A Framework for

the Implementation of

811 Service

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Table of Contents

1. Executive Summary

1.1. Objective

The objective of this document is to provide a framework to be used for the subsequent development of detailed business and implementation plans for the deployment of specific individual Jurisdictional 811 services by all members of the Multi-Jurisdictional Collaboration (MJC) regarding Healthlines in the 4 Western Provinces & 3 Territories.

1.2. Information Gathering

The following information gathering activities were completed:

- Review of existing MJC documentation;
- Telephone Interviews with Jurisdictions regarding their Current Situation; and
- Telephone Interviews with Telecom Service Providers regarding Telecom Technical Considerations.

1.3. The Structure of this Framework

The first step in preparing a plan for the deployment of 811 in a Jurisdiction is to determine what the Jurisdiction seeks to achieve from 811, tempered by the implications of the **CRTC Decision**.

The structure of this document itself provides a Framework not just for the Topics that must be considered in the next phase of planning, but also the approach that should be adopted.

- First it is necessary to understand the **CRTC decision** regarding 811.
- Then each Jurisdiction must define its specific Business Requirements using the **Planning Framework**.
- Only then should work progress to solutionning the Topics covered in the **Technology Framework** and **Marketing Framework.**
- Next the Implementation Plan is developed from the **Deployment Framework**.
- This can then be brought together in the **Business Case Framework**.

All Jurisdictions are different but there are possibilities for achieving some synergies. These are discussed in the section on **Jurisdictional Considerations.**

The penultimate section highlights the **Critical Success Factors.** These are the most important areas to address to ensure the success of an 811 deployment. This section is followed by a brief recommendation as to the most appropriate **Next Steps** that each Jurisdiction should consider.

1.4. Key Aspects of the CRTC Decision

The CRTC ruled that:

- It approves 811 for "access to non-emergency health teletriage services;"
- Current 811 use must cease no later than June 2006 (depending on the Telco) but 6 months notice should be provided of intent to use 811;
- 811 Service Providers are expected to undertake comprehensive and effective public awareness campaigns… to promote awareness of their 811 services especially for the purpose of minimizing confusion between emergency and non-emergency services and between 311 or 211 services;"
- "Call routing arrangements should be based on exchange boundaries unless otherwise negotiated by the 811 Service Provider and the Telecom Service Providers;"
- Telecom Service Providers assume the costs of "the basic switch modifications and network changes necessary for the implementation of the 811 service".
- Service Providers "requesting special routing arrangements should bear the cost of provisioning such arrangements;"
- Costs of the 811 Service must not be charged on telephone bills.
- Callers pay the costs associated with calls from payphones and cell phones.
- Costs for credit card, collect and toll must be negotiated between 811 Service Providers and Telecom Service Providers;
- Routing of 811 calls in areas where the 811 service is not available will have to be negotiated between 811 Service Providers and Telecom Service Providers; and
- It may be impossible to correctly route 811 calls from VOIP terminals (especially nomadic).

1.5. The Main Implications of the CRTC Decision

It appears likely that an 811 Service that is a portal to access a range of Health Services and which includes wayfinding (ie that goes beyond the existing NurseLine services) is likely to overlap with some of the proposed aspects of the 211 Service. However provided both services can efficiently and accurately direct callers to the appropriate destination, then such overlap should not be a customer issue, especially since it will decrease over time as callers become more familiar with each service.

The nature of the 811 and 211 services (if delivered independently) would lead to a duplication of some infrastructure and consequent increased overall costs. Conversely this potential duplication creates an opportunity to share infrastructure and thus reduce overall costs.

The CRTC timelines are not an obstacle to deployment. However 811 Service Providers would be well advised to commence an early dialogue with all Telecom Service Providers (both wireless and wireline) in order to identify and resolve issues.

