25,000 for beauty salons and \$20,000 for hairdressing studios²¹. It has been suggested that the cost of compliance with the existing legislation is relatively insignificant as the majority of costs would be incurred irrespective of whether the legislation existed or not.

¹⁹ Australian Bureau of Statistics, Unpublished Data - 1998

²⁰ The survey conducted by Queensland Health did not include information from the Brisbane City Council as they were unable to supply the data. Queensland Health Discussion Paper - Review of Hairdressing, Beauty Therapy & Skin Penetration Legislation, 1998.

²¹ Industry stakeholder opinion, 1999.

4.2.3 Service Characteristics

As shown in **Table 4.4**, a wide range of services are performed within these industries, the majority of which are encompassed by the existing legislation.

Distinguishing the services provided by participants on the basis of their industries is becoming increasingly difficult as other participants such as cosmetic surgeons and natural therapists enter the market. In addition, some existing participants in these industries are also providing services such as cosmetic tattooing, ear and other body piercing, natural therapies and hair implantation services that have blurred the distinction as to what comprises beauty services.

Table 4.4: Examples of Services provided by Hairdressers and Beauty Therapists

<input type="checkbox"/> Hair cutting	<input type="checkbox"/> Collagen implantation
<input type="checkbox"/> Shaving	<input type="checkbox"/> Cuticle cutting
<input type="checkbox"/> Hair 'styling' with brush or comb	<input type="checkbox"/> Cosmetic tattooing
<input type="checkbox"/> Blow wave/Blow drying	<input type="checkbox"/> Electrolysis
<input type="checkbox"/> Acrylic full nail sets/Artificial nail sets	<input type="checkbox"/> Lymphatic drainage (using skin penetrating procedures)
<input type="checkbox"/> Application of make up	<input type="checkbox"/> Massage
<input type="checkbox"/> Body wrap	<input type="checkbox"/> Micro dermabrasion
<input type="checkbox"/> Brushing	<input type="checkbox"/> Micro pigmentation
<input type="checkbox"/> Eye make up	<input type="checkbox"/> Extractions
<input type="checkbox"/> Diathermy/Red vein treatment	<input type="checkbox"/> Ear piercing
<input type="checkbox"/> Facial scrub	<input type="checkbox"/> Face and skin peels
<input type="checkbox"/> Filing and cleaning nails	<input type="checkbox"/> Electromagnetic therapy
<input type="checkbox"/> Lash perm and extensions	<input type="checkbox"/> Non-surgical liposculpture
<input type="checkbox"/> Perming	<input type="checkbox"/> Shampooing
<input type="checkbox"/> Waxing	<input type="checkbox"/> Tinting

Source: SKM Economics, based on information from industry stakeholders

This blurring of service function has made it more complex to identify the nature and structure of these industries and in turn, the enforcement of any legislation governing the operation of these services.

4.3 Skin Penetrating Industries

The structure of the skin penetrating industries is more difficult to measure than the hairdressing and beauty therapy industries. No statistical data on body piercing and tattooing is currently collected at a level that facilitates the segmentation of these industries from the

“other personal service” category currently assembled by the Australian Bureau of Statistics. However, some data on particular segments (such as acupuncture) is available from the Australian Bureau of Statistics.

As a result, measurement of the individual industries that comprise this sector has been based on industry stakeholder opinion, anecdotal evidence and where available, data from the Australian Bureau of Statistics.

4.4 Body Piercing Industry

Body piercing involves the insertion of jewellery and/or other items into various parts of the human body. Body piercing has traditionally been viewed adversely by mainstream Australian culture and the stigma associated with undertaking these activities has affected the availability of reliable information on participation rates in these activities.

4.4.1 Supplier Characteristics

There is currently no professional association of body piercers in Australia, although some participants are in the process of trying to establish one. Moreover, there is anecdotal evidence that a significant number of service providers are currently not registered with any Council or association.

A 1995 Queensland Health survey of registered skin penetration premises across the State (excluding Brisbane City) indicated that there were approximately 132 premises where skin penetration activities (other than ear piercing) were conducted²². A review of the ‘Yellow Pages’ indicates that at least 22 providers existed in the Brisbane area. It has been suggested by some participants that the ratio of unregistered practitioners to registered practitioners could be higher than 2:1.

These problems are compounded further by suppliers that may be exempted under the existing legislation (such as medical practitioners in the course of their profession) who undertake piercings under the umbrella of different service functions. In addition, beauty therapists and tattooists also appear to be providing piercing services. As a result, there is no definitive data source to estimate the number of suppliers in the industry.

The lack of a definitive estimate of registered practitioners makes the estimation of employment within

²² Queensland Health Discussion Paper - Review of Hairdressing, Beauty Therapy & Skin Penetration Legislation, 1998

these industries impossible. Anecdotal evidence from industry participants suggests that the average number of employees is less than 3, with the majority of unregistered practitioners consisting of owner-operators.

According to industry stakeholders, regional practitioners in areas such as Toowoomba undertake between 2,500 and 3,000 piercings per annum at an average cost of between \$50 and \$75 each. Metropolitan suppliers are estimated to undertake approximately 15,000 piercings per year at a similar price. Based on the estimated number of service providers, the value of this industry could be as much as (or greater than) \$40 million per annum.²³

The cost to establish a basic premises to meet the requirements of the existing legislation is between \$7,000 and \$12,000, with the final cost of shop fit-out dependent on the preferences of the service provider and the expectations of their client market. For example, a specialist piercing shop visited as part of this study cost approximately \$30,000 to establish in order to compete effectively with other piercing studios and beauty therapy salons that provided similar services.²⁴

4.4.2 Consumer Characteristics



Body piercing appears to be a growing consumer trend amongst younger persons in Australia. Queensland is no different, with the majority of participants in the 16 and 35 years age cohort.²⁵

The service is discretionary and does not appear to be price sensitive. Price differentials between suppliers suggest that whilst the market is competitive, consumers are willing to pay a premium where additional value is perceived to exist. Therefore, operators are able to charge on the basis of value added services such as aftercare checkups and presentation. In addition, the choice of jewellery may also impact on the consumer's decision and those providers offering the widest choice in terms of jewellery quality and styles are likely to attract a greater proportion of consumers.

4.4.3 Service Characteristics



Whilst the method of body piercing appears to be self explanatory, body piercing studios often undertake a variety of body art services including those summarised in **Table 4.5**. The equipment required to conduct body piercing ranges from simple pins and needles to more sophisticated

²³ Industry Stakeholder Opinion, 1998

²⁴ Industry Stakeholder Opinion, 1998

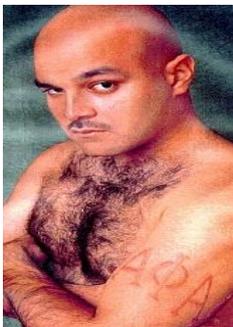
²⁵ Industry stakeholder feedback

piercing guns designed to pierce various parts of the body.

Table 4.5: Examples of activities undertaken by body piercing studios

<input type="checkbox"/> Ear Piercing	<input type="checkbox"/> Scarring
<input type="checkbox"/> Body piercing	<input type="checkbox"/> Branding
<input type="checkbox"/> Pleasure piercing	<input type="checkbox"/> Cutting
<input type="checkbox"/> Burning	<input type="checkbox"/> Implantation

Source: Industry stakeholders 1998



As can be seen, the types of services appear to be limited only by the imagination of the consumer.

Health and safety issues are not formally addressed through any accredited training course or professional organisation. There is no requirement under the current legislation with respect to education in infection control. There appears to be a wide discrepancy between service providers in terms of the quality of knowledge and infection control practice. This discrepancy is often conveyed to the consumer through lack of appropriate advice on the potential risks of any given service.

4.5 Tattoo Industry



Tattoo - derived from the Tahitian word Tatau which was onomatopoeic for the sound their tattooing instrument made - is a method of decorating the skin by inserting coloured substances under the surface. Traditionally, tattoo instruments were simple, sharp, thin objects which were dipped in ink and then pushed into the skin. Although this method is still used by some modern artists, it is extremely expensive and time consuming. Modern tattoo guns are built on the same concept: a long sharp needle powered by a small motor and controlled by a foot peddle. Depending on what it is used for, the size and number of needles vary. For outlining, a thicker single needle is used except in the case of finely detailed work, or a piece which requires fine lines, where a thin single needle is used. For colouring and shading, thinner multiple needles are used.

4.5.1 Supplier Characteristics

According to the Professional Tattooists Association of Australia (PTAA), there are approximately 200 members across Australia with approximately 44 of these within Queensland.

However, the PTAA suggests that their membership reflects less than 30 percent of the total number of participants in Queensland. As a result, there are potentially in excess of 150 Queensland service providers currently participating in this sector. In addition, a number of beauty therapists are offering cosmetic tattooing as part of their business activities and tattooing is also conducted illegally in jails and other 'backyard' operations.

The lack of definitive data on the number of operators and the ability of Councils to identify them has been a major enforcement issue for the existing legislation.

4.5.2 Consumer Characteristics



Like body piercing, tattooing has also been viewed adversely by mainstream Australian society. Anecdotal evidence provided by some stakeholders suggests that drug users, members of gangs and military personnel are amongst the primary consumers in this segment. However, there does not appear to be any strong statistical evidence to support this assertion.

According to the PTAA, an average tattooist could undertake between 1,500 and 2,500 tattoos per year depending on the location of their operation and at various costs depending on the type of tattoo required. This suggests that an average tattoo parlour (with two staff) would undertake between 3,000 and 5,000 tattoos per year.²⁶

The decision to have a tattoo requires patrons to consider the expense, the amount of pain involved, the commitment to carrying a permanent mark on the skin and the risk of infection.

The PTAA suggests that the largest proportion of customers falls within the 17 to 35 age bracket and do not appear to be very price sensitive. The primary characteristics for determining consumer choice is quality of service.

Further, it has been found that the majority of consumers are not fully aware of the risks associated with undergoing the procedure unless first instructed by the operator.

4.5.3 Service Characteristics

As with the beauty therapists and body piercing, many participants in these industries are diversifying their

²⁶ Information provided by the Professional Tattooist Association of Australia, 1999

businesses to undertake activities traditionally provided by others.

Many tattooists undertake body piercing as part of their business activities blurring the distinction between each industry. The PTAA has developed an infection control training course in conjunction with Queensland Health in an endeavour to improve health and safety amongst operators and consumers. At present, just over 30 percent of registered PTAA members have completed this course successfully.²⁷

4.6 Acupuncture Industry

The practice of Traditional Chinese Medicine (TCM), has a long and dynamic history which began to take form nearly 5,000 years ago. TCM incorporates a variety of interrelated modalities into a health system which takes each individual into account as a whole entity, rather than simply treating "diseases". Acupuncture is only one element in the provision of TCM, but has become synonymous with the provision of TCM services.

4.6.1 Supplier Characteristics

The acupuncture industry appears to be one of the most organised groups affected by the current review. Its primary representative body, the Australian Acupuncture and Chinese Medicine Association (AACMA) suggests that the industry has over 4,500 practitioners in NSW, Victoria and Queensland, of which there are in excess of 600 in Queensland²⁸. Of the registered practitioners, approximately 88 percent have completed or are undertaking approved training courses that incorporate infection control. It has been suggested that the majority of non-AACMA registered practitioners have not undertaken any formal training.²⁹

In addition, acceptance of the practice by mainstream consumers has seen the services conducted by other practitioners including general practitioners, chiropractors, naturopaths, shiatsu practitioners (i.e. masseurs), osteopaths and physiotherapists.

Qualified acupuncturists undergo between 3 years (advanced diploma) and 4 years (degree) training in the practice of acupuncture and spend in the vicinity of \$20,000 to \$35,000 on their education. The AACMA has developed an approved infection control course in conjunction with the

²⁷ 14 out of 44 registered tattooists have successfully completed the course according to the PTAA.

²⁸ *Towards a Safer Choice*, Victorian Department of Human Services, 1996.

²⁹ AACMA, 1999

Industry Training and Advisory Board, the Department of Employment, Vocational Education, Training and Industrial Relations as well as most State Health departments including Queensland Health³⁰.

The cost of building a premises to meet the requirements of the existing legislation has been estimated to be between \$10,000 and \$15,000. Industry practitioners have acknowledged that the majority of costs would be incurred irrespective of whether or not the legislation existed.

In addition to premises based practice, a number of practitioners provide mobile services and undertake/provide services at the place of the consumer. The extent to which this occurs has yet to be defined as no evidence is available. It has been suggested by the AACMA that the level of participation in mobile acupuncture is quite limited, with provision usually limited to the aged, the infirm or disabled who are otherwise unable to access these services.

4.6.2 Consumer Characteristics

The Australian Bureau of Statistics has conducted a national health survey which, *inter alia*, incorporated an assessment of consumer participation in other health services including acupuncturists, chiropractors, naturopaths, physiotherapists/hydrotherapists and osteopaths. As shown in **Table 4.6**, approximately 0.29 percent of Queenslanders used acupuncturist services during the two weeks preceding the survey. According to a study commissioned by the Victorian Department of Human Services, TCM practitioners provided around 25 consultations per week of which approximately 54 percent used acupuncture as the primary service.³¹ Based on these figures, the annual level of participation in Queensland could therefore range between 254,000 and 421,200 visits.³² In 1992-93, the total expenditure on alternative medicines in Queensland was estimated to be in excess of \$621 million, considerably higher than the estimated \$360 million spent on pharmaceutical drugs in the same year.³³

³⁰ Infection Control Guidelines for Acupuncture; Australian Acupuncture Association Ltd. 1997

³¹ *Towards a Safer Choice* - Victorian Department of Human Services, 1996

³² Calculation of 254,000 based on 1996 Census population estimates of 3,368,850 persons, 0.029 fortnightly participation. Calculation 421,200 based on 600 participants, 25 consultations per week over 52 weeks and 54% of consultations being acupuncture.

³³ National Health Survey; Cat. 4368.0 Australian Bureau of Statistics, 1995

Table 4.6: Persons using other health professionals in two weeks prior to interview. (Rate per 1,000 people)

Type of OHP	QLD	NSW	VIC	SA	WA	TAS	NT	ACT	AUST
Acupuncturists	2.9	3.9	2.6	0.9	3.0	1.5	2.1	5.1	3.1
Chiropractor	19.1	12.3	16.8	22.9	18.0	4.2	14.4	9.6	15.8
Chemist	26.3	22.0	21.2	20.8	28.9	30.2	24.8	30.9	23.5
Chiropodist / Podiatrist	3.7	5.6	7.2	8.5	6.6	10.5	1.7	8.9	6.1
Naturopath	7.7	5.0	6.8	7.3	7.1	2.7	3.2	5.4	6.3
Osteopath	0.2	3.5	1.5	0.5	0.9	1.2	0.3	2.7	1.8
Physiotherapist / Hydrotherapist	12.6	13.1	18.3	20.1	16.8	12.7	22.2	17.3	15.3

Source: ABS Catalogue 4368.0, 1997

The demographic picture of prospective consumers appears to be consistent with the perception that acupuncture services, like other health services, are not price sensitive and discretionary in nature. A profile of acupuncture consumers is provided in **Table 4.7**.

Table 4.7: Profile of Acupuncture/TCM Consumers

<input type="checkbox"/> More women than men utilise TCM
<input type="checkbox"/> Persons aged between 30 and 50 were the most frequent users of TCM
<input type="checkbox"/> Most consumers are white and live in urban or suburban areas
<input type="checkbox"/> Highly educated; possibly indicating those persons with higher disposable incomes.
<input type="checkbox"/> Mainly professional, technical or entrepreneurial employment backgrounds

Source: Australian Institute of Macrobiotic Studies, 1998

4.6.3 Service Characteristics

Table 4.8 summarises the typical services performed by acupuncturists in the performance of their business.

Table 4.8: Services performed by Acupuncturists/TCM Practitioners

<input type="checkbox"/> Acupuncture	<input type="checkbox"/> Chinese Massage
<input type="checkbox"/> Laser Acupuncture	<input type="checkbox"/> Raw herb/mineral/animal Decoctions
<input type="checkbox"/> Electrical Acupuncture	<input type="checkbox"/> Lifestyle Advice
<input type="checkbox"/> Cupping	<input type="checkbox"/> Prepared herbal/mineral/animal medicines
<input type="checkbox"/> Bleeding	<input type="checkbox"/> Dietary Advice
<input type="checkbox"/> Scarring/Microbustion	<input type="checkbox"/> Orthopaedic manipulations
<input type="checkbox"/> Point injection therapy	<input type="checkbox"/> Breathing, movement and meditation techniques

Source: AACMA, 1999

4.7 Other Industry Participants

As noted earlier, there are a number of other participants that could potentially be affected by the existing legislation and proposed amendments. These include practitioners currently exempted such as registered health care practitioners (e.g. medical practitioners and physiotherapists). Other groups such as naturopaths are providing services, such as those given in **Table 4.9**, that reflect similar infection risk characteristics as the identified services but are not captured by the definitions contained in the existing legislation.

The level and extent of exempted practitioner participation in services that directly compete with traditional hairdressing, beauty therapy and skin penetration service providers is unclear, although there is some anecdotal evidence to suggest that this occurs.

Similarly, the level of participation in the developing industries such as hair replacement, aromatherapy, naturopathy is likewise poorly documented with no reliable statistical sources presently available.

Table 4.9: Services performed by other service providers

<input type="checkbox"/> Hair transplantation	<input type="checkbox"/> Vaccinations
<input type="checkbox"/> Colonic irrigation	<input type="checkbox"/> First Aid
<input type="checkbox"/> Finger prick testing	<input type="checkbox"/> Cosmetic tattooing
<input type="checkbox"/> Blood transfusions	

Source: Queensland Health and Industry Stakeholders 1998

4.8 Regulatory Participants

The current legislation is administered by Queensland Health but applied and enforced through the local authorities around the state. All local authorities charge a fee ranging between \$70 and \$140 for registering hairdressing and beauty therapy premises and a standard fee of \$200 for skin penetration business premises.³⁴

The income obtained from these fees are used to offset the cost of enforcement and inspection. Each local authority has Environmental Health Officers who are responsible for the licensing/registration of potential participants in these industries. In addition, Environmental Health

³⁴ Queensland Health Discussion Paper - Review of the hairdressing, Beauty Therapy and Skin Penetration Legislation, 1998

Officers also undertake inspections of equipment used in the provision of hairdressing, beauty therapy and skin penetration services, provide infection control advice and investigate complaints. However, the extent to which these additional services are provided appears to vary considerably between authorities and is also dependent on the Environmental Health Officers concerned.

The Chief Executive Officer of each local authority has to ensure that employees have appropriate initial and ongoing training, knowledge and skills to perform the job they are employed under the *Local Government Act 1975*. However, there are no specific requirements on local authorities to ensure that the Environmental Health Officers are aware of all procedures or practices associated with the individual industries and activities captured under the existing hairdressing, beauty therapy and skin penetration legislation.

4.9 Unregistered/Unlicenced Participants

A key issue surrounding the current legislation targeted at hairdressing, beauty therapy and skin penetrating activities is the perceived large number of unregistered/unlicenced operators. Legislative controls imposed on participants are only effective against those participants that appear to comply willingly with the existing legislation.

The perceived existence of a significant number of unregistered/unlicenced operators undertaking the full range of activities captured by the existing legislation appears to suggest that the current legislation is incapable of providing the appropriate behavioural incentives on unregistered/unlicenced operators to comply with the legislation. However, it is unlikely that the current legislation or any proposed legislation will be able to deal with unregistered/unlicenced practitioners without the assistance of an organised and responsible operator association and the strengthening of the existing legislative sanctions.

4.10 Mobile Participants

As well as registered/licenced mobile operators providing the full spectrum of activities encompassed by the current hairdressing, beauty therapy and skin penetration legislation, there appears to be a significant number of unlicenced/unregistered mobile operators (e.g. party plan operators, hairdressers, wedding makeup specialists etc.). Mobile operators appear to provide a niche service to those clients that are aged, infirm, disabled, lack transport, or have sufficient disposable income to pay a premium to obtain a personal service within the confines of their own residence.

The existing legislation permits the existence of mobile hairdressing operators provided that they have a premises comprising of a building or a caravan which meets the

required standard. However, the consistency in applying this requirement appears to vary considerably between local authorities with some banning their existence whilst others waiver the requirements for a building and/or a caravan.

In contrast, under the existing legislation, it is implied that skin penetration activities (with the exception of ear piercing) are not permitted to be provided outside of a registered establishment (i.e. effectively, a building). The legislation directs the structural requirements of any establishment which effectively eliminates any mobile operation unless undertaken in a caravan or similar vehicle capable of being fitted out in a similar manner to a fixed premises. However, it appears that a number of services (e.g. acupuncture) are provided in the home of clients who are incapable of accessing or unable to access services from a fixed premise³⁵.

In addition, the legislation does not prevent the establishment of temporary skin penetration establishments that can be registered in accordance with the stipulated requirements of the legislation. It has been suggested that during some festivals, mobile body piercing shops have been established both in accordance and in some cases in contravention to the existing legislation.

The confusion relating to mobile operators in the hairdressing, beauty therapy and skin penetration industries appear to be caused by the inconsistent application of the legislation and the individual interpretation of the legislation by local authorities and/or their enforcement officers.

The separation of the risk factors associated with the activities provided and the role of the environment (i.e. premises) in the transmission of infectious conditions and communicable diseases, should clarify the need to impose limitations on the conduct of mobile operators.

³⁵ For example, rural and remote community access to fixed premises services may be limited where the local population is unable to support the full time operation of these services.

5. Public Health Risk Assessment

5.1 Risk Ranking Considerations

The prioritisation of potential infectious conditions/communicable diseases for the purposes of implementing infection control policies is not an ideal outcome. However, no society has the resources or capacity to effectively eliminate these risks. As a result, the level of risk borne by society involves a trade-off between the risks and associated costs to the public, the available resources and capacity of society to control those risks and the impact of control measures on industry and consumers. The decision to select an 'optimal' outcome is essentially subjective and has traditionally been the responsibility of government.

In the case of the current project, the level of appropriate risk management has not been determined. Rather, the focus has been on the most cost-effective mechanisms to minimise the infection risk to the public arising from the activities undertaken in the hairdressing, beauty therapy and skin penetration industries. The actual costs of which will be dependent on the resources available and the commitment of stakeholders to achieve any given outcome.

Almost two thirds of all stakeholder submissions indicated support for the segmentation of risks into categories that reflected the consequences associated with contracting an infectious condition or communicable diseases. In addition, the majority of submissions to the review also indicated that there was a need for regulation to assist in minimising the risks.

During the consultation process, a workshop was held to discuss the mechanisms of transfer of the identified communicable diseases and infectious conditions. Whether such a classification process could occur given existing data constraints was also considered. The consensus suggested that, if a choice was imposed on the public, most people would agree that those conditions which gave rise to the most dramatic impacts should receive the primary emphasis in any infectious/communicable disease control program.

5.2 Methodology

In order to determine whether the existing legislation is effective in minimising the risk of infection or disease transmission through the provision of services by operators captured under the legislation, it is useful to consider the mechanisms of creating and/or communicating

infections and the relationship they have with the activities undertaken by the industries in question.

In the context of this study:

"Risk is defined as the potential exposure of the community to the possibility of harm arising from infectious conditions/communicable diseases."

In order to measure this risk in socio-economic terms, a key element is the assessment of the likelihood (probability) and consequences (severity) to the public as a result of infectious condition (and/or communicable diseases) transference by the various activities being regulated.

By focusing on activities rather than industries, the causal factors giving rise to infection risk can be more easily identified and targeted. In this manner, the risks of communicating disease are minimised irrespective of the industry undertaking those activities.

Further, to assist in consistency in the assessment of risks from these activities, the study also considered (for comparative purposes only) the methods used to control risk in other health care settings. These settings included medical treatment rooms in general practitioners' offices, dental surgeries, "Red Cross" clinics, podiatry clinics and pathology specimen collection centres.

Similarly, activities were separated into skin penetrating and non-skin penetrating activities to provide an initial basis for separating high/lower risk activities. The reasons for this initial breakdown relates to the serious outcomes (morbidity and mortality) associated with inoculation of micro-organisms compared with simple skin or mucous membrane contact without actual skin penetration by the procedure. Micro-organisms inoculated through the skin are more easily spread in the body and micro-organisms in client's blood stream can contaminate the operator and the equipment. This poses a risk to sequential clients if the equipment is not thoroughly and effectively cleaned and sterilised or discarded.

As a result, our approach combines the assessment of each disease to identify its underlying potential to be communicated under alternative activities (i.e. skin penetrating or non-skin penetrating).

This approach resulted in a separate report that provided a risk assessment of the degree of risk from infections/communicable diseases to the community arising

from hairdressing, beauty therapy and skin penetration activities/procedures and an assessment of the most effective means of minimising those risks.

This section summarises the key elements of the risk assessment report.

5.3 Infectious Conditions and Communicable Diseases

For the purposes of classification, Queensland Health considered whether the disease or condition was acute or chronic, whether it imposed financial costs on society and the social/emotional costs of contracting the disease or condition.³⁶ A list of probable diseases/infectious conditions that could arise from the industries identified in **Section 4** were provided by the Communicable Diseases Unit of Queensland Health. These diseases are shown in **Table 5.1**.

Table 5.1: Communicable Diseases and Infectious Conditions arising from activities undertaken in the Hairdressing, Beauty Therapy and Skin Penetration Industries

<input type="checkbox"/> HIV	<input type="checkbox"/> Herpes virus (both genital and oral)
<input type="checkbox"/> Hepatitis B (HBV)	<input type="checkbox"/> Fungal skin and nail infections
<input type="checkbox"/> Hepatitis C (HCV)	<input type="checkbox"/> Pseudomonas
<input type="checkbox"/> Hepatitis D (HDV)	<input type="checkbox"/> Staphylococcus
<input type="checkbox"/> Other chronic blood borne diseases	<input type="checkbox"/> Streptococcus
<input type="checkbox"/> Human papillomavirus infection (both skin and genital)	<input type="checkbox"/> Bacterial and viral conjunctivitis
	<input type="checkbox"/> Head Lice

Source: Communicable Diseases Unit, Queensland Health; 1998

A comparison of the mode of transmission for these diseases was undertaken and the results are summarised in **Table 5.2**. It is apparent from assessing the identified diseases and modes of transmission in **Table 5.2** that premises have little or no influence over the spread of these diseases³⁷.

The effective management of these infections/diseases involves the following:

- knowledge of infectious agents, major routes of transmission and methods of interruption of transmission;
- skills to apply the above knowledge in practice;
- monitoring and surveillance of outcome of activities; and
- support from management to implement the required techniques (e.g. use of disposable gloves, equipment, cleaning procedures etc.), time and resources.

³⁶ Communicable Diseases Unit, Queensland Health - Ranking of diseases/conditions in health & beauty industry, 1999

³⁷ Premises by way of design and fit-out, for example, can however have an enabling impact on infection control procedures.

Table 5.2: Analysis of infections/diseases

Disease/Infectious Condition	Likelihood of transmission	Organism's living environment	Role of Skin/non-skin penetration in the development of infection	Role of knowledge and skill as mode of transmission	Role of equipment as a potential reservoir in the mode of transmission	Role of premises as mode of transmission
<i>Pseudomonas (bacteria)</i>	not highly infectious	moist environments	Non-skin penetrating, infections on the surface eg. nails or skin	main cause of transmission	2 nd most common mode.	n/a
<i>staphylococcus</i>	not highly infectious	Present on skin (ie. exogenous bacteria)	Direct skin to skin	main mode of transmission	2 nd most common mode	3 rd mode common mode
<i>streptococcus</i>	very infectious in small quantities	Phomytes	Spread through cough, skin-to-skin contact	2 nd most common mode	main mode	3 rd most common mode
<i>micrococcus</i>	not highly infectious	present on skin (ie. exogenous bacteria)	Direct skin to skin contact	main mode of transmission	2 nd most common mode	n/a
<i>sporotrichosis</i>	Uncommon	through environ. Organism (roseprick)	Inoculation	main mode of transmission	n/a	n/a
<i>ringworm</i>	Children below puberty most at risk	in humans and animals	Direct skin-to-skin or indirect	3 rd most common mode	main mode of transmission	2 nd most common mode
<i>head lice</i>	Common	lice lay eggs that hatch	Sharing combs, hats	2 nd most common mode	main mode of transmission	n/a
<i>Herpes simplex</i>	Infectious when skin broken	dies in extreme heat	Genital/mouth contact	main mode of transmission	2 nd most common mode	n/a
<i>warts</i>	people-low immune	humans	Direct skin to skin contact	2 nd most common mode	main mode of transmission	3 rd most common
<i>candida</i>	not communicable	stomach, bowel & genital tract	from within body's digestive system	2 nd most common mode	main mode of transmission	n/a
<i>cladosporium</i>	Relatively rare	wood, soil	Direct skin to skin contact	2 nd most common mode	main mode of transmission	n/a
<i>onychomycosis</i>	common fungal infection	nail (esp. toenail)	Ingestion cross-infection	main mode of transmission	2 nd most common mode of transmission	n/a
<i>Moraxella, Enterobacter aerogens, Klebisella pneumoniae</i>	Part of the normal flora of the human intestinal tract.	Eye infection	non-skin penetration Cross infection Transient hand carriage	main mode of transmission	2 nd most common mode of transmission	n/a
<i>Conjunctivitis</i>	Most common in children.	humans are carriers	Direct contact with eye secretions Cross infection	2 nd most common mode of transmission	main mode of transmission	n/a
<i>HIV/AIDS</i>	need more than 1ml blood to infect	carried in blood stream.	sexual intercourse, mother-to-baby, drug users inoculation	2 nd most common mode	main mode of transmission	n/a
<i>Hep B</i>	Infectious for non-immune	carried in blood stream.	sexual intercourse, mother-to-baby,	2 nd most common mode	main mode of transmission	n/a

	people		drug users			
<i>Hep C</i>	6% of people with a needlestick contract it	carried in blood stream.	inoculation sexual intercourse, mother-to-baby, drug users	2 nd most common mode	main mode of transmission	n/a
<i>Hep D</i>	only develops when have Hep B	carried in blood stream.	inoculation sexual intercourse, mother-to-baby, drug users	2 nd most common mode	main mode of transmission	n/a
<i>Mycobacterium tuberculosis</i>	Aerosolisation	carried predominantly in lungs of carrier	through respiratory tract, person-to-person	main mode of transmission	2 nd most common mode of transmission	n/a
<i>Syphilis</i>	Infectious for 24 to 48 hours	infects the genitalia of carriers.	through direct (sexual) contact or mother to baby.	n/a	n/a	n/a

It is suggested that infectious diseases for which the general public is at greatest risk are those which fulfil the following criteria:

- 1.No effective treatment;
- 2.No effective immunity in normal (non-immunocompromised) hosts;
- 3.No preventative vaccine;
- 4.Highly contagious;
- 5.Highly virulent (pathogenic);
- 6.Easily spread (e.g. aerosolisation); and
- 7.Difficult to control (aerosol spread, natural reservoirs).

Diseases which meet criteria 1 to 3 are HIV/AIDS, HBV, HCV and HDV. All of these diseases are blood borne viruses that are spread primarily by inoculation, vertical spread and/or direct blood contact³⁸. Infection with these agents will lead to a shortened life span and severe morbidity prior to death. In order to determine the level of risk associated with individual activities, the risks of each individual procedure were considered as to whether they are associated with the inoculation of the skin, whether bloodletting occurs accidentally or as part of the procedure, and the knowledge and skill of the operator.

Those activities that generate higher infection risks should be subject to stricter controls on their conduct than those activities that generate less risk. It is apparent that the requirements to control bloodborne diseases would also generally encompass requirements to control bacterial and other infectious conditions. The imposition of standard controls across all disease types irrespective of their potential risk would impose

³⁸ The methods of spread and mechanisms for transfer are discussed in detail within the body of the risk report.

unnecessary costs on moderate to lower risk activities without generating any additional benefits to the community. The separation of activities into different risk categories will assist in developing a better targeted, more cost effective risk management approach.

5.4 Proposed Definitions

The identification of the causal factors influencing the transmission of diseases has proven that industry based regulatory measures are unwieldy and inappropriate. Instruments should focus on the activity in question in order to ensure that measures are appropriately targeted. Nevertheless, practical requirements dictate the definition of key elements to ensure that the interpretation and application of any legislation is consistent and easily administered.

As such, the following definitions were used to assist in the identification and classification of activities during the risk assessment process and have been formed through a consensus opinion of what **should** be captured by any legislation seeking to minimise the risks associated with these types of activities.

Skin Penetrating Activities - Any activity involving the piercing, cutting, puncturing, tearing or shaving of the skin, mucous membrane or conjunctiva of the eye.

Non Skin Penetrating Activities - Any activity that does not fall into the category of skin penetrating activities.

Higher Risk Activities - Any activity that causes blood or other body fluid to be released as a *consequence* of its operation.

Moderate Risk Activities -

Any activity that:

- Has the *potential* to cause blood or other body fluid to be released accidentally; or
- Results in such small quantities of blood or body fluid being released that no risk exists; or
- As a result of the equipment being used, (e.g. single use, pre-sterilised needles) mitigates the risk of contamination arising from the activity being undertaken.

Lower Risk Activities - Any activity that does not cause blood or other body fluid to be released as a result of its execution but may still create the opportunity for the transmission of infectious conditions or communicable

diseases through inappropriate infection control practices.

No Risk Activities - Any activity that effectively generates no *material*³⁹ risk of infectious conditions or communicable disease transmission.

The following definitions of hairdressing and beauty therapy were utilised to define the scope of the project:

Hairdressing - The cutting, styling or undertaking of any similar activity involving facial or scalp hair for the purposes of maintaining or enhancing a person's appearance.

Beauty Therapy - The provision of any non-skin penetrating service (excluding hairdressing) for the purpose of enhancing a person's appearance (e.g. use of cosmetics).

³⁹ Materiality for the purposes of this report has been deemed to reflect those diseases which could in all likelihood be transmitted through blood and result in severe sickness or death.

It should be noted that the activity based approach to the study makes the definitions of particular industries redundant for the purposes of establishing a new legislative model and were designed to facilitate the identification of services provided by existing participants. This was done by adopting non-prescriptive definitions based on specific tasks or functions which enables demarcation based on activity. It is recognised that in practice, some participants in these industries undertake activities which span across these definitions.

5.5 Potential Threat of Infection

As noted earlier, the key threat to participants in these activities are generally related to blood borne diseases such as HBV, HCV, HCD and HIV. Other infectious conditions are generally non-life threatening, controllable and/or corrective measures exist. **Table 5.3** summarises some recent Australian data on rates of infection for some of the key diseases identified earlier.

Table 5.3: Current Prevalence Rates for key infections

Disease	Probability due to skin penetration injuries ⁴⁰	Probability of Chronic Infection	Probability of Mortality after being chronically infected ⁴¹	Prevalence Rate ⁴²
HIV	0.5%	100%	100%	0.04%
HBV	30%	10%	25%	0.5%
HCV	3%	75%	10%	1.0%
HDV	N/A	N/A	N/A	N/A
Skin nos	Rash, N/A	N/A	N/A	N/A
Other Skin Infections	N/A	N/A	N/A	N/A

Source: The rates for this table are based on information provided by the following agencies: Australian Institute of Health and Welfare, 1998; Department of Human Services - SA, 1998; Queensland Health, 1999

These prevalence rates indicate the general societal threat to participants in these industries. It is arguable whether the actual risk is higher or lower depending on the individual stakeholders lifestyle, immunological

⁴⁰ Probability of contracting the disease through skin penetrating injuries such as accidental needlestick injuries, tattooing, body piercing, acupuncture etc. from an infected source.

⁴¹ Probability of death after contracting the infectious disease/condition.

⁴² It is possible that the recorded prevalence rates identified may not fully reflect the 'true' level of infection in the community (as it records reported cases only). As a result, these figures are indicative of societal risk and have been used as a basis for establishing cost estimates for the purposes of this report.

response and activity.⁴³ However, it has been suggested that these prevalence rates do not fully reflect the true prevalence of diseases in society. **Table 5.4** summarises the number of consumers that could potentially be affected based on the current probability rates for blood borne disease types, and the level of participation in each of these industries for assumed prevalence rates referred to in **Table 5.3**.

Table 5.4: Illustrative Examples of Persons Potentially Infected from Skin Penetrating Activities per year (Qld)⁴⁴

Disease	No of Persons Potentially infected
HIV	2.73
HBV	2,051.10
HCV	410.22

Source: SKM Economics and CDU 1999

As can be seen from this data, the potential theoretical risk from these activities can be quite significant depending on the disease/infectious condition being assessed. As a result, there appears to be a *prima facie* case for the existence of some mechanism to control the spread of diseases from these activities. This case is strengthened if it is assumed that reported prevalence rates are understated due to the nature of recording and/or reporting of particular disease types. As a result, sensitivity tables have been incorporated to reflect various levels of disease prevalence. These sensitivity estimates provided below have been derived from discussions with Queensland Health.

Table 5.5 summarises the potential increased risks of infection based on the level of services provided, the probability of infection and the alternative prevalence rates for HIV, HBV and HCV. (A more detailed sensitivity table is incorporated into **Appendix E**).

⁴³ Refer to Risk Report.

⁴⁴ Calculations based on probability of disease transmission * number of services performed per premises * number of premises * prevalence rate * probability of contaminated equipment being used in the activity (in this case 100%)* weight for estimated level of 'under reporting' (in this case 0%).

Table 5.5: Illustrative Examples of Persons Potentially Infected by Key Disease Weighted by Assumed Prevalence Rates per Year⁴⁵

Prevalence Rate	HIV	HBV	HCV
Existing	2.73	2,051.10	410.22
50% Over-reported	1.37	1,025.55	205.11
50% Under-reported	4.10	3,076.50	615.33
100% Under-reported	5.46	4,102.20	820.44

Source: SKM Economics; Queensland Health 1999.

Table 5.6 summarises the number of persons potentially infected in key industry groups for each disease type.

Table 5.6: Illustrative Examples of Persons Potentially Infected by Key Disease Weighted by Actual Prevalence Rates per Year

Activity	HIV	HBV	HCV
Body Piercing	1.45	1,089	217.8
Tattooing	0.44	330	66
Acupuncture	0.84	632.1	126.42
Total Persons	2.73	2,051.10	410.22

Source: SKM Economics; Queensland Health 1999

Nevertheless, based on actual prevalence rates, it would appear that the *actual* risk to the community from the blood borne diseases identified above is quite low. In addition, if the assumption of 100% equipment contamination is relaxed, the studies assumed range of potential infections is considerably lower as evidenced in **Table 5.7**.

⁴⁵ Calculations based on probability of disease transmission * number of services performed per premises * number of premises * prevalence rate * probability of contaminated equipment being used in the activity (in this case 100%) * weight for estimated level of 'under reporting'.

Table 5.7: Illustrative Examples of Persons Potentially Infected by Key Disease Weighted by Alternative Rates of Equipment Contamination

Disease	100% Equipment Contamination	75% Equipment Contamination	50% Equipment Contamination	25% Equipment Contamination
HIV	2.73	2.05	1.37	0.68
HBV	2,050.80	1,538.10	1025.40	512.70
HCV	410.16	307.62	205.08	102.54
Total Persons	2,463.69	1,847.77	1,231.85	616.92

Source: SKM Economics 1999

5.6 Consideration of Available Data.

A review of available data on these diseases was undertaken to establish any evidence of the risks associated with the activities undertaken by the hairdressing, beauty therapy and skin penetration industries.

Notification of infectious diseases (including blood borne diseases) is legislated separately in each Australian State and Territory. However, many of the potentially serious infectious conditions may be completely asymptomatic, meaning that both the carrier and potential victim will not recognise their risk unless the carrier has a blood test and their condition revealed. Therefore, tracing actual infectious conditions/communicable diseases to their source is difficult and in some cases impossible. Hairdressers, beauty therapists and skin penetration operators are **not** currently expected to notify infectious conditions although they and other persons in the community can report conditions to Queensland Health.

In addition, data such as: infections post-manicuring, blood loss while waxing, scissor nicks while cutting hair or infections post-body piercing/tattooing are not generally collected. As a result, the availability of statistical data linking these diseases to the activities undertaken by the industries captured under the existing legislation in a causal manner is difficult to obtain.

There are no confirmed reports of Hepatitis C or HIV sourced from a hairdressing, beauty therapy or skin penetration service in Australia. The Queensland AIDS Medical Unit provided a summary of the Queensland HIV cases (1995-1997 inclusive) and confirmed that HIV infections in Australia had not been sourced to either hairdressing, beauty therapy or skin penetration activities.

However, there exists a reasonable body of literature on the adverse consequences of body piercing (including acupuncture) and tattooing throughout the world. Much of this literature relates to activities that occurred prior to the recognition of HIV and HCV, the widespread use of the HBV vaccine and the adoption of basic infection control techniques including 'standard precautions'.⁴⁶

A recent paper from the USA discusses the relationship between HIV and skin penetration. Dr A Davis (*MJA*, 1995; 163:556) notes that a higher proportion of NSW blood donors who were tattooed had evidence of HCV, without other risk factors (a ratio of 5/13).

Similarly, there are reports of 'barber-associated' Hepatitis C from Italy and there are many reports of Hepatitis B associated with skin penetration activities (tattooing and acupuncture) both in Australia and world-wide prior to the introduction of disposable equipment and basic infection control practices. However, the extent to which these studies relate to Australia is limited by the differences in social conditioning and processes undertaken by individual industry participants.

As a result, available evidence suggests that the actual reported risk of infection associated with hairdressing, beauty therapy and skin penetration activities in Australia appears to be quite low. This low reported outcome is partially attributed to the lack of available statistical evidence and an apparent reluctance of some consumers to identify their participation in some of the affected activities.

⁴⁶ Details of the literature review and available evidence are contained in the Risk Report.

Further, whilst there is no evidence that blood borne or other disease transmission in the hairdressing, beauty therapy and skin penetration industries is associated with any factors related to premises (i.e. buildings etc.), there is general agreement that the environment facilitates the conduct of appropriate hygiene practices and therefore has a role in enabling the operator to implement good infection control practices.

The ability of these viruses to be spread by blood contaminated penetrating instruments and concerns about the use of non-sterile equipment when skin penetrating activities are performed or bloodletting occurs still exist and therefore should be managed accordingly.

Tables 5.8(a) to (d) lists examples of activities, the micro-organisms involved and their mode of spread. The activities have been separated into "higher risk", "moderate risk", "lower risk" and "no risk" categories depending on whether there is skin penetration and blood loss/exposure either accidentally or as a consequence of the activity in question.

Table 5.8a: Risk Segmentation of Activities - Higher Risk Activities

Activities/Procedures undertaken in the hairdressing, beauty therapy and skin penetration industries	Micro-organisms	Mode of Spread
Higher Risk Activities⁴⁷ (Blood flow arising as a consequence of the activity)		
Acupuncture	Blood borne micro-organisms	Inoculation if non sterile re-useable equipment is used
Body piercing/Pleasure piercing (excluding the used of closed piercing guns with disposable cartridges)	<i>S aureus</i> Blood borne micro-organisms	Direct contact - skin micro-organisms such as <i>S aureus</i> causing a subsequent infection. Inoculation if non sterile re-useable equipment is used
Collagen implantation	Foreign material contamination if not sterile Skin micro-organisms	Inoculation of skin micro-organisms without sterile equipment and techniques
Extractions	Skin Micro-organisms Blood borne micro-organisms	Unclean, reusable equipment
Finger Prick Testing	Blood borne micro-organisms	Inoculation if non sterile reusable equipment is used
Implantation (Hair or any other substance)	Blood borne organisms Skin micro-organisms	Inoculation
Lymphatic drainage through the use of skin penetrating devices. (E.g. Tubes etc.)	Skin microbes, blood borne micro organisms-organisms	This involves skin penetration and this is considered to be higher risk especially without sterile or disposable equipment
Micro dermabrasion	Skin micro organisms Blood borne organisms	Local inoculation of endogenous organisms or cross infection
Micro pigmentation	Skin micro organisms Blood borne organisms	Inoculation from non-sterile equipment or endogenous skin bacteria
Red Cross Blood Services	Blood borne micro-organisms <i>S aureus</i>	Inoculation of skin micro-organisms without sterile equipment and techniques. Direct contact - skin micro-organisms such as <i>S aureus</i> causing a subsequent infection.
Scarring/Cutting/Bleeding (using a knife or other sharp instrument)	Skin micro-organisms Blood borne organisms	Inoculation from non-sterile equipment or endogenous skin bacteria.
Tattooing	Known blood borne micro-organisms (Hepatitis B, Hepatitis C, HIV)	Inoculation from non-sterile (re useable) instruments. Direct contact - skin micro-organisms such as <i>S aureus</i> causing a subsequent infection.

⁴⁷ The risk of contamination is significantly reduced if sterile, new (disposable) items are used once and disposed of carefully into a rigid sealable container which is then incinerated.

Table 5.8b: Risk Segmentation of Activities - Moderate Risk Activities

Activities/Procedures undertaken in the hairdressing, beauty therapy and skin penetration industries	Micro-organisms	Mode of Spread
Moderate Risk Activities (Accidental bloodletting or body fluid release, or risk is minimised through the use of disposable equipment)		
Burning scarring branding (with heated equipment)	Nil	heat destroys micro organisms infection may develop after the event in the healing process from endogenous bacteria
Cuticle Cutting (cuticles are keratin and do not have a blood supply, if bleeding occurs the operator has gone too deep ie beyond the cuticle)	Skin microbes Blood borne microbes if equipment contaminated with blood	Inoculation/Skin penetration can allow entry of skin microbes or organisms on equipment if it is neither sterile nor disposable
Ear Piercing and Nose Piercing (Using closed piercing guns and disposable cartridges) ⁴⁸	Skin Micro-organisms	Unclean, reusable equipment
Electrolysis (involves needling the hair follicles so is potentially higher risk)	Blood borne micro-organisms <i>S aureus</i>	Inoculation Endogenous microbial inoculation into the site of the procedure
Haircutting (NB razors are used in shaving as well as haircutting. The role in haircutting may be to shave the neck or to create a "rough" hair cut)	Skin microbes Blood borne microbes if equipment contaminated with blood	Skin penetration of customer with blood stained scissors or re useable razor Skin penetration of the operator with blood stained scissors or razor
Shaving (Cut throat or non-disposable razors)	Blood borne micro-organisms <i>S aureus</i> Streptococci Herpes simplex	Direct inoculation of blood borne micro-organisms or skin micro-organisms if non sterile, non disposable razors are used
Waxing	<i>S aureus</i> <i>Pseudomonas sp</i>	Direct contact from inadequately heated re -used wax. May result in local skin infection where wax applied. There is NO literature evidence that blood borne micro-organisms have been spread by this technique.

⁴⁸ Whilst ear piercing invariably results in blood loss, the actual blood loss appears to be accidental rather than deliberate. Further, the 'risk' associated with ear piercing is regarded as moderate as ear piercing utilises disposable equipment and the 'gun' is sterilised between clients. Therefore, ear piercing has been regarded as a moderate risk activity and not a higher or lower risk activity.

Table 5.8c: Risk Segmentation of Activities - Lower Risk Activities

Activities/Procedures undertaken in the hairdressing, beauty therapy and skin penetration industries	Micro-organisms	Mode of Spread
Lower Risk Activities (No blood or body fluid release)		
Application of acrylic/artificial nails	<i>Pseudomonas sp</i>	Environmental, if nails not sealed
Application of cosmetics (including eye cosmetics)	Skin micro-organisms Skin microbes contaminating the product if it is not single person use	Endogenous microbes Direct contact contaminated re useable equipment
Body wrap	Skin micro-organisms Skin microbes contaminating the product if it is not single person use	Direct Contact
Diathermy/Red vein treatment	Nil during treatment, possibly in the healing phase with endogenous skin microbes	Diathermy heat coagulates blood and destroys micro-organisms
Face and Skin Peels	Skin micro-organisms	Direct contact from contamination in re useable chemicals
Facial scrub	Skin microbes	Endogenous microbes
Hair 'styling' with brush, comb contaminated with hair or secretions from previous patients (s)	Staphylococci, <i>Pseudomonas sp</i> , Head lice, Streptococci, <i>S aureus</i>	Direct contact resulting in 'surface' contamination of customer and subsequent potential risk of infection development.
Massage	Skin microbes	Direct Contact
Other manicure services	Skin microbes	Direct Contact

Table 5.8d: Risk Segmentation of Activities - No Risk Activities

Activities/Procedures undertaken in the hairdressing, beauty therapy and skin penetration industries	Micro-organisms	Mode of Spread
No Risk Activities (No risk of infectious condition or communicable disease transmission)		
Blow Wave/Blow Drying	No Risk	No risk
Electromagnetic therapy	No Risk	No risk if equipment wiped clean
Lash perm and extensions	No risk	No Risk
Lymphatic drainage without skin penetration	No risk	No Risk
Liposculpture (non surgical)	No risk	No risk
Massage (No contact with open skin lesions)	No risk	No risk
Perming	No Risk	No Risk
Shampooing	No Risk	No Risk
Shaving (single use disposable razors)	No Risk	No risk except to the operator who may be exposed to blood or the risk of inoculation with blood borne micro-organisms if cut with a blood stained razor
Tinting/Colouring (Hair)	No Risk	No Risk

Given the lack of suitable data to assess the actual risks associated with the activities in question and the existence of scientific evidence on the potential risk associated with the activities undertaken by participants in these industries, *the underlying assumption should be that all clients in these industries should be considered potentially infectious.*

5.7 Effectiveness of the Current Legislation

Given that the primary objective of the existing legislation is to minimise the risk of infection from the activities associated with the hairdressing, beauty therapy and skin penetration industries, the primary benefit to the public would arise from the cost-effective control of these risks.

A primary finding of the risk assessment was the formal recognition that different activities gave rise to different levels of risk. Any legislation that intends to minimise the risk associated with infectious conditions and communicable diseases should therefore focus on the processes/activities that give rise to those risks.

The profile of activities and risks outlined in **Tables 5.8 (a) to (d)** indicates that the major risks to public health lie with blood borne diseases and therefore those

activities that are 'intentionally' bloodletting in nature.

The premises or environment of any given operator is not directly relevant to preventing the transmission of infectious conditions/communicable diseases arising from activities undertaken in the restricted industries. However, the environment enables practitioners to conduct good infection control practices.

A primary focus of the current hairdressing, beauty therapy and skin penetration legislation is on the structural design of premises and types of materials used in the construction of premises used in the provision of these services⁴⁹. This approach fails to address some other crucial elements in minimising the risk to the public, namely;

- knowledge of infectious agents, major routes of transmission and methods of interruption of transmission;
- skills to apply above knowledge in practice;
- monitoring and surveillance of outcome of activities; and
- support from management to implement the required techniques (e.g. use of disposable gloves, equipment, cleaning procedures etc.), time and resources.

The inadequacy of the existing legislation as a mechanism to effectively control the transmission of infectious conditions/diseases is further evidenced through a survey of 51 Brisbane based stakeholder premises undertaken by Queensland Health.⁵⁰ This survey found that premises that complied with the existing legislation regarding cleaning were just as likely to grow micro-organisms on their equipment as those premises that did not comply.

It appears that premises based legislation fails to address the key contributory factors leading to the transmission of infectious conditions/communicable diseases, namely;

- knowledge and skill in applying appropriate infectious control procedures;
- use of and sterilisation of equipment used in undertaking the service/activity; and
- knowledge and skill of the operator in undertaking the service.

⁴⁹ The current legislation does not treat the premises as the only element for infection control. Other aspects are also considered within a 'package' of issues.

⁵⁰ Queensland Health, 1995

There does not appear to be any statistical evidence to suggest that the existence of current legislation has had any significant impact on the health outcomes identified.

In fact, there is anecdotal evidence to suggest that the prevention of practitioners to treat some consumers/operators (e.g. those with infectious skin conditions, head lice and/or parasitic infections⁵¹) under the existing legislation may in fact diminish society's ability to manage and arrest the spread of those infections. The requirement of practitioners to observe standard infection control practices may eliminate or reduce the risk to the extent that participants can interact in a manner that reduces/eliminates those risks. Currently, there is no provision in the existing legislation to address this possibility and removes access to these services by the sick and infirm.

Further, the focus of the current legislation on particular industries and the exemption of others who undertake similar activities appears to ignore the fundamental purpose of public health legislation. Exemptions from the existing legislation on the basis of professional registration do not appear to be based on the existence of similar guidelines on infection control. As such, it is questionable whether any exemptions should occur unless the exempted participants undertake to complete precautions at least equal to the requirements set out in the current legislation.

The apparent inadequacy of the current legislation to address the fundamental elements of infection control suggests that it is unlikely to provide any public benefit. Nevertheless, it is worthwhile considering the existing legislation through the same framework used to assess any potential reform option.

The blurring of service functions amongst participants has made the enforcement of the existing legislation difficult. It has also led to the inconsistent application of the legislation by enforcement agencies. This problem is exacerbated further by the difficulty faced by regulatory agencies in interpreting and enforcing the legislation effectively. The apparent inconsistency in application of the current legislation and its impacts on stakeholders are discussed in the following section.

⁵¹ s.59 prohibits hairdressers/consumers with infectious skin diseases, or who are infested with head lice or other parasitic infection from carrying out the operations of a hairdresser or from entering or remaining in a licenced premises.

6. Public Health Costs⁵²

In the previous Chapter, the findings of the Risk Assessment Report were summarised and it was noted that there is a risk to the public that infectious conditions/diseases may result from various hairdressing, beauty therapy or skin penetration procedures. This section now considers the likelihood (or probability) of that happening, and the potential costs to the public associated with such conditions/diseases.

In estimating the potential cost impact of diseases on the community, cost of illness (COI) analysis can be used. By measuring the impact of disease in economic terms, it presents (from a monetary viewpoint) the way diseases affect the community. However, it should be noted that studies into the costs of infectious conditions and communicable diseases in Australia are limited, with the results of various valuation exercises generally yielding quite diverse (and potentially contentious) findings.

The COI approach provides a useful "benchmark" for assessing the costs and benefits associated with public health issues. Costs calculated using COI analysis are indicative only and are not intended to be a complete measurement tool. For example, to provide a comprehensive measure of the dollar costs of various diseases, reliable economic measures for anxiety, pain and suffering and the value of human lives would be required. Whilst such measures do exist to some degree, their validity and acceptance may be debatable.

All calculations used for this exercise are shown at **Appendix E**, and the following discussion explains the methodology used to estimate:

1. the likelihood (*probability*) of Queensland consumers acquiring infectious conditions/diseases from hairdressing, beauty therapy and skin penetration procedures; and
2. the potential *costs* to the community associated with those conditions/diseases.

firstly in relation to non-blood borne infections, and then in relation to blood-borne infections.

⁵² The cost estimates provided in this chapter are designed to provide an indicative estimate of the potential costs that may arise from selected diseases. It is accepted that the actual costs of each disease will be dependent on the technology, treatment profiles and the individual patient characteristics and is likely to vary significantly from the estimates provided. Nevertheless, the study team believes that these figures provide ball park estimates of the potential disease costs likely to occur from hairdressing, beauty therapy and skin penetration activities.

6.1 Non-blood borne infections

As noted in the Risk Assessment Report, non-blood borne infections associated with hairdressing, beauty therapy and skin penetration activities include streptococcus, staphylococcus, ringworm, head lice, fungal infections, and conjunctivitis (both bacterial and viral). These conditions are generally non-life threatening, and, under normal circumstances, are readily treated.

6.2 Likelihood of acquiring a non-blood borne infection

As noted in **Section 5 (Risk Assessment)**, data is collected for notifiable conditions/diseases (including blood borne diseases), but is not collected in relation to other, less serious conditions. Thus there is no available data as to the frequency of occurrence of the conditions noted above, and consequently, no calculations have been made as to the probability of a person acquiring a (non-blood borne) infectious condition from hairdressing, beauty therapy or skin penetration procedures.

6.3 Costs associated with non-blood borne infections

As noted above, no data is collected in relation to non-blood borne infectious conditions arising from hairdressing, beauty therapy and skin penetration services, therefore no calculations can be made of the costs of treatment associated with those conditions.

Anecdotal evidence from industry practitioners and consumers indicates that the majority of costs arising from these diseases relate to expenditure on remedial medication to correct fungal, bacterial and other infections. This expenditure is generally quite low unless the infection warrants admission to hospital. The average length of stay in hospital for severe infectious and parasitic diseases is 4.7 days.⁵³ Once corrected, stakeholders suffering from these infectious conditions are generally returned to full productive capacity in society.

6.4 Blood borne infections

Blood borne infections include Hepatitis B, C and D and the HIV/AIDS virus. These infections, which may be acquired from skin-penetrating procedures, are recognised as having the most serious consequences; ie. they may

⁵³ Australia's Health; Australian Institute of Health and Welfare. 1996 - www.aihw.gov.au (Accessed dec. 1998)

result in chronic, debilitating and potentially fatal illness.

6.5 Likelihood of acquiring a blood borne infection

The probability of a person acquiring a blood borne infection will vary according to each person's immunological response and lifestyle choices (intravenous drug use, sexual activity, etc).

In estimating the likelihood of a person acquiring a blood borne infectious disease, the following methodology was used:

Step 1:

Firstly, an estimate was made of the number of tattoo, body piercing and acupuncture services provided in Queensland each year . As shown in **Appendix E, Table 1**, the number of such services that are provided in Queensland each year is estimated to be around 1,367,200 services.⁵⁴ Of these 1,367,200 services, only some may result in the transmission of a blood-borne infection.

Step 2:

Secondly, data from a range of sources was analysed by the consultancy team to provide an indication of:

- (a) current prevalence rates for blood borne infections in the general community; and
- (b) the probability that a person, if exposed to a blood borne infection, will actually acquire that infection.

The data analysis indicated that prevalence rates for blood borne diseases within the general adult community range from 0.04% for HIV, to 0.50% for HBV and 1.00% for HCV.⁵⁵ It has been suggested that prevalence rates for these diseases may be higher or lower within some groups of people (eg. intravenous drug users), however, there is no available data to identify different client groups within the hairdressing, beauty therapy and skin penetration industries. Therefore, prevalence rates for the general adult population have been used in these calculations, and were shown in **Table 5.3**.

The data analysis also indicated that the probability of a person who is exposed to a blood borne disease actually

⁵⁴ Refer to Section 4 of this report and Table 1 of Appendix E.
⁵⁵ Communicable Diseases Unit, Queensland Health; 1999.

acquiring that disease is within a range of 0.50% for HIV, 3% for Hepatitis C and 30% for Hepatitis B.⁵⁶

⁵⁶ Germanaud J, Causse X, Dhumeaux D. Transmission of HCV by Accidental Needle Stick Injuries Presse Medical 23 (23): 1078-82, 1994. "Risk of Transmission of HCV 0-3% and may be up to 10% if patient (donor) is HCV RNA positive up HBV risk 7-30%". RACS Policy Document Infection Control in Surgery. Management of AIDS (HIV) and Hepatitis B. February 1994 Appendix 11 pp14-16. C. Burrell; Today's Life Science. October 1992, p12-16. "HBs Ag eAg pos 106-108 infectious doses/ml". Global Program on AIDS. Report of a WHO Consultation on the Prevention of HIV and Hep B Virus Transmission in the Health Care Setting. Geneva 11-12 April 1991 WHO pl. "HBV is found in very high titres (often >10x10⁶ ID/ml) 7-30% risk of HBV infection after needle stick exposure. HIV is less common the virus is present at concentrations of 10-100 ID/ml. <0.5% of HCW sustaining a needle stick exposure to the blood of a HIV positive patient have acquired HIV". Ippolito G, Puro V, Petrosilla N, Pugliese G, Wispelwey B, Tereskerz PM, Bentley M, Jagger N. Prevention Management of Occupational Exposure to HIV. Advances in Exposure Prevention. University Virginia USA 1997 p12-13. Courier-Mail, February 3, 1999.

Step 3:

To estimate the number of infections that may occur in Queensland, the consultancy team multiplied the total estimated number of tattoo, piercing and acupuncture services in Queensland (ie, 1,367,200) by the estimates undertaken at step 2, that is:

- (a) the disease prevalence rates in the general community for each blood borne disease; and
- (b) the probability that a person exposed to a blood borne disease will actually acquire that disease.

These calculations are summarised below:

HIV persons	1,367,200 x 0.4% x 0.50%	=	2.73
Hep B Virus persons	1,367,200 x 0.50% x 30%	=	2050.80
Hep C Virus persons	1,367,200 x 1.00% x 3%	=	410.16

Step 4:

The above figures were then multiplied by the rate of probability of acquiring a disease from skin penetrating procedure, ie the probability that equipment used in such procedures may be contaminated/infected with a blood borne disease from a previous client.

In estimating the rate of probability, a sensitivity analysis was undertaken, within a range of 100% (highest) and 25% (lowest) probability rate that equipment may be contaminated with a blood borne virus.⁵⁷ Calculations for the sensitivity analysis are shown in **Appendix E, Tables 3,4,5 and 6.**

Those calculations indicate that, using the upper probability rate of 100% and the lower probability rate of 25%, the number of Queensland consumers who could potentially be infected as a result of a skin penetrating procedure, is as follows:

⁵⁷ Probability range was prescribed by the Legislative Projects Unit and the Communicable Diseases Unit of Queensland Health; 1999.

Table 6.1: Number of Persons Potentially Infected weighted by probability of contaminated equipment being used in skin penetrating procedures

Disease	Upper probability Range (ie. 25% of Equipment is infected)	Lower Probability Range (ie. 25% of Equipment is infected)
HIV	2.73	0.68
HBV	2,050.80	512.70
HCV	410.16	102.54
Total Persons	2,463.69	616.92

Source: SKM Economics; Queensland Health 1999

Step 5

When considering the above calculations, it was recognised that not all blood-borne infections will result in chronic infection and not all will result in mortality. Information from the South Australian Department of Human Services⁵⁸ indicates that the following rates of chronic infection/mortality are likely apply in respect of each of the major blood borne diseases:

Table 6.2: Probability of Mortality and Chronic Infection for selected bloodborne diseases.

Disease	Probability of Chronic Infection	Probability of Mortality after chronic infection.
HIV	100%	100%
HBV	10%	25%
HCV	75%	10%

Source: SA Department of Human Services, 1998

The above information is also shown in **Appendix E, Table 7.**

6.6 Costs associated with Blood borne Infections

No definitive costs for treating each of the above diseases was available to the consultancy team, however information was obtained from a range of agencies to provide an indication of treatment costs for blood borne diseases.

According to the Australian Institute of Health and Welfare, the annual cost of blood borne diseases in 1993-94 was approximately \$401 million for the nation as a whole.⁵⁹ This low total cost reflects the fact that the

⁵⁸ What Have You Got? South Australian Department of Human Services, 1998.

⁵⁹ Disease Costing Methodology used in the Disease Costs and Impact Study; 1993-94. Australian Institute of Health and Welfare; 1994.

majority of costs associated with blood borne diseases are indirect human capital costs (eg. pain and suffering, employment/family/social impacts), which are not incorporated within these figures.

A study conducted by Susan Hurley et al. indicated that, for HIV, the direct life time treatment costs in Australia in 1992-93 was approximately \$93,000 per patient.⁶⁰

⁶⁰ Lifetime cost of human immunodeficiency virus-related health care - Susan Hurley et al. Published in Journal of Acquired Immune Deficiency Syndrome Human Retrovirology; August 1996:12(4)-Pp. 371-8

Information obtained from a range of sources indicates that the costs of treatment for Hepatitis B infections are \$2,230 for each chronic case and \$128,900 for each case resulting in mortality (death).⁶¹ The costs of treatment for Hepatitis C are \$48,728 for chronic infections and \$62,599 for cases resulting in mortality in the last two years of treatment.⁶²

The above costings, together with probability rates of infected equipment, were factored into the calculations shown in **Appendix E (Table 10)** with the following results:

Table 6.3: Potential Total Disease Costs weighted by alternative probabilities of skin penetrating equipment being contaminated with infected blood.

Probability of Equipment Contamination	Potential Total Costs of Treatment (HIV, HBV & HCV; chronic and mortal infections)
100%	\$31.73 million
75%	\$23.80 million
50%	\$15.87 million
25%	\$7.93 million

Source: SKM Economics; Queensland Health 1999

Thus, the costs of treatment of blood borne diseases in Queensland could be as high as approximately \$32 million, or as low as approximately \$8 million.⁶³

The above cost estimates reflect the baseline cost associated with treating disease. Other costs, such as reduced work performance due to sickness, mental stress/anguish, reduction in career opportunities and other family/social implications, may be incurred by affected individuals, their families, employers, and by society in general.

An indication of the potential impact of social costs, in terms of productive days lost and number of deaths, are shown in **Table 6.4**:

⁶¹ Disease Costs of Hepatitis B in Australia, 1993. Australian Institute of Health and Welfare; 1994.

⁶² Schedule 1 Review of the Public Health Regulations; NSW Department of Health; 1994.

⁶³ Based on equipment contamination probability range provided by Queensland Health.

Table 6.4: Other Social Costs for HBV per annum (Qld)

Disease	Number of Potential cases Generated	Number of Potential Deaths	Number of Days in Lost Productivity
HBV	2,051.10	51.28	6,091.8 ⁶⁴

Source: Australian Institute of Health and Welfare, 1998; ABS Health Survey 1995.

The Tasmanian Department of Health and Human Services estimated that indirect human capital costs associated with HIV are approximately \$600,000 for each infected person, with an estimated annual cost of around \$120 million for Tasmania.⁶⁵

In summary, it is probable that the cost estimates of between \$8 million and \$32 million referred to above are likely to understate the full costs to Queenslanders from blood borne disease that may arise as a consequence of skin penetrating procedures. Additionally, cost estimates may change over time.

6.7 Public benefits from minimising infection risks

The public benefits from controlling the transmission and spread of infectious diseases/conditions are essentially a healthier population and, in turn, a potentially more productive society.

Studies into the costs of disease prevention programs have often demonstrated the societal benefits through a comparison of the costs of program and reductions in incidence rates for those diseases. For example, a study into the provision of HBV vaccines in the USA indicated that an annual benefit of around US\$555 million was achieved through the number of cases avoided.⁶⁶

In Australia, a similar study was undertaken and found that the costs of vaccinating all persons against HBV was approximately \$9,729 per person over and above the screening cost of \$354 per person. In contrast, the cost of a HBV case was estimated at around \$2,230 per person.⁶⁷ As a result, it was viewed at the time as inappropriate on cost-benefit grounds to apply a universal vaccination. However, recent information provided by the Communicable

⁶⁴ Based on Tasmanian Department of Health and Community Services estimate of hospitalised days of 2.97, SA Communicable Diseases Unit death rate estimate of between 25-30% of chronic carriers (ie. 10% of total infections).

⁶⁵ Regulatory Impact Statement - The Public Health Bill 1996; Tasmanian Department of Health and Human Services; 1999 - www.dchs.tas.gov.au.

⁶⁶ Disease Costs of Hepatitis B in Australia; Australian Institute of Welfare; 1993.

⁶⁷ Disease Costs of Hepatitis B in Australia; Australian Institute of Welfare; 1993.

Diseases Unit of Queensland Health has suggested that decreasing costs associated with HBV vaccination has resulted in a universal vaccination policy now being applied to children.

This illustrates the point that cost-effective measures are required to minimise the health risks (and associated costs) of infectious diseases.

In conclusion, there is probability range within which consumers may acquire infectious conditions/diseases as a consequence of hairdressing, beauty therapy and skin penetration services. Without effective government intervention to minimise those risks, public health costs could be within a range of \$8 million and \$32 million.

The next two sections of this PBT Report assess:

- the ability of the current legislation (the Base Case) to effectively minimise the risks (and consequent costs) of infection from hairdressing, beauty therapy and skin penetrating procedures; and
- the ability of the various legislative reform options to effectively control the same level and range of risks.

7. Assessment of the Existing Legislation (Base Case)

7.1 Methodology

In considering the Base Case (current legislation), the following issues and impacts have been considered:

- Legislative Coverage;
- Public Health Impacts (including the potential costs to the community from treating infectious conditions/diseases);
- Impacts on Service Providers;
- Impacts on Consumers; and
- Impacts on Regulatory bodies.

Each of these issues is addressed below.

7.2 Legislative Coverage

The existing legislation covers participants who fall within the current definitions of hairdressing and skin penetration. There are a number of other services that would appear to be captured under the current legislative definitions, however regulatory bodies have not in practice applied the legislation in respect of these activities, eg. hair implantation, blood transfusions, cosmetic/party plan demonstrations, finger prick blood testing, and many other activities.

A significant disadvantage associated with the existing legislation is that it has not evolved in response to the changing service profile of the industries affected and the changing range of activities undertaken within those industries. For example, some hairdressing businesses also provide nail/manicure or other beauty services, and some beauty therapists also undertake piercing and tattoo activities (eg. cosmetic tattoo). Nor does the current legislation effectively address some of the new activities being undertaken, particularly in the body piercing industry (eg. implantation of substances under the skin).

The current legislation also fails to take into account the different risk levels associated with different activities, that is, it places the same level of legislative requirements on all hairdressing, beauty therapy and skin penetration businesses, regardless of the differing level of risks associated with the various activities. An alternative approach to legislative coverage by industry definitions could be to focus on activities, and (consistent with the conclusions of the Risk Assessment Report) to legislate in respect of various types of activities according to their level of risk. Many stakeholders indicated a preference for such an

approach, which received strong support from submissions to the review.

7.3 Public Health Impacts

As described in **Chapter 3**, the current legislation requires that premises used for hairdressing, beauty therapy and skin penetration (as defined) must be licensed/registered with local government authorities, and must meet specified building requirements. The legislation also prescribes hygiene standards for the conduct of those businesses, and methods of cleaning, disinfecting and sterilising equipment. It is possible that the existence of the current legislation encourages business owners and operators in these industries to take some precautionary steps to minimise infection risks.

However, the current legislation has no requirements in relation to standard infection control precautions or in relation to infection control training for operators. Those issues (as noted in section 5 concerning the Risk Assessment Report) are considered to be the key factors in reducing risks to the public from infectious conditions/diseases.

In the absence of legislative requirements in relation to recognised infection control precautions or mandatory infection control training for operators, there is no evidence that the current legislation effectively reduces the risks of infectious conditions/diseases. This suggests that the potential savings to the community from the current legislation are minimal, and may be little different than under an unregulated environment.

The costs of disease that may arise under this model could be between \$8 million and \$32 million (depending on the assumptions made as to the probability that skin penetrating equipment could be contaminated with a blood borne disease and the degree of prevalence of such diseases in the adult community).

7.4 Impacts on Service providers

7.4.1 Compliance Costs

Compliance costs for service providers under the Base Case comprise the licensing/ registration costs, building and maintaining business premises, and complying with other legislative requirements.

Licensing costs for hairdressing and beauty therapy premises range from between \$70 and \$140 (depending on the local government body), while a standard \$200 registration fee is charged for skin penetrating premises. On a

Statewide basis, this would total approximately \$282,000 for hairdressing/beauty therapy premises, and \$160,000 for skin penetrating premises, ie a total of \$442,000.⁶⁸

⁶⁸ Calculated on the basis of the number of registered premises multiplied by an average fee of \$105 for hairdressing/beauty therapy premises and \$200 for skin penetration premises. Does not include the cost of meeting premise requirements stipulated by the existing legislation.

There are also costs associated with building and maintaining business premises to the standards set out in the legislation and it has been suggested that these impose significant costs on business participants. However, an analysis of construction costs for various hairdressing, beauty therapy and skin penetrating practices suggests that primary costs (ie costs that would be incurred irrespective of whether the legislation existed or not) are between \$20,000 and \$25000, and may not change significantly even if no legislation existed.⁶⁹

It appears that the primary factors influencing the design and building of a practice are determined by consumer preferences. Businesses such as beauty therapists, which seek to attract higher income, more affluent customers, tend to spend more on the fit-out of their shops/salons. In contrast, those businesses that deal with customers who are more interested in expediency and convenience (eg. hairdressing services) appear to spend less on building fit-outs.

In practice, the legislation is imposed primarily on those businesses that clearly fall within the definition of hairdressing, beauty therapy and skin penetration, and is most commonly applied to those businesses that apply to have their premises licensed/registered. It is not widely applied to those businesses that elect to operate outside the law (eg. "backyard" operators).

The base case legislation is not consistently applied to many other businesses that provide hairdressing, beauty therapy and skin penetration services (eg. department stores, "party plan" operators, cosmetic demonstrators, hair implant salons, natural therapists and others who provide acupuncture services or "finger prick" blood tests, etc). Furthermore, providers such as doctors, dentists and physiotherapists are exempted from the legislation when providing services "in the conduct of their profession".

Therefore, whilst the cost burden imposed on service providers in meeting the current legislative requirements may be reasonably low, there is an unfair competitive advantage to providers who supply similar services but to whom the legislation is not generally applied.

⁶⁹ Industry Feedback on the costs incurred to build premises to attract clients and facilitate the provision of the services. Industry stakeholders suggested that that actual cost of compliance with the existing legislation was between \$5,000 and \$15,000 depending on individual Council requirements. Refer to Section 4 for discussion on shop fitouts.

7.4.2 Restrictions on competitive conduct

As noted above, the current legislation requires business premises to be licensed/registered, and requires premises to be constructed and maintained to specific standards.

The current legislation contains barriers to the provision of mobile services under the current legislation. Hairdressers may apply for a mobile hairdressing licence, but the provisions for such licensing are not clear, and have been interpreted and applied differently in different local government areas. There are no provisions for mobile skin penetrating services.

Many providers view government-imposed standards as an important element in ensuring that the industry's reputation, services and/or product quality are maintained and that public confidence is preserved. In addition, many providers in established businesses consider that government imposed requirements, (including premises-based requirements) are a useful barrier to competition from unregistered "backyard" operators and/or unregistered "mobile" operators.

However, it is important to distinguish between competition issues and public health issues. The Risk Assessment Report concluded that there is no causal linkage between premises and the transmission of infections within the hairdressing, beauty therapy and skin penetration industries, and that standard infection control precautions (and appropriate operator knowledge/skill) are the most significant factors in reducing infection risks. Consequently, there is no health-based justification for restricting mobile services.

A consumer's decision to select one provider over another will most frequently depend on the needs and preferences of the consumer. Consumers of mobile services are often aged, disabled or infirm and/or people who lack transport and who cannot access premises-based service providers. Consumers in rural and remote areas, who lack access to business centres and "fixed location" service providers, may also be consumers of mobile services. In addition, some consumers of mobile services may be people on higher disposable incomes seeking the convenience of a mobile operator.

As noted in **Section 7.4.6**, the base case legislative requirements are not applied consistently to all service providers. Some health practitioners, for example, may

provide similar services (eg. acupuncture, piercing) but are currently exempted from the legislation . In addition, there is anecdotal evidence of significant participation by unregistered practitioners in the hairdressing, beauty therapy and skin penetration industries.

As a result, some practitioners have the advantage of not being required to meet the licensing fees/costs (ranging from \$70 to \$200 per annum) and/or the additional costs of ensuring that the premises used in the conduct of the service meet the requirements of the legislation.

In addition to the licensing and premises requirements described above, the current legislation prohibits persons with specified infectious conditions/diseases from providing and receiving services. It does not provide for precautions to be taken to minimise risks to allow those persons to provide or receive services as is done under other legislation and for other occupational groups. Other providers (eg. medical practitioners), who are exempt from the legislation in the course of their profession, may undertake similar activities (eg. acupuncture, piercing), but are not limited in the scope of services they may provide and their consumers are not prohibited from receiving their services.

For example, medical practitioners suffering from blood borne diseases such as HIV or HBV in Queensland are allowed to continue to supply non-exposure prone services provided standard precautions are followed and the transmission risk is minimised . Similarly (and for comparative purposes), it is noted that other legislation such as the Food Act 1989 (Qld) allows infected persons to undertake activities such as food preparation provided that precautions are taken to prevent the contamination of food or food contact surfaces.

The current legislation does not provide a similar precautionary approach for hairdressing, beauty therapy and skin penetration service providers. Thus the legislation is potentially discriminatory against service providers and consumers of hairdressing, beauty therapy and skin penetration services, and is in conflict with the more inclusive approach recommended under the National Hepatitis C action plan ⁷⁰. Furthermore, anecdotal evidence suggests that some services (eg. treatment of head-lice by hairdressers) could in fact assist in management of infectious conditions.

⁷⁰ Economic Analyses for the Review of the National Hepatitis C Action Plan; Department of Public Health and Community Medicine - University of Sydney; August 1998.

In conclusion, there is no evidence to suggest that the current restrictions on service provision in the hairdressing, beauty therapy and skin penetration industries is justified on either health grounds or on a cost-benefit basis.

7.4.3 Restrictions on equipment used by service providers

The Base Case legislation also contains restrictions/prohibitions on some procedures and equipment, eg. shaving with cut throat razors, use of certain hairdressing/beauty therapy equipment such as rotary hair-brushes, sponges, powder puffs, neck dusters.

From discussions with stakeholders, it appears that some currently restricted equipment (eg. rotary brushes) has not been used, and in fact has not been commercially available, for more than 30 years. Stakeholders also provided some anecdotal information about the potential impact of different materials on consumers and the probability of post-service infection; however, no definitive scientific evidence was available to determine their validity.

Most stakeholders agree that equipment should be restricted only on the basis of a risk assessment of the equipment's potential to transmit infectious conditions/diseases. In particular (and consistent with the Risk Assessment Report), it is considered that skin penetrating equipment that cannot be effectively sterilised is likely to generate substantially more costs than benefits to the public from infectious conditions/diseases.

7.4.4 Employment Impacts

The current legislation, which focuses on the licensing/registration of business premises, tends to favour employment in fixed business locations. There is only very limited provision in the legislation for local government authorities to grant a mobile hairdressing licence, and no provision at all for mobile skin penetrating licences.

The provision for mobile hairdressing licences has been interpreted and applied in various ways across various local government authorities. Industry feedback indicates that some local authorities will only issue a mobile hairdressing licence if the proprietor has a fully fitted-out mobile van, some local authorities will issue a licence to persons who provide "door to door" hairdressing

services, while other councils will not issue mobile licences at all.

Thus the current legislation supports employment in fixed business locations, and does not facilitate legitimate employment opportunities for mobile operators.

However, it is widely recognised throughout the hairdressing, beauty therapy and skin penetration industries that many unlicensed/unregistered operators are in fact providing "backyard" services. These unregistered service providers are generally "sole operators" who may provide services either from their own homes, in clients' homes or in other locations. The current legislation has not been able to control these "illegal" operators (and it is unlikely that any form of regulation would ever be able to prevent home-based or mobile operators).

An external impact under the existing legislation is the de facto prohibition of training of apprentice hairdressers by mobile operators. Under the miscellaneous provisions of the Hairdressers' Industrial Award (gazetted 17 September 1993), hairdressers are prohibited from providing services anywhere except premises registered as a shop under the Workplace, Health and Safety Act 1990. This requirement would restrict mobile operators from employing apprentices and/or other hairdressers, and effectively restricts mobile hairdressing operators to sole proprietorship. No similar prohibition appears to exist for body piercers, tattooists, acupuncturists and beauty therapists.

Based on the findings of the Risk Assessment Report, which concluded that premises are not key factor in reducing infection risks, there does not appear to be any health-related explanation for restricting the employment of apprentices by mobile operators. Rather, it appears that the restriction promotes the existence of larger premises-based operators, by restricting the capacity of mobile operators to expand.

A submission to the review from the Department of Training Employment and Industrial Relations (DETIR) noted that the hairdressing, personal care and beauty care industries provides one of the few segments of the employment market providing substantial employment for women, particularly "micro" businesses owned by women. DETIR's submission also noted that most segments of these industries operate on small margins and are considered as one of the more peripheral home-based enterprises, and that 30% of all home based operators may be involved in the beauty services industry. DETIR's submission also indicated that provision of mobile services is essential, for example to provide services to people with a disability, or lack of mobility.

7.4.5 Training Impacts

As previously noted, a key conclusion of the Risk Assessment Report was that infection control knowledge and skills are the key factors in minimising infectious diseases/conditions.

There is no requirement under the current legislation for operators to undergo infection control training, however it should be noted that Queensland Health has provided assistance to industry bodies to formulate and establish infection control training courses/modules. The full public health benefit of these training courses, however, may not be captured at present, due to the current lack of any legislative requirement for operators to undergo infection control training.

It is considered that further development of appropriate infection control training courses would enhance training opportunities for current and potential service providers and would improve overall workplace skills within the affected industries. Health outcomes would also be improved under any regulatory reform model that mandates infection control training requirements, particularly for skin penetration activities, which carry the risks of transmitting blood-borne diseases (and which impose the highest costs on society).

7.4.6 Application of the current legislation to service providers

There is anecdotal evidence that the application of current legislative requirements is inconsistent between different local government areas, resulting in potential cost advantages accruing to service providers in some areas, and cost disadvantages in other areas. The most useful example of this inconsistency is in respect of mobile operators.

In some local government areas, mobile operators are required to conduct their businesses from a licensed mobile vehicle, eg. a caravan fitted out to the satisfaction of the local authority. In other areas, however, they may provide their services without such a licensed vehicle. In some jurisdictions, mobile operators have been banned from operating altogether, potentially forcing them to operate illicitly.

As previously discussed, from an infection control perspective, there appears to be little justification to exclude particular providers from providing services the public on the basis of their premises, provided they comply with appropriate infection control requirements. Many health practitioners (eg. doctors, nurses) provide "mobile" services to the public, ie health services are provided in the patient's home.

Further, as identified earlier, the requirements to licence business premises ignores the primary determinant of infection risks, notably, operator knowledge and skill in applying infection control practices.

7.5 Impacts on Consumers

7.5.1 Consumer Protection

On the basis that the current legislation does not address the key factors in minimising infection risks to the public, it could be argued that the base case affords little protection to consumers. As a consequence, the potential costs to society from blood-borne diseases are not minimised.

Therefore, in the event of regulatory failure (ie when an infection does occur), consumers bear not only the costs incurred from correcting the infectious disease/condition, but must also bear the costs of seeking restitution through the court system.

Thus, it would appear that consumers do not benefit from effective disease control under the current legislation, and are arguably only marginally better off than under no regulation.

While there is no formal mechanism for consumer complaints under the current legislation, consumers may provide information to local government authorities about breaches of the current legislation if they are aware of them. There are no remedies available to consumers under the existing legislation; that is, consumers must process any damages claims they may have through the justice system, where the onus of proof is on the plaintiff. However, it should be noted that this issue does not change under any of the proposed regulatory reform options.

7.5.2 Consumer Costs/Savings

Hairdressing, beauty therapy and skin penetration services purchased by consumers are discretionary in nature, and demand for these services therefore reflects lifestyle, income and trends in society as a whole.

It is probable that consumers bear the majority of any compliance costs imposed on service providers through the legislation. The annual costs in Queensland would be in the vicinity of \$282,000 for hairdressing services and \$160,000 for skin penetrating activities.⁷¹

Some services (eg. tattoo, piercing, and beauty therapy) do not appear to be price-sensitive, ie. consumers seeking those services will purchase them regardless of the cost of service. The costs of compliance on service providers appear to be passed on to consumers through the pricing of services, with little or no effect on consumer demand.

Hairdressing, however, appears to be more competitive and price sensitive as a whole and as such, is more prone to price variations. There is a general perception that service providers in the hairdressing sector are limited in the amount of compliance costs that will be borne by consumers. The wide disparity in pricing between hairdressers suggests that a marked level of product differentiation occurs and that, in some cases, it may be possible to pass on some or all of the compliance costs incurred by service providers.

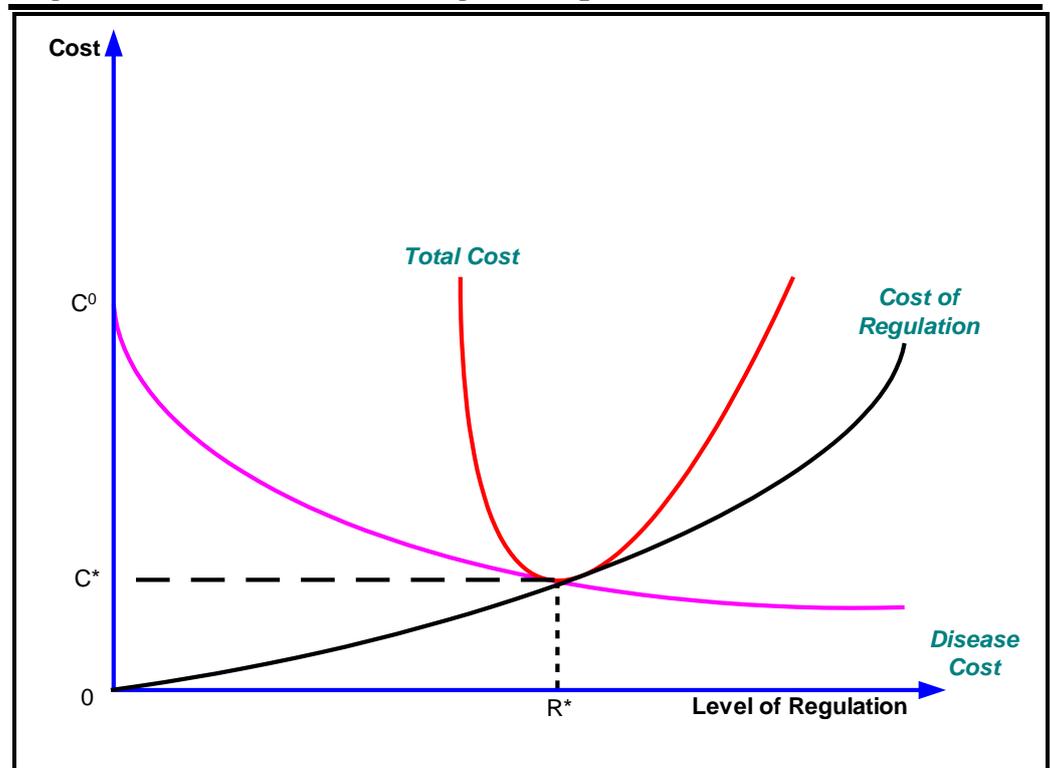
The primary benefit accruing to consumers from legislation governing hairdressing, beauty therapy and skin penetration businesses is a reduction in the level of risk associated with the activity undertaken by those businesses. **Figure 6.1** illustrates the potential cost-

⁷¹ Calculated on the number of premises multiplied by an average cost of \$105 for hairdressing/beauty therapy and \$200 for skin penetrating. Excludes premise construction costs.

benefit trade-off between the costs of regulation and the level of risk assumed by society.

Assuming all risks are fully identified and valued by consumers, consumers would maximise their benefits when the cost of incurring the diseases is no greater and no less than the cost of implementing the regulation. This is illustrated by R^*C^* in **Figure 6.1**. Any position outside of this point would push the consumer up the total cost curve by either incurring excessive disease cost risk or excessive regulation costs.

Figure 6.1 Risk Cost v Regulatory Cost-Benefit Trade-off⁷²



7.5.3 Consumer Choice and Access

Consumer choice and access to services are central features of a competitive market. Both elements are restricted under the current legislation.

As previously discussed, the current legislation prohibits providers from providing services to persons with infectious diseases/ conditions. The legislation does not make any allowance for preventative measure, eg. wearing of gloves when treating consumers with infectious skin conditions, double gloving when providing services to

⁷² C^0 represents the costs to society if no regulation existed; R^*C^* represents the optimal combination of regulation and disease costs imposed on society.

consumers with blood borne diseases. Thus, consumers appear to be unnecessarily prevented from receiving services under the current legislation.

Further, the current restrictions imposed on mobile operators reduce consumer access to services. These restrictions impact on consumers who are aged or infirm, or who lack transport to business centres, and on persons who prefer a mobile service. The restrictions also impact significantly on consumers in rural and remote areas, who may not have ready access to "fixed" business premises.

There is no data to suggest that consumers incur additional health risks when mobile services are provided. It is considered that all service providers should comply with appropriate infection control standards, regardless of the method of service delivery. In this way, and provided consumers are aware of the level of risk associated with a hairdressing, beauty therapy or skin penetration service, then consumers can make their own assessment of the costs and benefits associated with different forms of service delivery.

7.5.4 Other Consumer Issues

7.5.4.1 Antidiscrimination considerations

It has been suggested that the current restrictions on providers and consumers with infectious diseases/conditions could be in breach of anti-discrimination policies and legislation.

In its submission to the review, the Anti-discrimination Commission noted that there are exemptions under the Antidiscrimination Act 1991 for discriminatory acts on the basis of public health or workplace health and safety. However, the Commission commented that these exemptions could be hard to justify if there are alternatives to managing the risk of infectious diseases/conditions arising from the affected activities.

A Commonwealth Health & Aged Care submission also commented on the National HIV/AIDS Strategy and the National Hepatitis C Action Plan which aims not only to eliminate those diseases, but also to minimise the personal and social impacts of those diseases. These impacts can include stigma and isolation in the lives of people with those conditions, and discrimination against them when accessing to services.

7.6 Impacts on Regulators

7.6.1 Costs

The principal costs for regulators are those associated with developing, maintaining, enforcing and reviewing the legislation. In addition, other costs associated with the legislation may be incurred by, for example, the justice system, consumer affairs and other public sector areas.

The costs of developing, maintaining and reviewing legislation are unclear. For example, the budgeted annual cost of Queensland Health's legislative area is in the vicinity of \$990,000,⁷³ with additional funding available for special projects such as the current legislative review. However, this budget estimate represents all legislative issues affecting Queensland Health, including the costs of this legislative review.

Submissions from local government authorities did not provide information about the costs to them of monitoring and enforcing the current legislation. It is recognised that these costs may be difficult to estimate, since local government officers generally monitor and enforce a number of pieces of legislation, therefore it is not possible to separate individual costs. However, a number of local government submissions did comment that licensing/registration fees imposed on businesses are necessary to support the costs of inspections, audits and (where necessary) prosecutions. Some local government authorities also noted that the regulatory time lags associated with processing notices and following up actions seem to act as a disincentive for some local authorities to strictly enforce the legislation.

Industry stakeholders have commented that local governments do not appear to take an active role in respect of monitoring and enforcing legislative compliance, and there appears to be a view amongst stakeholders that they were not receiving 'value' for their licensing/registration fees. A recent survey by Queensland Health of local governments and public health units also indicated few if any prosecutions have occurred for breaches of legislation in recent years.⁷⁴ A subsequent survey of Public Health Units concerning complaints and investigations similarly indicated a limited number of complaints and investigations had been

⁷³ Queensland Health - Finance Division, 1999

⁷⁴ Queensland Health - Communicable Diseases Unit, 1998

conducted in relation to infection issues in the industries under review.⁷⁵

⁷⁵ Queensland Health - Legislative Projects Unit, 1999

It appears from the feedback obtained from Councils and information from Queensland Health, that the majority of data collection occurs in manual file format which is both tedious and time consuming to review. As noted by Brisbane City Council in its response to a project survey, this problem appears to be a function of the resources assigned to the administration of the legislation and the historical development of some administrative systems.

It is questionable whether the current methods of enforcement deliver any net benefit to the public, given that a "premises" focus does not appear to provide any effective control over factors implemented in the transmission of infectious diseases/conditions. This may be further compromised by lack of knowledge and understanding of the infection risks associated with the industries and their activities on the part of enforcement officers, and by the apparent duplication of investigation and review by public health units of Queensland Health.

As a result, it is probable that the net effect of the existing legislation to regulators is negative. Expenses incurred in enforcing the current legislation have imposed opportunity costs on society without any corresponding increase in public health benefits.

7.6.2 Ease of Administration

Some of the administrative advantages of the current premises licensing approach include that it:

- Provides a record of registered premises locations;
- Facilitates contact with service providers by recording business names, details and activities performed at premises; and
- Provides a means of raising revenue for local government to fund the investigation, audit and prosecution of service providers.

Key benefits associated with local government enforcement of the legislation are the wide distribution of local government authorities across the State, as well as the economies of scale they can achieve through monitoring and enforcing numerous pieces of legislation.

Further benefits arise in some areas (eg. Toowoomba City Council and Redland Shire Council), when councils and industry stakeholders combine to promote local awareness and understanding of the risks of infectious diseases/conditions, and effective means of minimising those risks.

It has been claimed that an advantage of the current system is associated with the licensing and registration system for premises. This system theoretically allows regulators to maintain a record of who is conducting particular activities and where they are located. However, anecdotal evidence indicates that there are numerous individuals or groups who are not licensed/registered, and who do not comply with the existing legislation.

Such legislative avoidance, however, can never be fully overcome under any regulatory model, since it is probable that there will always be some people who elect to operate outside the law. Local government authorities face significant difficulties with such operators, not only in identifying "illegal" operators, but also in successfully prosecuting them, since they may move on, and since consumers may often be reluctant to act as witnesses during prosecutions.

7.7 Assessment of Existing Legislation (Base Case)

The current legislation, which focuses on industries rather than activities, is not responsive to contemporary issues in the provision of hairdressing, beauty therapy and skin penetration services.

The current legislation does not address the key factors needed to reduce infection risks to the public, ie knowledge/skill in applying infection control standards. Therefore, the potential costs to the community arising from infectious diseases/conditions under the current legislation are unlikely to be significantly different to an unregulated model.

The current restrictions on competition within the affected industries appear not only to reduce the scope of services that may be provided, but also to reduce consumer choice and access to such services. Furthermore, some restrictions are potentially discriminatory in nature.

The costs of monitoring and enforcing the current legislation are not balanced by benefits to public health.

Overall, there is no net benefit to the community from the current legislation.

8. Assessment of Reform Options

8.1 Methodology

The assessment of reform options is based on the same process applied to the Base Case.⁷⁶ In this manner, the costs and benefits of each reform option are separately identified and assessed in terms of relative advantages and disadvantages over the Base Case (discussed in **Section 7**).

The reform options considered are:

- Option 1:** No Regulation
- Option 2:** Negative Licensing
- Option 3:** Two-tier approach (ie, licensing for high risk activities plus negative licensing for low/moderate risk activities]
- Option 4:** Premises licensing + Code of Conduct
- Option 5:** Premises licensing plus licensing of individuals

As was done with the Base Case, each of the above options has been considered in terms of the following impacts:

- Impacts on Public Health
- Impacts on Service Providers
- Impacts on Consumers
- Impacts on Regulatory bodies

The above options have been compared to identify which option maximises the net benefit to the community. An overall assessment of the five options is undertaken at **Section 8.8**, and a summary is presented in **Table 8.2**.

8.2 OPTION 1: NO REGULATION

Under Option 1, there would be no regulation of hairdressing, beauty therapy or skin penetration services. However (as with the Base Case and other regulatory options), other, non-industry specific legislation (e.g. *Workplace Health and Safety Act 1995*, *Trade Practices Act 1975*), would remain in place.

The "no regulation" model is generally considered to be suitable for circumstances where there are no concerns about public health risks associated with the activities undertaken.

⁷⁶ The 'Base Case' is essentially the scenario that would occur if there were no changes to the current situation. It is a point in time extrapolation of the current conditions.

However, concerns do exist about the potential risks of infectious diseases/conditions from these services, and, under a "no regulation" model, public health risks could be increased.

It appears to be generally accepted amongst stakeholders and the community that skin penetrating activities, which generate significant risk of infectious diseases/conditions, pose health risks to the community, and that legislation aimed at reducing those risks is justified on that basis.

8.2.1 Public Health Impacts

As discussed at Section 6, an assessment of the costs associated with infectious diseases indicates that there is a potential annual cost to society of between \$8 million and \$32 million⁷⁷ associated with treating blood-borne diseases that may arise from skin-penetrating activities.

Under a "no regulation" model, there would be no framework for reducing the risks (and associated costs) of infectious conditions/diseases. Thus, a "no regulation" model cannot effectively reduce the potential risks to public health, and thus treatment costs could be at the highest range noted above, ie \$32 million.

This cost exposure is somewhat comparable to the Base Case, given the apparent lack of effectiveness of the current legislation in addressing identified risk factors (eg. infection control training, knowledge and skills for service providers). However it could be argued that the mere existence of the existing legislation provides a level of awareness among providers and the community that results in some reduction in public health risks.

8.2.1.1 Public Health Education and Awareness Programs

It is probable that service providers would be the major beneficiaries under a "no regulation" model, since they would no longer bear any licensing or legislative compliance costs. However, some regulatory savings could also be made by government agencies, which would no longer bear the costs of developing, monitoring, enforcing and reviewing legislation. Regulatory savings could potentially be redirected towards public health education and awareness programs designed to improve provider and consumer awareness of risks associated with the hairdressing, beauty therapy and skin penetrating services.

Health promotion and disease prevention programs have received significant emphasis in recent years.

⁷⁷ Refer to **Appendix E** for an illustration of the disease costing calculations, which are based on the allocation of direct and indirect health expenditure across disease types based on incident rates and other factors.

Specifically designed preventative campaigns such as the national AIDS program, anti-smoking campaigns and the National Campaign Against Drug Abuse all provide examples of effective mechanisms for promoting community awareness and in turn, contributing to the reduction in health costs.

An effective public health education and awareness program could, potentially, generate a greater net public benefit than the maintenance and application of the existing legislation.

However, while health promotion and education activities are highly desirable, by themselves they would not be sufficient to effectively minimise the risks of infectious conditions/diseases that may arise from the activities under review.

8.2.2 Impacts on Service Providers

8.2.2.1 Compliance Costs

Under a "no regulation" model, service providers would have no legislative compliance costs. However, it could be argued that these cost savings may be negated if there is a subsequent increase in the incidence of serious infectious diseases, and an associated increase in civil actions by consumers against service providers, ie. for damages suffered.

8.2.2.2 Restrictions on Competitive Conduct

Under a "no regulation" model, there would be no restrictions on competitive conduct. Thus, the impacts on providers associated with the current legislation would be removed, ie, compliance costs, restrictions on the scope of services offered, restrictions on equipment used, and restrictions on mobile operators.

8.2.2.3 Employment and Training

Under a "no regulation" option, there would be no restrictions on the employment of mobile operators (other than the current restriction under the Hairdressers Industrial Award already mentioned in section 7). This option would thus enhance employment opportunities for mobile operators.

Business owners operating from "fixed" premises may be concerned that this would impact on their own employment prospects, since they have higher overheads and may not be able to compete with lower prices available from mobile operators. However, this is a competition issue rather than a health issue, and there are also issues of consumer

choice and access, particularly in rural and remote areas, to be taken into account (see section 8.2.3.3 below).

Since there would be no training requirements under this "no regulation" option (as with the Base Case), there would be no impact on training.

8.2.2.4 Self Regulation

Professional associations already exist for each of the industries under review except body piercing, and there is no barrier to their continuation under any of the Options under consideration.

Under a "no regulation" model, competition may increase between service providers, which in turn may provide an impetus for the further development of existing industry bodies/ professional associations and/or the establishment of new associations. Such an impetus could come from industry participants seeking to differentiate their services on the basis of quality, in order to increase market share and maximise revenue.

Stronger industry bodies could develop standards that are acceptable to the broadest segment of practitioners, and which also reflect the minimum acceptable level of quality to consumers. In turn, this may help to create a more informed market.

Under a self-regulatory approach, professional associations or industry bodies would be responsible for developing, administering and monitoring appropriate standards. An example of this arrangement is the Australian Acupuncture and Chinese Medicine Association (AACMA), which has specific membership criteria, and which has developed comprehensive infection control guidelines for use by members providing acupuncture services.

Not all industry bodies/professional associations, however, would have the resources to effectively monitor all members across the State.

A stronger emphasis on industry self-regulation, however, could result in higher membership fees being levied on members as industry bodies undertake the roles (e.g. audit, investigation, education and enforcement) previously fulfilled by regulators under the current system. Thus it is possible that the savings to providers from the removal of legislative compliance costs could be outweighed by cost increases from industry self-regulation, since industry bodies are unlikely to be able to match the scale efficiencies of existing regulators.

Additionally, membership of industry associations is voluntary (not compulsory), so does not cover all participants in the market. Furthermore, industry/professional associations do not have the same enforcement powers as government regulatory agencies. For

example, an industry association could, as a last resort, "expel" a member for non-compliance with industry standards, but could not impose statutory penalties as can be done under a regulatory scheme enforced by government agencies.

8.2.3 Impacts on Consumers

8.2.3.1 Consumer Protection

Hairdressing, beauty therapy and skin penetration services are used by a significant number of Queensland consumers although some services (eg. hairdressing) are probably accessed more frequently than other services (eg. body piercing).

Given the discretionary nature of many activities under consideration (eg. piercing, tattooing), it could be argued that consumers are more likely to have undertaken their own assessment of the costs and benefits associated with higher risk activities.

However, anecdotal evidence and feedback from stakeholders suggests that most consumers are heavily reliant on the information provided by service providers. It has also been suggested that consumer compliance with post-procedure care is often lacking, and this perception has been supported by a recent study of medical practitioners which indicates that the majority of post-piercing infections are due to poor patient aftercare rather than inappropriate infection control practices by operators.⁷⁸

Nevertheless (as with the existing legislation), consumers are most likely to bear any additional health risk costs associated with these services. As noted under **Section 8.2.1** above, these costs are expected to be marginally higher under "no regulation" than under the existing legislation (base case).

Under the "no regulation" option, government regulatory bodies would have no powers to respond to consumer complaints or to require operators to comply with specific standards. Consumer complaints about service providers would have to be handled by individual service providers and/or their professional associations.

⁷⁸ Brian Witherspoon, Toowoomba City Council, *Potential Health Complications Associated with the Positioning and Inadequate Care of Body Piercings*, unpublished, 1998

NB: This study, which was based on a survey of 112 general practitioners in the Toowoomba area, does not claim to be conclusive, and notes that it can only be taken as an indication of trends.

Consumer rights under this model are identical to the Base Case and all other options; that is, consumers would have common law rights (e.g. law of tort and/or equity).

In South Australia, it is proposed to repeal the existing hairdressing legislation and include hairdressing as a "prescribed service" under South Australia's consumer legislation. Under this approach, consumer protection is improved since "prescribed services" have implied warranties. Thus, if a consumer elects to take legal action against a hairdresser for damages suffered, there is no need to first prove that a certain quality of service was implied/warranted. This approach (which could be adapted for other services), may be one alternative to offset potential risks to the consumer and to improve overall protection, particularly for low risk services.

8.2.3.2 Consumer Costs/Savings

Under Option 1 (no regulation), consumers may benefit from a reduction in charges for services, as a flow-on from providers who will no longer have any regulatory compliance costs. However, these potential savings to consumers could be offset by correspondingly higher social costs associated with increased disease transmission risks. Whilst this increase in disease costs may only be marginal in relation to the Base Case, it could be quite significant when compared to the net outcome (ie. disease costs vs. costs of regulation) of Option 3.

8.2.3.3 Consumer Choice and Access

Under Option 1, consumer choice and access would be totally unrestricted by government intervention. Instead, the choice and depth of services would be determined through market forces.

8.2.4 Impacts on Regulators

Under a "no regulation" model, government bodies would incur no costs for the development, maintenance, enforcement or review of legislation. These cost savings could, however, be offset by additional government expenditure on public health education and promotional programs, and, potentially on increased costs of treating disease.

The lost revenue stream associated with licence/registration fees payable to local government authorities under the current legislation would appear to be offset by reduced regulatory costs for those local authorities. No impacts on the employment of government officers would be anticipated under a no regulation model, as officers engaged in regulatory monitoring and enforcement of the current legislation also undertake a

range of other regulatory tasks associated with other legislation.

The primary savings to regulators from Option 1 are likely to be the costs of undertaking legislative reviews such as this study in the future. This could result in a saving of around \$500,000 every 10 years.⁷⁹

8.2.5 Assessment of Option 1

The maximum benefit from a "no regulation" model is gained when the risks associated with any given activity is low, since market forces will dictate the optimal standard to minimise risks and attract custom. As such, this option is best suited to the lower and no risk activities.

However, the application of an unregulated model for higher or moderate risk activities is likely to generate significant adverse health consequences, with direct costs potentially reaching up to \$32 million per annum.⁸⁰ Thus, it would appear inappropriate to implement such a system for moderate/higher risk activities.

Submissions to the review did not support this Option. One submission (from a total of 75) proposed a combination of Options 1 and 2.

8.3 OPTION 2: NEGATIVE LICENSING

Under this option, operators would not be required to hold a licence, but would be required to undertake activities in accordance with specified legislative requirements. Failure to comply with such requirements would result in sanctions such as the imposition of statutory penalties (e.g. fines], or could result in an enforcement body applying to a Court for an Order to prohibit an operator from undertaking a specific activity or from participating in the market.

8.3.1 Legislative Coverage

A negative licensing approach could focus on activities undertaken, rather than on the definition of individual industries as occurs under the Base Case. Thus, any business or person (regardless of their industry definition) who undertakes an activity captured under the legislation would be automatically covered by the negative licensing requirements. An "activity based" approach, which is recommended in the Risk Assessment Report, is

⁷⁹ Department of Natural Resources estimate of individual legislative review costs (direct and indirect) under the PBT framework.

⁸⁰ Refer to Section 6 earlier in report and/or Appendix E for more information on disease costing.

better suited to current and ongoing changes in service structure and consumer preferences for various activities.

A negative licensing model could target different services/activities according to their level of risk, in a similar manner to that proposed under Option 3. For example, negative licensing legislation could impose standard infection control requirements for all operators, with *additional* requirements (eg. infection control training) for higher risk operators. Thus, Option 2 has the potential to provide a better targeted and less restrictive outcome than the existing legislation, which applies to all hairdressing, beauty therapy and skin penetration premises, regardless of the level of risk posed.

This approach also provides greater legislative flexibility and effectiveness. Legislation that is targeted at activities rather than industries, for example, could include a provision to enable guidelines to be made in relation to various activities (or categories of activities). Such guidelines can be more readily updated when there are changes in activities or infection control practices. This would improve legislative responsiveness and cost-effectiveness.

8.3.2 Public Health Impacts

Under a negative licensing approach, it is probable that the effectiveness of the legislation would be greater than that of the existing legislation (base case), since, as noted above, the legislation could establish higher infection control requirements on activities that generate the highest public health risks. For example, the legislation could require higher risk (ie skin penetrating) service providers to undertake infection control training prior to providing higher risk services.

A negative licensing model with effective infection control requirements could deliver a lower level of societal risk from infectious diseases/conditions that that delivered under an unregulated market or under the existing regulatory arrangements (Base Case).

However, a negative licensing model is primarily a reactive, complaints based model rather than a proactive model, so it may not provide a sufficiently high level of protection to the public from higher risk activities which are associated with blood-borne diseases.

The negative licensing model as outlined in the Queensland Health Discussion Paper is considered to be best suited

for those activities that give rise to lower and moderate infection risks, but not for those that give rise to higher risks (ie. skin penetration procedures).

8.3.3 Impacts on Service Providers

8.3.3.1 Compliance Costs

Under Option 2 (negative licensing), service providers would no longer have to pay licence or registration fees. However, service providers would still bear the costs associated with complying with the infection control requirements of the legislation.

Compliance costs under a negative licensing model are therefore expected to be lower than the compliance costs of the current legislation (Base Case), and higher than under Option 1 (the "no regulation" model). However compliance costs under Option 2 could increase if mandatory training requirements for higher risk operators are included, in which case, the costs of Option 2 could be similar to Option 3 (the two-tier model described in **Section 8.4**).

8.3.3.2 Restrictions on Competitive Conduct

The introduction of a negative licensing model would remove the restrictions on trade currently imposed by the existing legislation, eg. restrictions on mobile operators. All service providers would be able to provide services, provided they complied with infection control standards specified in the legislation.

8.3.3.3 Employment and Training Impacts

Since there would be no restrictions on mobile operators under a negative licensing model, employment opportunities for mobile operators could increase under this Option (as under Option 1).

Business proprietors operating from fixed premises may argue that this will impact on their own employment and that of their employees, since mobile operators may have lower business overheads and thus be able to provide more competitively priced (and/or more convenient) services to the public. However, this argument is a competition-based argument and has no health-based foundation, ie. it is not based upon an assessment of health risks.⁸¹

If training requirements for higher risk operators are mandated as part of the negative licensing model, training

⁸¹ The Risk Assessment Report concluded that infection control training and practices, rather than premises requirements, are the most significant factor in reducing infection risks.

opportunities and workplace skills within the affected industries could be enhanced.

It should be noted that the imposition of a training requirement for higher risk operators might have an impact on part-time employees, depending on the extent to which the costs of training are outweighed by the income generated from higher risk activities. However, it is anticipated that this impact would be minimal, due to the small number of participants who undertake higher risk activities.

8.3.4 Impacts on Consumers

8.3.4.1 Consumer Protection

Consumers generally incur the majority of costs and benefits associated with any regulatory model associated with service provision. Under a negative licensing model focused on activities, consumers are likely to face a lower level of risk from infectious diseases/conditions in comparison to the existing legislation (Base Case) and under a no regulation model (Option 1).

The use of statutory sanctions to enforce legislative provisions under Option 2 may provide a behavioural incentive to service providers to conform to prescribed infection control standards or guidelines. However, statutory sanctions under a negative licensing model are generally reactive, ie they are usually applied only after non-compliance has occurred, which could have significant health implications for consumers, particularly in relation to higher risk activities which generate the risk of blood-borne infectious diseases.

Consumer rights under Option 2 would be identical to other options, ie common law rights. In addition, consumers could make complaints or provide information to enforcement agencies about businesses that do not comply with prescribed infection control standards.

8.3.4.2 Consumer Costs/Savings

As noted earlier, the introduction of a negative licensing framework could generate a small reduction in the cost structure of service providers. However, the rate of flow-on reductions in the cost of services to consumers is dependent on the concentration of suppliers and level of price competition between service providers.

For hairdressing services, the savings arising under Option 2 from lower compliance costs (albeit marginal) and

the removal of restrictions on service provision should occur relatively quickly.

Conversely, savings in the tattoo and body piercing industries are unlikely to flow immediately, as customers are generally less price sensitive and operators target particular niche markets.

Nevertheless, it is possible that all consumers could receive a small proportional benefit from decreasing the compliance costs of service providers.

Additionally, access to services will improve under this model, as existing requirements restricting the provision of services would no longer exist.

8.3.4.3 Consumer Choice and Access

Limitations on the conduct of mobile operators under the Base Case (current legislation) have significant impacts on consumer choice and access, particularly for rural and remote communities, the disabled, the infirm, the aged and those who lack transport, as well as those for those who simply prefer a mobile service.

The removal of such limitations under this model (Option 2) would enhance consumer choice and access for all services provided by the hairdressing, beauty therapy and skin penetration industries.

Therefore, consumers are likely to benefit significantly under Option 2, in comparison to the Base Case as well Options 4 and 5.

8.3.5 Impacts on Regulators

8.3.5.1 Costs

Government regulatory bodies could benefit from the administratively simpler approach of a negative licensing model; however, they could also experience negative impacts including higher regulatory costs associated with:

- Loss of registration/licence fees (which currently subsidise enforcement costs);
- Increased monitoring costs due to a potential increase in the number of participants covered by the legislation (as a result of the easier business establishment process); and
- Difficulties in locating and identifying operators.

Given the loss of income from licensing/registration fees, it is not surprising that submissions from many

enforcement bodies did not support a negative licensing model.

However, regulatory costs could be offset under this model by imposing "user-pays" charges for inspections/audits of relevant businesses (ie, instead of the traditional licence fees). That is, when local authorities inspect a hairdressing, beauty therapy or skin penetration business, they could charge an inspection/audit fee, with further inspections/fees applied only in cases of non-compliance with legislative requirements.

Regulatory costs could also be reduced if increased competition within the industries provided an additional stimulus for the establishment of industry bodies to establish standards that would differentiate their products and provide an adequate level of protection to consumers from infection risks. However, there is no certainty that this would occur.

8.3.5.2 Ease of Administration

A disadvantage for regulatory bodies under a negative licensing model may be that of not having a ready record of business operators providing relevant services, and where those businesses are located. It should be noted, however, that under the current legislation (Base Case), enforcement bodies generally only have records of participants who comply with the legislation, ie those who register their business premises. Unregistered "backyard" and/or mobile operators are not generally monitored, because no record is held of their activities.

It could be possible under a negative licensing model to require providers to notify regulators of their activities, however this would depend to a large extent on voluntary compliance by service providers and/or by significant proactive monitoring by regulators to "track down" non-compliant providers.

The costs of proactive monitoring would not be offset by licensing or registration costs, since these do not apply under a negative licensing approach.

It is possible that professional associations, or an independent audit organisation, could conduct audits of the various market participants. However, the effectiveness of that approach would depend on (a) the establishment and approval of suitable audit organisations; (b) the willingness of participants to engage (and pay for) external organisations to undertake such audits; and (c) audit organisations notifying the

relevant government body of breaches of the legislation for enforcement purposes.

A negative licensing model is primarily reactive, rather than proactive, in nature. This means that, generally, enforcement action will not take place until after a breach of the legislation has occurred. While this might be acceptable in relation to lower risk activities, it could be very costly in relation to higher risk activities that pose a risk of transmitting blood-borne diseases. In addition, many blood-borne diseases are asymptomatic in nature, and after a period of time, it is very difficult to trace the source of an infection. Thus, breaches of the legislation could be difficult to trace, and very costly for all concerned.

8.3.6 Assessment of Option 2

The negative licensing model provides a useful model in establishing minimum criteria for infection control practices for various categories of activities. The ability of the model to separate activities according to their risk profiles, and to establish higher "benchmarks" for higher risk activities, also provides a better (and more cost effective) model for reducing health risks.

This model could include mandatory infection control training for higher risk operators, with an obligation being placed on business proprietors to ensure that employees undertaking higher risk procedures are trained in appropriate infection control procedures. This approach would provide a higher level of public health protection than either the Base Case or Options 1 or 4.

However the imposition of mandatory requirements as described above would increase the social cost of the model in line with Option 3 (the two-tier model), without necessarily providing a similar level of reduction in serious health risks (ie from blood-borne diseases) as is available under Option 3.

The major drawback of the negative licensing approach is that it is primarily reactive in nature. This drawback is particularly significant in relation to higher risk activities, which carry the risk of transmitting blood-borne diseases. The introduction of random audits/investigations would mitigate this risk, however this is unlikely to occur in the absence of licensing/registration fees or other cost-recovery mechanism for enforcement agencies.

Depending on the structure of the legislative model, the costs of implementing Option 2 are likely to be similar to Option 3 (the two-tier model), without a similar level of confidence in the level of risk reduction from higher-risk activities.

Only four of the 75 submissions to the review supported this Option, however one of those four also supported Option 3.

8.4 OPTION 3: TWO-TIER MODEL

Under the two-tiered approach of Option 3, activities that give risk to the more serious public health risks are dealt with in a different manner to those that pose less serious risks.

When assessing the level of risks posed by various hairdressing, beauty therapy and skin penetration activities, the Risk Assessment Report concluded that activities that are blood-letting in nature pose a higher risk than activities that are not blood-letting in nature.

Option 3 therefore takes a tiered approach in recognition of the different levels of risks posed by various activities.

Under Option 3, the elements of a licensing system (for higher risk services) are combined with those of a negative licensing system (for lower/moderate risk services). An illustration of this approach is contained in **Table 8.1**

Table 8.1: Example of Requirements under a Two-Tier Model

Higher Risk Activities	Low/Moderate Risk Activities
Licence required	No licence required
Mandatory infection control training for operators	Infection control training <i>recommended</i> , but not mandatory
Licence conditional upon provision and maintenance of an environment that facilitates appropriate infection control practices	Services to be provided in an environment that facilitates appropriate infection control practices
Operators/owners must comply with prescribed infection control standards	Operators/owners must comply with prescribed infection control standards

Source: Queensland Health, 1999

The purpose of licensing under this Option is not to limit numbers of providers or otherwise impede competition, but to reduce public health risks.

8.4.1 Business versus Individual Licensing under the Two-Tier Model

The Risk Assessment Report concluded that the most effective means of minimizing the risks to the public from blood borne virus infections would be to ensure that all persons involved in higher risk (ie skin penetration) activities have undergone a course of instruction/certification in infection control practices. Under the two-tier model, this could be achieved under **either** a business licensing **or** individual licensing approach. These two approaches are considered below.

8.4.1.1 Individual Licensing

Individual licensing under Option 3 would require all high risk service providers to hold a licence. This would allow government enforcement agencies to maintain a record of these providers, however such records may not translate into an improved ability to track individual operators for audit/ inspection purposes, as the mobility of operators will act as an impediment.

The cost implications of imposing licensing requirements on individuals would be higher than the cost implications of imposing licensing requirements on businesses, since there are significantly more individual operators than businesses providing higher risk services.

An individual licensing approach would particularly affect part time operators, who are less able to bear the additional costs of obtaining a licence.

In addition, the larger number of individual licences would create additional work and financial imposts on government enforcement agencies, which currently focus on business premises.

Other enforcement issues may work against the concept of individual licensing. For example, if an audit uncovers a problem with sterilising equipment at a business where a number of individuals are working, the issue would arise as to which individual (or all of them) would be held responsible for the defective equipment?

A further disadvantage of individual licensing is the lack of protection available to employees in circumstances where business owners may exert pressure on employees to provide services without taking appropriate infection control precautions, for example, to provide services with unsterilised equipment. A business licensing approach, by

contrast, would place statutory obligations on business proprietors to facilitate infection control practices.

Thus there appears to be little argument to support the imposition of individual licensing, as this would impose additional costs and administrative complexities, with little or no additional benefit to the public.

8.4.1.2 Business Licensing

Under a business licensing approach, the legislation could still mandate infection control training for all individuals providing high risk services, and could also require business owners to ensure that persons who provide higher risk services within their business have the required infection control training.

Under a business licensing approach, the business owner would also be responsible for ensuring that he/she maintains a business environment that facilitates the conduct of appropriate infection control practices. However, the consultancy team believes that environmental requirements should not be prescribed in the legislation, as this would limit/remove the potential for business proprietors to exercise initiative and innovation, and would thus limit/reduce potential benefits under this model.

It is anticipated that licence fees would be applied to businesses providing high risk services, and that the fee would cover administrative costs associated with the licence, plus the costs of an initial inspection and annual infection control audit of the business. The variable costs (eg. additional inspection/audit fees) would be recovered on a "user pays" basis, with business owners being responsible for any additional inspection/audit costs required as a result of non-compliance with the legislation.

In the case of businesses that sub-lease space for other providers (eg. tattooists), the principal business owner would remain responsible for ensuring that each provider has the appropriate infection control training, and is able to comply with prescribed infection control standards.

The consultancy team recommends that, if Option 3 is adopted, businesses with multiple locations should pay a single business licence fee, rather than a licence fee for each location, which would make the model expensive and unwieldy from a commercial viewpoint. It is considered critical that the issuing of a business licence covers all

locations of a particular business and does not impose unnecessary duplication of charges on business proprietors. If this occurs, the model would be no different to a premise based model plus infection control training for high risk service providers.

A business licensing approach would provide clarity as to who is responsible for audit/inspection fees, a significant improvement over an individual licensing approach. Further, it should provide regulatory bodies with details of business locations where high-risk services are performed. This will facilitate monitoring of activities within those businesses.

The application of business licensing (rather than individual licensing) is expected to provide a marginal cost saving to service providers over all, since it would affect a lower number of providers.

In conclusion, a business licensing approach is supported in preference to an individual licensing approach, and is used when considering the impacts of the two-tier model (below).

8.4.2 Public Health Impacts

As noted earlier, it is considered that effective control of infectious diseases/conditions from higher risk activities justifies a level of legislation that will influence operator knowledge and skill in infection control practices.

The two-tier model (Option 3) specifically targets activities according to their level of risk, and would mandate infection control training and associated requirements for higher risk services. Option 3 provides a proactive and cost-effective means of reducing public health risks.

The two-tier model addresses the legislative weaknesses outlined under the Base Case. It remedies the existing legislation's inability to address infection control training, and is also an improvement on the negative licensing model (Option 2). Option 3 is expected to deliver better public health outcomes than Option 2 or Option 4, and significantly better outcomes than Option 1 (no regulation).

Assuming a \$200,000⁸² annual regulation administration and maintenance budget and no income, the reduction in the

⁸² Estimates costs may be marginally higher than the existing regulatory for skin penetration premises, which is estimated at \$160,000 based on current

number of infections from HIV alone would need to be marginally greater than 2 cases per annum to make the proposed system cost-effective. In reality, however, income will be generated from the licensing of higher risk activities, which in turn will reduce the break-even risk reduction to less than 2 cases per annum.⁸³

In view of the projected improvement in reducing disease under this model, and disease cost-savings at a maximum value of \$32 million annually, it is considered that this option would generate the most-cost effective means to minimise public health risks.

8.4.2.1 Risks of Licensing

One public health risk associated with any form of licensing (but particularly associated with individual licensing) is the potential de facto legitimisation of practitioners who could use the term 'licensed' to imply some form of government sanction. This may provide consumers with an inappropriate level of confidence in selecting a supplier.

charges. For the purposes of this study, a 25% premium on existing costs has been assumed.

⁸³ Assuming an annual HIV cost of \$93,000 per case. Should a human capital cost approach be used, the breakeven number of cases would be less than 1.

However, it should be noted that this issue is no different from the current legislation (Base Case), under which a licensed or registered business owner could imply that the premise-based licence is a form of sanction for the qualifications of the operator.

8.4.3 Impacts on Service Providers

8.4.3.1 Compliance costs

Under the Base Case legislation, the costs of complying with premises requirements are estimated to be between \$5,000 and \$15,000 per premises at the time of establishment,⁸⁴ plus the standard annual licence fee, and ongoing costs of compliance with legislative requirements.

Under Option 3 (the two-tier model), businesses that provide no, lower and moderate risk services would not be required to be licensed and would not be required to meet specified premises requirements. These businesses would still be required to comply with appropriate infection control practices, but it is expected that compliance costs for these businesses would be significantly reduced.

Businesses providing higher risk services, however, could face similar compliance costs to those currently existing under the base case. These businesses would still be required to hold a licence, and would still be required to provide an appropriate environment to permit proper infection control practices. However, these costs are expected to be lower than a more prescriptive premises-based model, and should allow business owners to be flexible and innovative in generating an environment that facilitates appropriate infection control.

New costs associated with training would apply for persons/businesses undertaking higher-risk activities, since operators would be required to undergo basic and refresher training courses in relation to infection control, and business owners would also be obliged to ensure that their operators have the required training. Training costs would impact on both existing and potential service providers.

⁸⁴ Industry estimates for fit-out costs to comply with the existing legislation was approximately \$5000 for a hairdressing/beauty therapy business and up to \$15000 for a skin penetrating business.

However, costs associated with training requirements could be minimised if infection control training is incorporated into generic training courses, where such courses exist (eg. beauty therapy). Costs could also be reduced if some allowance is made for the certification of existing higher risk practitioners (eg. body piercers, tattooists) on the basis of their current infection control knowledge. Industry bodies could assist this process by working with Queensland Health and the Department of Employment, Training and Industrial Relations to identify and register courses that would meet appropriate infection control standards and to develop bridging mechanisms to assist existing participants migrate to the new standards.

Despite the apparent additional costs to higher risk service providers, more submissions supported the two-tier model in comparison to support for other models.

8.4.3.2 Restrictions on competitive conduct

Other than the licensing requirement for higher risk businesses, and a requirement for operators to have appropriate infection control training, Option 3 (two-tier model) would not contain any restrictions on competition.

The proposed model would not limit the provision of particular services, eg. mobile services. Rather, it will focus on the risk of the activity and the process for implementing appropriate infection control policies and procedures to minimise infection risks from that activity.

For higher risk businesses, the licensing criteria may include some environmental requirements.

8.4.3.3 Employment and Training Impacts

Employment opportunities for mobile operators would be increased under Option 3, particularly for low/moderate risk service providers who would not be required to comply with any building requirements.

Service providers in fixed business locations may be concerned that increased competition from mobile operators could affect their own employment prospects. However, any adverse impact on providers in fixed business locations is likely to be more than offset by increased employment opportunities in the mobile sector. In addition, given the small segment of the market which currently uses mobile operators, and the many different factors influencing consumers in their choice of provider (eg. quality, reputation, location), such impact is expected to be quite marginal.

Under Option 3, the following training requirements are expected to apply:

- All persons undertaking higher-risk activities must undertake infection control training or certification
- Business proprietors must ensure that all persons who undertake higher risk services within their business have the required infection control training/certification.

Thus, infection control training requirements would not impact on *all* participants in the hairdressing, beauty therapy and skin penetration industries. For example, infection training will be mandatory *only* for operators who undertake higher risk (ie skin-penetrating) activities, not for those who provide low/moderate risk services. Based on the current (estimated) number of service providers who undertake skin penetrating activities, and current accredited training levels completed, it is expected that training requirements could affect between 400 and 1,500 individuals throughout Queensland.⁸⁵

It is possible (but not probable) that some higher risk operators could drop out of employment as a result of these training requirements. This is more likely to happen if the operator is a part-time employee and if the cost of training does not outweigh the 'perceived' benefits. It should be noted however, that training costs are unlikely to be significant in isolation, and (as discussed above), may be included as a module in standard training courses.

There does not appear to be any evidence of significant part-time employment within the 'core' skin penetration industries (eg. tattoo/body piercing). However, the increasing prevalence of non-core businesses (eg. beauty therapists) providing skin penetration services, and the higher potential for beauty therapists to work part-time, suggests that this impact may be greater in the non-core skin penetrating service areas. However, in the absence of available quantitative data and industry advice that direct part-time service provision is not significant, it is unlikely that this impact would be significant.

It is envisaged that Queensland Health, in consultation with DETIR and industry bodies, will work towards

⁸⁵ Estimate based on current accredited training levels completed and the estimated number of service providers in skin penetrating activities.

accrediting infection control training courses, including those provided within national competency standards training (eg. beauty therapy).

A significant benefit to be gained from the infection control training requirement under Option 3 is the improvement in skill levels within the affected industries, and improved employability of operators who have undertaken such training.

Additionally, as noted under **Section 8.4.2** dealing with public health impacts, such training is considered to be the most effective means of reducing public health risks.

8.4.4 Impacts on Consumers

8.4.4.1 Consumer Protection

Consumer protection under the two-tier model would occur in five (5) primary ways:

- All businesses and operators would be required to comply with standard infection control guidelines/code of practice;
- Businesses that provide higher risk services must hold a licence based on relevant infection control criteria;
- All persons who undertake higher risk procedures must have recognised infection control training/certification;
- Regulatory agencies will monitor and enforce the legislation, both proactively and reactively; and
- Consumers can notify enforcement agencies if they believe a business is not complying with infection control requirements, and will also have the usual common law remedies if they suffer damages as a result of a hairdressing, beauty therapy or skin penetration service.

It is considered that the two-tier model of Option 3 could provide a higher level of protection from the risks of infectious conditions/diseases than the Base Case, a higher level than either Option 1 or Option 4, and a similar level of protection to Option 5.

When compared with Option 2, Option 3 would provide a similar level of protection for lower/moderate risk activities, and a *higher* level of protection for higher risk activities.

8.4.4.2 Consumer Costs/Savings

Under the two-tier model, there is likely to be some reduction in the cost structure of businesses that provide

low/moderate risk services, since a negative licensing framework will apply to those businesses. These cost savings to business could be passed on to consumers, however the rate of flow-on reductions may be dependent on the concentration of suppliers and level of price competition between participants.

The imposition of infection control training requirements on higher risk operators *may* create a marginal increase in the costs of services for higher risk activities; however, such costs could be reduced if infection control training is incorporated within existing generic training courses (eg. beauty therapy). Moreover, as previously noted, higher risk (skin penetrating) services do not appear to be price-sensitive, with consumers generally choosing a provider on the basis of perceived quality and type of service rather than on price.

As previously noted, the two tier model appears to be the most effective method for reducing the risk to consumers of infectious conditions/diseases from hairdressing, beauty therapy and skin penetration services. With the costs of disease ranging between \$8 million and \$32 million,⁸⁶ and an estimated regulatory cost of \$200,000,⁸⁷ the potential benefits to consumers far outweigh the costs.

8.4.4.3 Consumer Choice and Access

As noted under Option 2, restrictions on the conduct of mobile operators would have significant impacts on service access by rural and remote communities, the disabled, the infirm, the aged and those that lack transport.

Under the two-tiered model, there would be no restriction on the provision of lower and moderate risk activities by mobile service providers. This would enhance consumer access and choice in relation to hairdressing and the many beauty therapy services that fall within the lower/moderate risk classification.

Some level of restriction may still exist in relation to higher risk services activities, although it is possible that a business wishing to provide higher risk services from a mobile van or similar could meet the necessary licensing criteria, including BCA requirements.

⁸⁶ Refer to Appendix E for details on calculations.

⁸⁷ Estimates costs may be marginally higher than the existing regulatory for skin penetration premises, which is estimated at \$160,000 based on current charges. For the purposes of this study, a 25% premium on existing costs has been assumed.

If mobile provision of higher risk services does occur, it is considered unlikely that disabled, infirm, or aged persons would be significant users of high risk services (eg. tattoo, body piercing). However, the provision of mobile high risk services would improve consumer access to such services in rural and remote areas, as well as to those who lack transport to business centres and to those who may simply prefer a mobile service.

Therefore, consumers are likely to derive a higher benefit under Option 3 than under the Base Case or under Options 4 or 5.

8.4.5 Impacts on Regulators

8.4.5.1 Costs

Under a two-tier model, licence fees will only be payable by higher-risk participants, thus potentially leaving a cost-recovery void for regulatory agencies in respect of lower/moderate risk service providers.

However, this issue could be addressed by the imposition of "fee for service" charges, ie. by regulatory agencies charging businesses a fee when an inspection is undertaken. This would address current industry concerns that licence fees are often "money paid for nothing".

An annual inspection could be a "standard" charge for business proprietors, with any additional inspections charged only if a compliance notice is issued because of legislative infringements. Since the new legislation will have appropriate review/appeals mechanisms built in, this should alleviate industry concerns that all inspections may result in a compliance notice simply to enable the regulatory agency to charge an inspection fee.

This approach would (a) encourage enforcement agencies to undertake at least an annual inspection of businesses in their area, and (b) encourage service providers to maintain legislative compliance in order to avoid further inspection charges during the year.

This approach would also ensure that regulatory agencies are reasonably compensated:

- (a) by licence fees for the costs of administering a licensing system for higher risk businesses; and
- (b) by inspection fees for their inspection activities

8.4.5.2 Ease of Administration

Under Option 3, regulatory agencies would have a similar level of regulatory control as under the existing legislation in respect of higher-risk service providers, but not in respect of lower and moderate risk service providers (who would not be required to be licensed under this model). This may create some difficulties for regulatory agencies in locating 'problem' operators in the lower/moderate risk categories. Nevertheless, given the low level of identified complaints and prosecutions under the existing legislation, it is unlikely that this risk is significant.

Furthermore, the charging of inspection fees on a 'user pays' basis, will ensure that businesses have a market based incentive to comply with the legislation and to minimise the level of inspections undertaken.

8.4.6 Assessment of Option 3

The two-tier model, which combines the elements of a negative licensing approach for low/moderate risk services with a licensing approach for higher risk services,

provides a substantial improvement over the existing legislation, which requires all business premises to be licensed/registered, regardless of the level of risk they pose.

By segmenting activities according to their risk categories, and placing a higher level of regulatory controls over higher risk services, the two-tier model increases consumer protection from blood-borne diseases and reduces the net costs to society from those diseases.

Similarly, the two-tier model reduces compliance costs for lower/moderate risk services, while compliance costs for higher risk services are maintained at a similar level to those imposed under the current legislation. Training costs for operators may be an additional factor in this regard, but are not expected to be significant, and are justified to secure the net benefits to society in terms of disease reduction.

Finally, the imposition of licensing fees will offset the need to maintain enforcement agency capacity and the introduction of a user pays based inspection/audit system will provide a market based incentive for businesses to maintain satisfactory infection control practices.

Option 3 received the highest level of support from submissions to the review (30/75), significantly higher than any other Option.

8.5 OPTION 4: PREMISES LICENSING PLUS CODE OF PRACTICE

Under this approach, as under the Base Case, all business premises where hairdressing, beauty therapy and skin penetration services are provided would have to be licensed. In addition, operators would also be required to comply with guidelines or a code of practice. As with the Base Case, mobile hairdressing/beauty therapy operators would also be required to have licensed mobile premises, while mobile skin penetrating operators would not be allowed. There may also be restrictions as to who can provide/receive services.

8.5.1 Legislative Coverage

The focus of Option 4 is on industries rather than activities that generate risks. As a result, all market participants would be subject to the same premise-based requirements and potentially similar industry codes of practice, irrespective of the activities (or mix of activities) they undertake, and the risks they may pose.

Option 4 fails to address the differences in risks associated with the various activities and the changing nature of the hairdressing, beauty therapy and skin penetration industries. As with the existing legislation, the ability of this model to evolve in response to ongoing changes in service delivery will be limited.

Restrictions on mobile operators are likely to create a greater incentive for mobile operators to go 'underground' and operate illegally in order to meet the existing demand for their services. This 'dysfunctional' behavioural incentive may create additional risks to community health. However, this is unlikely to significantly differ than the situation under the current legislation, and could be mitigated by enforcement bodies undertaking more proactive monitoring and enforcement activities.

8.5.2 Public Health Impacts

Under Option 4, the requirement for all business premises to be licensed is unlikely to have any significant impact on the reduction of infectious diseases/conditions. As noted in the Risk Assessment Report, there is a lack of evidence of any causal relationship between premises and disease transmission (however it is acknowledged that premises may facilitate the implementation of appropriate infection control practices⁸⁸).

This option requires all business premises to be licensed, regardless of the level or risk they pose. Given the different levels of risk associated with various hairdressing, beauty therapy and skin penetration activities, it is unlikely that Option 4 would yield a more cost-effective reduction in disease costs than either the Base Case, or Options 1 or 5.

The effectiveness of this model would be dependent on the infection control requirements contained in any proposed guidelines or code of practice.

Any guidelines or codes which focus on premises requirements alone are unlikely to prove effective in terms of public health risk reduction, since this does not address the key issue of operator training, knowledge and skill in infection control practices. However, the development of guidelines/codes that require adherence to standard infection control practices may deliver a better health outcome than the Base Case or Option 1.

⁸⁸ The NHMRC and ANCA in the publication entitled 'Infection Control in the Health Care Setting' recognise some linkages between environmental surfaces and disease transmission. Importantly, the environments under review in this study are **not** health care settings.

It is suggested that industry-based codes of practice would be ineffective, due to the continual blurring of service function between various industries. For example, beauty therapists may also provide piercing/tattoo services, while tattoo and piercing businesses may provide both piercing and/or tattoo. Therefore, it is considered that a single set of guidelines/code of practice for infection control targeted at activities that give rise to public health risks would be more effective in terms of reducing infection risks.

8.5.3 Impacts on Service Providers

8.5.3.1 Compliance Costs

Under Option 4, premises requirements would be imposed on all industry participants, as no distinction is made between the risks associated with any activity.

As noted under the Base Case, the costs associated with maintaining a premises to the standards specified in the current legislation (or any proposed building code requirements) are likely to be immaterial, given consumer demand (preference) driven construction standards.

However, the imposition of prescriptive "premises" requirements, with no additional (eg. public health) benefit, is both inefficient and inappropriate. Further, the building compliance requirements under this option will only relate to those participants meeting the industry definitions for hairdressing, beauty therapy or skin penetration. As a result, the same competitive disadvantages which occur under the existing legislation (ie. Base Case) will remain under this model.

Prescriptive standards for premises would reduce the flexibility of individual businesses and operators from developing innovative and low cost solutions to infection control requirements. For example, the outsourcing of equipment sterilisation would be pointless if there was a legislative requirement to have an autoclave in every premise where skin penetrating activities occur. This could impose an inefficient level of compliance costs on service providers.

Depending on the details of building requirements and the codes of practice, the actual costs of compliance under this model is expected to be similar to or greater than the costs incurred under the Base Case. Compliance costs associated with infection control standards will be in

addition to the existing annual licensing costs, which range upwards of \$442,000.⁸⁹

Thus (depending on the premises standards and the content of the proposed codes under this model), the compliance costs of Option 4 could be at least as much as (and potentially higher than) the compliance costs incurred under the Base Case and Option 3.

8.5.3.2 Restrictions on Competitive Conduct

Under Option 4, there would continue to be restrictions (as with the Base Case) on mobile hairdressing and beauty therapy operators, who would be required to have a 'licensed' establishment. In addition, as outlined in the Queensland Health Discussion Paper, September 1998, tattooists and body piercers would not be allowed to provide mobile services under this model (as is the case under the existing legislation).

This model could also include restrictions as to whom services could be provided to (e.g. only allowed to provide services to the aged and infirm).

89 Combined licensing costs under the existing legislation, ie \$282,000 for hairdressing/beauty therapy premises and \$160,000 for skin penetrating premises (see section 7.1.15).

These proposed restrictions on mobile operators would have the impact of reducing potential market opportunities available to operators in these markets. Such restrictions are not justified on grounds of public health risk since, (as noted in the Risk Assessment Report), there is no evidence linking premises as a causal factor in infectious conditions/diseases.

Some industry participants in "fixed" business premises may support restrictions on mobile service provision; however, as noted in the discussion of the Base Case, such support is more likely to be based on restricting competition than on public health grounds.

The application of industry codes of practice under Option 4 could engender some competition-based disadvantages. For example, an industry-based code of practice would apply only to those providers who are captured by the definition of the industry, but would not apply to those providers who are not captured by the definition but nevertheless provide similar services. For example, an industry based code of practice for beauty therapists would apply only to those who fall within the definition of beauty therapists. It may not apply to those providers who are not beauty therapists as defined, but who nevertheless provide services that may be similar to those provided by beauty therapists (eg. department store assistants who demonstrate/apply cosmetics).

This could place some industry participants at a competitive disadvantage, and is a key reason why activity-based legislation (as per options 2 or 3) is preferred to industry-based legislation.

8.5.3.3 Employment and Training Impacts

As noted in the section above, Option 4 (in comparison to Options 1,2 and 3) imposes significant impediments to the market-place development of mobile service providers, without taking into account the level of risk associated with the services they provide.

At present, there are approximately 270 registered mobile providers and an unknown number of unregistered, "back yard" or "black market" providers. These operators are most likely to be sole operators, and under current circumstances would be unlikely and/or unable to employ other operators.⁹⁰

⁹⁰ Queensland Health Discussion Paper - Review of Hairdressing, Beauty Therapy and Skin Penetration Legislation, 1998.

The continuance of current restrictions on mobile operators, or the imposition of new restrictions, could affect the continued employment of some registered and most unregistered providers. Moreover, the continuance of restrictions on mobile operators would restrict any employment growth in those service areas, and may act as a barrier to existing businesses "branching out" into mobile service provision.

Option 4 does not provide any training opportunities for current participants or potential new participants, and does not add to skill levels within the various industries.

8.5.4 Impacts on Consumers

8.5.4.1 Consumer Protection

The level of consumer protection under Option 4 may be marginally higher than the Base Case, depending on the effectiveness of the code or codes of practice to be developed. However, it is unlikely to be as high as the level of protection available under Option 3 or 5, since it does not include infection control training requirements, and captures only industries, rather than activities.

Under this model, as with other models except Option 1, statutory penalties would apply to business owners who breach the legislation. In addition, as with all other models, common law remedies would be available to consumers, and complaints could be made to enforcement agencies about providers who breach the legislative requirements.

8.5.4.2 Consumer Costs/Savings

There are unlikely to be any compliance savings passed from service providers to consumers under Option 4, since compliance costs to service providers are expected to be similar to (or marginally higher than) the Base Case,

Furthermore, based on the conclusions of the Risk Assessment Report, it is questionable whether premises licensing can deliver any tangible benefits to consumers in the form of lower infection risks

8.5.4.3 Consumer Choice and Access

The restrictions on mobile operators proposed under Option 4 would limit consumer choice and access to hairdressing, beauty therapy and skin penetration services, without any corresponding benefits in the form of lower risk. This impacts particularly on rural and remote areas, as well as

on those who lack transport or who may simply prefer to receive a mobile service. This indicates that Option 4 does not provide the optimal result for consumers

8.5.5 Impacts on Regulators

8.5.5.1 Costs

Under Option 4, the administrative, monitoring and enforcement costs to regulators are likely to be the same as those under the Base Case (ie, the existing legislation).

Regulatory agencies would collect licence fees from those participants who apply for licences, and would conduct inspections/audits (both proactive and reactive) in the same manner as the Base Case.

8.5.5.2 Ease of Administration

Option 4 retains a key advantage of the existing legislation in providing an immediate record of businesses providing hairdressing, beauty therapy and skin penetration activities and the location of those businesses. However, this does not capture those providers who elect to provide services illegally, ie as "backyard", or unregistered operators.

8.5.6 Assessment of Option 4

Under this model, the potential cost to the community from the existence of infectious diseases is unlikely to be significantly different to that of the current regulatory system (ie the Base Case).

The restrictions placed upon competition under Option 4 reduce market participation as well as consumer choice and access, and do not appear to be based on the risks associated with the provision of various activities.

This model is unlikely to be as cost effective as Options 2 or 3, as it does not address the differences in risk levels associated with the different activities provided within the hairdressing, beauty therapy and skin penetration industries.

Only seven submissions (from a total of 75) supported Option 4.

8.6 OPTION 5: PREMISE LICENSING PLUS LICENSING OF INDIVIDUAL OPERATORS

This model is a variation of Option 4 (premises licence plus code of conduct), with the **additional** impost of licensing each individual operator. The benefits and disadvantages associated with operator licensing were discussed under Option 3, and this model does not appear to impose any additional requirements. The relative advantages of this model are summarised in **Table 8.1** and the costs and benefits are shown at **Appendix C**.

8.6.1 Legislative Coverage

In line with Option 4, this model focuses on the industries affected rather than the activities that generate disease risks. Furthermore, the imposition of restrictions on mobile operators would result in Option 5 having the same problems as Option 4.

Therefore it is possible that coverage under this legislation will be less than that identified for Option 3, unless the industry definitions contained in the legislation capture all the current and potential activities that may be undertaken in those industries.

8.6.2 Public Health Impacts

Under this model, which would be likely to include infection control training in the criteria for individual licences, it would be possible to reduce the disease costs associated with infectious diseases/conditions to a level comparable with that for both Options 2 and 3. This model could therefore be equally effective (albeit, not as cost-effective) as Option 3 in reducing infection risks arising from hairdressing, beauty therapy and skin penetration activities (provided mandatory infection control training for individuals is imposed as part of the licensing conditions).

This model, like Option 4, does not address the different risk categories of the various services, and imposes the same level of regulation (including "premises" requirements) on all providers, regardless of the level of risk posed by the services they provide.

Thus, while Option 5 may be as effective as Option 3 in reducing public health risks, it is not as cost effective as Option 3.

8.6.3 Impacts on Service Providers

8.6.3.1 Compliance Costs

As noted earlier, the imposition of premises licensing, codes of practice and individual licensing under Option 5 duplicates the benefits that can be achieved through a significantly less prescriptive regulatory model.

It is unlikely that compliance costs under this model will be lower than those costs imposed by the other four options, and is likely to be *significantly* greater than the existing annual licensing cost of \$442,000,⁹¹ when the additional costs associated with individual licences and training requirements are factored in.

Option 5 (as with the Base Case and Option 4), imposes requirements on all service providers, regardless of the level of risk they pose. This Option therefore imposes unnecessary compliance costs on service providers of no, lower and moderate risk services.

This model would impose the highest compliance costs on service providers in comparison to the other models discussed.

8.6.3.2 Restrictions on Competitive Conduct

Option 5 does not improve or change the limitations on competitive conduct identified for the Base Case or Option 4. The potentially tighter restrictions on mobile service providers introduced in Option 4 and Option 5 compromises the extent to which industry participants can differentiate their services through innovation and flexibility.

8.6.3.3 Employment and Training Impacts

Option 5 could encourage infection control training within the affected industries, however the imposition of individual licensing fees on all operators would increase overall costs to individuals. Thus, Option 5 could discourage people (particularly part-time workers) from undertaking training in order to enter the market.

Option 5 may therefore provide the most significant adverse employment impacts of all Options considered.

⁹¹ Combined licensing costs under current legislation (see section 7.1.15).

8.6.4 Impacts on Consumers

8.6.4.1 Consumer Protection

As noted in the section dealing with public health risks, infection risks to consumers would be more effectively reduced under Option 5 than under the Base Case and Options 1 and 4.

Since mandatory infection control training could be imposed under either Options 3 or 5, Option 5 is expected to deliver the same degree of risk reduction as Option 3 (but would not be as cost effective as Option 3).

Under Option 5, as with Option 3, statutory penalties would apply to service providers and business owners who breach the legislation. Consumers could make complaints or provide information to regulatory bodies if they believed that a provider was not complying with the legislation.

In addition, as with all other models, common law remedies would be available to consumers who suffer damages as a result of a hairdressing, beauty therapy or skin penetration service.

8.6.4.2 Consumer Costs/Savings

Compliance costs under Option 5 are expected to be significantly higher than any other Option, so providers would have no scope to reduce service costs to consumers.

It is acknowledged that this model improves on the public health and consumer protection outcomes identified for Option 4, however it imposes additional costs without any significant additional benefit when compared to Option 3. For example, infection control training requirements can be mandated under Option 3 without the need for individual licensing.

Thus, it is considered that Option 5 imposes additional costs on participants without any significant benefit to consumers.

8.6.4.3 Consumer Choice and Access

Restrictions on mobile operators are expected to be similar to those under Option 4, and would have similarly significant impacts on service access by rural and remote communities, the disabled, the infirm, the aged and those who lack transport.

Option 5 limits consumer choice and access to services in a similar manner to that of Option 4. These restrictions

on choice and access are without any corresponding benefits in the form of lower risk, which indicates that this model does not provide the optimal result for consumers.

8.6.5 Impacts on Regulators

8.6.5.1 Costs to Regulators

Under Option 5, regulatory agencies would licence not only all business premises where hairdressing, beauty therapy and skin penetration services are provided, but would also licence all individuals providing those services.

This would effectively more than double the licensing burden of the existing legislation (Base Case), which covers business premises only. Thus, regulators would bear significant additional costs of administering this model, in both the short- and long-term.

8.6.5.2 Ease of Administration

Option 5 retains the same advantages as Option 4 in relation to premise locations and also has the added advantage of being able to keep track of individuals providing the services. As such, this model may be marginally easier to administer than all other options with the exception of Option 1. However, as noted in the earlier discussion about the advantages/disadvantages of individual licensing (see **Section 8.4.1**), such records may not translate into an improved ability for regulatory agencies to track individual operators for audit/inspection purposes, as the mobility of operators will act as an impediment.

8.6.6 Assessment of Option 5

Whilst it is acknowledged that this model will improve on the public health outcomes identified for Option 4, it is unlikely that it would be as cost-effective as Option 3.

The dual licensing requirements (ie for business premises and for individual operators) would have significant cost impacts for service providers, and would create a greater regulatory burden for enforcement bodies. Nevertheless, it is the only Option other than Option 3 that can meet the primary objective of infection risk reduction.

This Option was not proposed in the Discussion Paper and therefore did not receive any supporting submissions.

8.7 Overall Assessment of Options

A comparative analysis of the impacts under each option was undertaken in order to identify a "preferred option".

The results of the analysis are summarised in **Table 8.2**, which provides an indicative ranking of each Option's ability to meet review criteria.

Option 1 (no regulation) is considered suitable only for activities that generate no health risks.

Option 2 (negative licensing) is considered suitable for activities that may generate low or moderate health risks, but is not suitable for higher risk activities, ie skin penetrating activities that potentially involve risks of blood-borne diseases.

Option 4 (premises licensing plus Code of Conduct) imposes restrictions and compliance costs on all service providers regardless of the level of health risks they may pose. It does not provide any net benefit to the public.

Option 5 (premises licensing plus individual licensing) similarly imposes restrictions and compliance costs on all service providers, without regard to the level of risk they may pose. It is considered suitable for skin penetrating activities that may carry high health risks, but is the most costly of all options.

As shown in **Table 8.2**, Option 3 (two tier model) is the "preferred option".

Option 3 applies different levels of regulation according to the level of health risks. It imposes no regulatory requirements on activities that generate no risk; applies negative licensing to activities that give rise to lower and moderate risks, and requires businesses providing higher risk services to be licensed on the basis of their ability to meet specified infection control criteria. Option 3 also mandates infection control training for persons who provide higher risk services.

Licensing requirements are imposed on higher risk services not to limit provider numbers or to otherwise impede competition, but only **to ensure that public health infection risks are effectively reduced**. There are no proposed restrictions on the type of person or business who/which can provide services, provided they meet the prescribed infection control standards.

Option 3, the preferred model, effectively meets the risk minimisation objective, and maximises public health benefits with the least impact on business activities.

Table 8.2: Assessment of Impacts under each Option

IMPACT/BENEFIT	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5	OPTION PREFERENCE
A PUBLIC HEALTH IMPACTS						
• Meets the objective of reducing risks to the public from infectious diseases/ conditions	1	2	5	1	5	Options 3,5
• Reduces costs of disease management	1	3	5	1	5	
• Deals with low/moderate risk activities in most cost effective manner	3	5	5	2	1	Option 2
• Deals with higher risk activities in most cost effective manner	1	3	5	2	4	Option 3
B IMPACTS ON PROVIDERS						
• Reduces compliance costs to providers	5	4	3	2	1	Option 1
• Removes restrictions on competitive conduct	5	4	4	1	1	Option 1
• Enhances training opportunities	1	5	5	1	5	Option 5
C IMPACTS ON CONSUMERS						
• Provides consumer protection from infection risks	1	2	5	1	5	Options 3,5
• Potential reduction in costs of services to consumers (flow-on from cost savings to providers)	5	4	3	2	1	Option 1
• Enhances consumer choice and access	5	5	4	1	1	Options 1, 2
D IMPACTS ON REGULATORS						
• Reduces regulatory costs	5	2	4	4	3	Option 1
• Ease of Administration	5	2	3	4	3	Option 1
TOTAL SCORE	38	41	51	22	35	Option 3

Rankings in the above Table are an indicative assessment of each option's ability to meet review criteria.

5 is the highest ranking, 1 is the lowest.

9. Experience in Other Jurisdictions

Hairdressing has been, and remains subject to public health regulation by most health authorities through the application of premises' licensing or registrations and/or regulations about health related standards.

Generally, skin penetration has not historically been the subject of occupational regulation, or "operator" based regulation, although it has been the subject of premises' regulation and legislation about health related standards.

Currently, the type and extent of the regulation of hairdressing and skin penetration across the States and Territories varies considerably. Some jurisdictions have commenced, or will soon commence, NCP reviews of their regulation of the hairdressing, beauty therapy and skin penetration industries.

The ACT and Tasmania have recently enacted new public health legislation with schemes for the regulation of certain activities categorised as "public health risk activities". The legislation in these two States is similar in that it addresses and regulates certain activities (on a public health risk basis) rather than businesses or occupations.

The ACT legislation provides that the Minister may, by instrument, declare an activity and/or procedure to be a public health risk activity, i.e. an activity that may result in the transmission of disease, or that may otherwise adversely affect the health of individuals in the context of the wider health of the community. Any such declaration must indicate whether the declared activity or procedure is a licensable or non-licensable activity or procedure.

Persons carrying on public health risk activities or procedures must comply with a Code of Practice in relation to that activity or procedure. (The legislation provides that the Minister may establish Codes of Practice, setting out minimum standards or guidelines).

Those public health risk activities or procedures which have been declared to be licensable must not be undertaken unless the person doing so holds an "activity licence" or "procedure licence" in relation to the activity/procedure, and must not be undertaken except in accordance with the licence.

Decisions about the granting or refusal of an activity licence must have regard to:

- the suitability of premises for the activity;

-
- the competence and experience of the applicant;
 - the adequacy of equipment to carry on or perform the activity in accordance with any applicable Code of Practice;
 - any previous contravention by the applicant;
 - the potential public health risks associated with the activity; and
 - any other matters relevant to the interests of public health.

Decisions about the granting or refusal of a "procedure licence" are the same as those for an "activity licence", except there is no requirement in relation to the suitability of premises, or in relation to the adequacy of equipment.

In Tasmania, in determining an application for licence, the competency of the applicant to undertake the activity in accordance with any relevant guidelines must be considered. If so declared by public notice, operators may also have to register their premises. Separate guidelines have been issued in respect of the activities of ear and body piercing, tattooing, and acupuncture. These require registration of premises with local government, compliance with infection control measures and related measures.

A brief summary of the regulatory arrangements in other Australian jurisdictions is provided in **Appendix D**.

The findings of this report are consistent with the movements towards a less prescriptive and restrictive regulatory environment in other jurisdictions. The preferred option (ie. Option 3, the two-tier model) is consistent with recent Tasmanian and ACT legislation.

10. Conclusions

10.1 Existing Legislation

Given the primary objective of the existing legislation is to minimise the risk of infection from the activities associated with the hairdressing, beauty therapy and skin penetration industries, the primary benefit to the public would arise from the cost-effective control of these risks.

A primary finding of the risk assessment was the formal recognition that different activities give rise to different risks. Any legislation that intends to minimise the risk associated with infectious conditions and communicable diseases should therefore focus on the processes/activities that give rise to those risks.

The profile of activities and risks outlined in this report indicates that the major risks to public health lie with blood borne diseases and therefore those activities that are bloodletting in nature.

The premises of any given operator is not directly relevant to preventing the transmission of infectious conditions/communicable diseases. Premises do however, act to facilitate practitioners to conduct good infection control practices.

This outcome was reinforced in the cost benefit assessment which found that there was unlikely to be a net public benefit from the maintenance of the existing hairdressing, beauty therapy and skin penetration legislation.

10.2 Reform Options

No net public benefit could be demonstrated with the retention of the existing regulations. Furthermore, it was found that the benefit to the community would be greater under an alternative model. The assessment of the reform options identified different strengths and weaknesses in all models proposed and these are summarised in **Appendix C**. The alternative associated with the highest net public benefit is a model that is based upon a two-tier regulatory system targeted at specific hairdressing, beauty therapy and skin penetration activities on the basis of infection risk.

The experience in other States has seen a growing emphasis on developing a better model to address the risks associated with the activities provided by the hairdressing, beauty therapy and skin penetration

industries. Tasmania and the ACT have both adopted approaches that seek to address different levels of activity risk. These models appear to be consistent with the findings of this report.

In addition, the preferred model also received the largest proportion of support from the submissions to the project (refer to **Appendix A**).

Overall, the PBT assessment concluded that Option 3 is the most effective method of achieving the legislative objective for the following reasons:

- Removes barriers to competition imposed under the existing and proposed premise based approaches;
- Impedes competition only to the extent that businesses undertaking higher risk (ie. skin penetrating) activities must meet certain licensing criteria that are clearly related to risk minimisation;
- Addresses the factors implicated in the risks of infection/communicable disease transmission (eg. operator skill and knowledge);
- Minimises the costs of disease to the community from the activities undertaken in the hairdressing, beauty therapy and skin penetration industries by recognising that significantly higher personal, social and economic costs arise from blood borne diseases than from other infections;
- Focuses on activities rather than industries, allowing more effective targeting;
- Addresses the weaknesses identified in the other alternative models and/or provides the same level of consumer protection more cost-effectively;
- Clearly focuses on the roles of operators and business proprietors in minimising the risks from communicable diseases/infectious conditions;
- Regulators are no worse off under this model as those businesses requiring monitoring are liable to pay for any audit/investigations undertaken; and
- Instills a market incentive on participants to minimise adverse behaviour by imposing costs of investigations/audits on the non-compliant party.
- Provides an effective level of protection to the public from (a) Bloodborne diseases and conditions and (b) Other infections by:
 - iii. Requiring businesses that provide higher risk activities to be licensed according to specified risk minimisation criteria, and by requiring persons who provide higher risk services to have completed approved infection control training or examination; and

iv. Requiring all service providers (irrespective of risk classification) to take reasonable steps to minimise the risks of infections/communicable diseases.

Finally, Option 3 also minimises the impacts on employment within the affected industries and maximises access to services by potentially disadvantaged groups (eg. infirm, aged, rural and remote communities).

Appendix A - Summary of Submissions

Appendix B - Legislative Extracts

Appendix C - Impact Statement Matrix

	BASE CASE (premises licensing)	OPTION 1 (no regulation)	OPTION 2 (negative licensing)	OPTION 3 (two-tier model)	OPTION 4 (premises licensing and code of practice)	OPTION 5 Premises licensing <u>and</u> individual licensing
Description of Option	All premises must be licensed regardless of level of risk	No legislation	No licensing requirements All service providers must comply with infection control standards	High risk s businesses must be licensed All high risk service providers must have infection control training/certification All service providers (regardless of risk) must comply with infection control standards	Same as Base Case plus Code of Practice applies to all operators regardless of risk level	All premises must be licensed regardless of risk level All individual operators must be licensed regardless of risk level
PUBLIC HEALTH IMPACTS						
Reduces Public Health Risks (ie, meets risk minimisation objective of the legislation)	No - Does not address key factors needed to reduce infection risk(infection control standards & training) - however it may encourage some precautionary measures (eg. sterilisation of equipment)	No - Does not address key factors needed to reduce infection risks	Partially - Could be effective in respect of low/moderate risk activities, but may not effectively minimise risks of blood-borne diseases from high risk activities	Yes - Incorporates the key factors needed to minimise the risks of blood-borne diseases and other infectious conditions	No - Does not incorporate the key factors needed to minimise infection risks, particularly blood borne diseases, ie infection control training and skills	Yes - provided infection control training is the key criteria for individual licences
Reduces disease costs	No - Costs of treating disease could range between \$8m and \$32m	No - Costs of treating disease could range between \$8m and \$32m Costs may be marginally higher than under Base Case.	Could partially reduce disease costs; Costs should be less than under Base Case.	Yes - Costs of treating disease should be significantly less than under Base Case	No - Costs of treating disease could range between \$8m and \$32m; Costs may be less than under Base Case (depending on infection control standards in code)	Yes - Costs of treating disease should be significantly less than under Base Case
Cost Effective approach to minimising risks and disease costs	No Imposes costs, regardless of level of risks	No Does not address infection risks (and associated costs) to the community	Yes, but may not sufficiently reduce costs of blood borne diseases	Yes Addresses activities according to level of risk	No Imposes costs regardless of level of risks	No Imposes significant costs, regardless of level of risks
IMPACTS ON SERVICE PROVIDERS						
Compliance Costs	Estimated at \$442,000 (licensing costs of all providers) plus estimated additional \$5000-\$15000 per location for premises requirements	None	Less than existing licensing costs of \$442,000	Lower costs for low/moderate risk activities; And at least equal to the existing licensing costs of \$160,000 for high risk (ie skin penetrating) activities	At least equal to the existing licensing costs of \$442,000	In excess of existing licensing costs of \$442,000
Restrictions on competitive conduct	Yes - Restrictions on mobile service providers Restrictions on service provision by/to persons with infections Inconsistent application of	No restrictions	No restrictions	Some restrictions - High risk businesses would be required to hold a licence (based on infection control criteria) and to ensure that all high risk service providers within	Yes - Similar restrictions to Base Case	Yes - Similar restrictions to Base Case plus additional licensing requirements for individual service providers

	BASE CASE (premises licensing)	OPTION 1 (no regulation)	OPTION 2 (negative licensing)	OPTION 3 (two-tier model)	OPTION 4 (premises licensing and code of practice)	OPTION 5 Premises licensing <u>and</u> individual licensing
	legislation (ie not applied to some provider groups); Some service providers exempted from legislative requirements			the business have infection control training/certification No restrictions on mobile service providers, or on provision of services.		
Employment impacts	Restricts employment of mobile service providers	No restrictions on mobile operators - this option is likely to increase employment opportunities for mobile service providers, with no net adverse effect on service providers in "fixed" business locations	No restrictions on mobile operators - this option is likely to increase employment opportunities for mobile service providers, with no net adverse effect on service providers in "fixed" business locations	No restrictions on mobile operators - This option is likely to increase employment opportunities for mobile service providers, with no net adverse effect on service providers in "fixed" business locations	Similar to Base Case	Similar to Base Case, <u>plus</u> additional negative impact if licensing requirements for individual operators discourage participation in the market
Training impacts	No impact on training	No impact on training	May enhance training opportunities for some service providers (depending on how the model is developed)	Would enhance training opportunities for high risk service providers and enhance workplace skills in infection control	No impact on training	If infection control training is mandated in the licensing criteria for individuals under this model, it could enhance training opportunities and enhance workplace skills
IMPACTS ON CONSUMERS						
Consumer protection	Does not effectively reduce infection risks. Regulatory bodies may respond to consumer complaints and/or information. Consumers have common law rights.	Would not effectively reduce infection risks. Consumers would have common law rights only.	Expected to partially reduce infection risks. Consumers would have same rights as under Base Case.	Expected to significantly reduce infection risks. Consumers would have same rights as under Base Case	Not expected to effectively reduce risks from blood borne diseases. Consumers would have same rights as under Base Case	Expected to significantly reduce infection risks. Consumers would have same rights as under Base Case
Consumer costs/savings	Consumers most likely bear majority of compliance costs imposed on providers (\$442,000 for licence costs alone)	Service costs to consumers may fall since compliance costs of providers would be nil	Service costs to consumers may fall since compliance costs of providers would be reduced	Costs to consumers for no/lower/moderate risks may be reduced; Costs to consumers for high risk services may be equal to or marginally higher than under Base Case	Costs to consumers expected to be similar to those under Base Case	Costs to consumers expected to increase due to significantly increased compliance costs of service providers
Consumer Choice & Access to services	Consumer choice and access limited due to: Restrictions on mobile services Restrictions on provision of services to people with	No restrictions on consumer choice and access	No restrictions on consumer choice and access	No restrictions on consumer choice and access to low/moderate risk services Minor restrictions on consumer choice and access to high risk services	Same restrictions as Base Case	Same restrictions as Base Case

	BASE CASE (premises licensing)	OPTION 1 (no regulation)	OPTION 2 (negative licensing)	OPTION 3 (two-tier model)	OPTION 4 (premises licensing and code of practice)	OPTION 5 Premises licensing <u>and</u> individual licensing
	infections			(providers must meet licensing criteria)		
IMPACTS ON REGULATORY BODIES						
Costs	Revenue from licensing fees of approx. \$442,000 Licensing, monitoring and enforcement costs of approximately \$442,000 Development and review of legislation: (Queensland Health) approx. \$500,000 for NCP review costs alone	Loss of licensing revenue of \$442,000 Offset by no costs to regulatory bodies for licensing, monitoring, enforcing legislation No legislative review costs (savings of approx. \$500,000)	Loss of licensing revenue of \$442,000 Monitoring and enforcement costs - Less than Base Case Legislative review costs - less than \$500,000 since no NCP review needed	Loss of licensing revenue from low/moderate risk service providers, of approximately \$282,000 Revenue from licensing high risk businesses approx. \$160,000. Licensing, monitoring and enforcement costs - May be marginally higher than Base Case Legislatively review costs of approximately \$500,000	Licensing revenue similar to Base Case Licensing, ,monitoring and enforcement costs similar to Base Case Legislative review costs (including NCP review) of approximately \$500,000	Licensing revenue from premises <u>and</u> individuals - significantly higher than Base Case Licensing, monitoring and enforcement costs (local government) - significantly higher than Base Case due to dual licensing Legislative review costs (including NCP review) of approx. \$500,000
Ease of Administration	No change	Removal of legislative requirements also removes all administrative issues	May be more difficult to administer due to lack of data capture from licences	May be more difficult to administer for low/moderate risk services due to lack of data capture from licences	Same as Base Case	Administration workload expected to double, due to dual licensing of premises and all individual operators

Appendix D - Experience in Other States

Appendix E - Disease Costing Calculations

It has been estimated that around 1,367,200 tattoo, body piercing and acupuncture services are provided throughout Queensland each year. This estimate has been based on the number of registered service providers multiplied by the average estimate of services provided by each operator (business location).

Of these 1,367,200 services, it is estimated that only a small percentage will result in the transmission of a blood borne infection. In order to determine the probability of infection due to equipment contamination with blood from a previous client or operator, some estimate of equipment contamination with blood from a previous client or operator would be required. As a result, the project has assumed a sensitivity range of 100% to 25% to reflect the probability of contamination of the equipment.⁹² It has also been assumed that the probability of acquiring the disease following skin penetration by equipment contaminated with virus infected blood is 0.5% for HBV, 30% for HBV and 3% for HCV.⁹³

In addition, only a fraction of the persons receiving or providing treatment will carry the diseases within the general adult community. Prevalence rates within the general community of 0.04% for HIV, 0.5% for HBV and 1.00% for HCV were adopted in line with discussions with Queensland Health.⁹⁴ Whilst it is acknowledged that some population groups have a higher prevalence than others (eg. IDU), no data were available to identify the different client groups within the affected industries. Therefore, no allowance has been made for either an increase or decrease to the general population prevalence rate.

By multiplying the total services for each group with the disease prevalence rates (ie. probability of person carrying the disease), the probability of using blood

⁹² Probability range was prescribed by the Legislative Projects Unit and the Communicable Diseases Unit of Queensland Health; 1999.

⁹³ Germanaud J, Causse X, Dhumeaux D. Transmission of HCV by Accidental Needle Stick Injuries Presse Medical 23 (23): 1078-82, 1994. "Risk of Transmission of HCV 0-3% and may be up to 10% if patient (donor) is HCV RNA positive up HBV risk 7-30%". RACS Policy Document Infection Control in Surgery. Management of AIDS (HIV) and Hepatitis B. February 1994 Appendix 11 pp14-16. C. Burrell; Today's Life Science. October 1992, p12-16. "HBs Ag eAg pos 106-108 infectious doses/ml". Global Program on AIDS. Report of a WHO Consultation on the Prevention of HIV and Hep B Virus Transmission in the Health Care Setting. Geneva 11-12 April 1991 WHO p1. "HBV is found in very high titres (often >10x10⁶ ID/ml) 7-30% risk of HBV infection after needle stick exposure. HIV is less common the virus is present at concentrations of 10-100 ID/ml. <0.5% of HCW sustaining a needle stick exposure to the blood of a HIV positive patient have acquired HIV". Ippolito G, Puro V, Petrosilla N, Pugliese G, Wispelwey B, Tereskerz PM, Bentley M, Jagger N. Prevention Management of Occupational Exposure to HIV. Advances in Exposure Prevention. University Virginia USA 1997 p12-13. Courier-Mail, February 3, 1999.

⁹⁴ Communicable Diseases Unit, Queensland Health; 1999.

contaminated equipment and the probability of contracting the disease, it is estimated that a maximum of 2.73 persons could be potentially affected by HIV on an annual basis. In a similar manner, the same process indicated that 2,050.8 persons and 410.16 persons could be affected annually by HBV and HCV respectively.

Whilst this may result in up to 2,464 persons being affected annually, not all infections will result in mortality or chronic infections and the extent of equipment contamination will be less than 100%. It has been estimated, based on information obtained from the AIHW and the SA Department of Human Services that HIV has a 100% probability of chronic infection and mortality, whilst HBV has a 10% probability of chronic infection and 25% probability of mortality (ie. a joint probability of mortality of 2.5%) and HCV has a 75% probability of chronic infection and a 10% chance of mortality (ie. a joint probability of mortality of 7.5%) following infection.

The costs of treating these diseases vary considerably. No definitive estimate of cost could be identified and has been inferred from multiple sources. For example, the direct treatment costs of HIV was estimated to be \$93,000,⁹⁵ while the costs for treating chronic and mortal (ie death) HBV infections was assumed to be \$2,230 and \$128,900 respectively.⁹⁶ The cost for HCV was assumed to be \$48,728 for chronic infections and \$62,599 for mortal cases.⁹⁷

By multiplying the relative number of cases for each disease group (separated into chronic and death categories) by their relative cost assumptions, the total costs of disease management (assuming a 100% probability of equipment contamination) are as follows:

Cost of treating potential HIV infections	\$254,299.
Cost of treating potential HBV infections	\$11,067,655.
Cost of treating potential HCV infections	\$20,412,976.
Total Costs of Potential Infections	<u>\$31,734,930.</u>

⁹⁵ Lifetime cost of human immunodeficiency virus-related health care - Susan Hurley et al. Published in Journal of Acquired Immune Deficiency Syndrome Human Retrovirology; August 1996:12(4)-Pp. 371-8

⁹⁶ Disease Costs of Hepatitis B in Australia, 1993. Australian Institute of Health and Welfare; 1994.

⁹⁷ Schedule 1 Review of the Public Health Regulations; NSW Department of Health; 1994.