Clear branding of 811 services is essential to reduce the possibility of confusion for callers seeking emergency aid vs non-emergency health assistance. However it seems likely that variations in 811 scope in different Jurisdictions will make branding difficult. For example using 811 as a simple and easy to remember access number for an existing

NurseLine is a different value proposition and branding to using it as the portal to the range of Provincial Healthline and/or wayfinding services.

The fundamental understanding is that the Telecom Service Providers must enable the local 811 caller to get to a local destination without additional costs to the caller or 811 Service Provider, but moving the call further (ie to a provincial centre) is at the 811 Service Provider's expense. This expense is simply the competitive long-distance charge arising from forwarding the call from the local Telco to the toll free number used for the 811 Service.

It is important to note that 811 is not necessarily a free call. The 811 caller must pay the access costs for calls from cell phones, satellite phones, radio phones and payphones, including operator charges if required but excluding long-distance. 811 calls will be free for wireline callers while any long-distance costs required to connect any type of call to the 811 Service Provider will be paid by the 811 Service Provider from the call's local termination - except for callers using an alternate 10 digit number (eg from overseas).

The routing of wireline calls is relatively straightforward since the caller's originating location is clear, thus the appropriate 811 Service Provider destination is also clear. Configuration of the switches for the wireline Telecom Service Providers should be simple if the calls are all routed to a single centralised (jurisdictional) Service Provider as 811 will most likely be. This contrasts with the problems that arise with the routing of 211 and 311 calls to more local centres whose catchment areas do not correspond with exchange boundaries.

However the routing of other types of call may be problematic. A cell phone call will be routed to the Jurisdiction the call is in when roaming. Radio, Satellite and VOIP phone users will either have go through an operator or call a separate direct 10 digit number since it will be extremely difficult to set up automatic routing, at least in the short term.

1.6. Framework Topics

The framework required to implement 811 as simply an 'easy to remember number to call' could be a relatively straightforward technical undertaking. It could involve no more than the considerations required to substitute a 3 digit number in place of a 10 digit number for existing Healthline (predominantly NurseLine) Services. But 811 does offer the possibility to redefine Healthline Services and how they are delivered. It is this broader opportunity that drives many of the considerations in this Framework

The Planning, Technology, Marketing and Deployment Frameworks contain 33 separate Topics that must be considered. The most important of these are captured in the Critical Success Factors.

1.7. The Business Case for 811

Although the development of a Business Case is not in scope for this study it may be necessary for a Jurisdiction to develop one. The following are the key considerations for that Business Case.

1.7.1. Variable Costs

The scope of the service will naturally make a significant difference to the demands placed on the service and thus the variable costs. The largest single cost will be the staff cost to service phone calls. This is primarily driven by the volume of calls and the time it takes to handle calls. However general staff productivity also plays a significant factor, as modified by Service Levels.

For those calls that are long distance and cannot be routed using fixed facilities then long distance charges will apply. This is typically an order of magnitude less than the agent cost involved in handling a call and is therefore not of great significance.

1.7.2. Fixed Costs

These costs include the fixed staff needed to manage the service and its operations, telecom and IT infrastructure. These costs are more significant in a low volume environment.

1.7.3. Benefits

The MJSC Literature Review did not report on any direct comparables with an 811 service but did find many Healthline services similar to the NurseLine component with indications that some also enabled broader access to health and social services. It found no economic evaluations of 811 Services and as yet little quantifiable evidence to support a proforma quantified business case. However there was plenty of support in the MJSC Literature Review for qualitative benefits.

1.8. Critical Success Factors

Although there are 33 Topics to consider in an 811 deployment, they are not all of equal importance. The following are the most significant. Failure to correctly address these Critical Success Factors will substantially increase risk and the probability of failure.

The Scope of 811 Service must be clearly defined. It is essential for each Jurisdiction to have a clear Vision and Scope for their 811 service and how it aligns with each their Health Care Strategy.

The appropriate Stakeholders must be engaged. The strategic benefit from 811 is its potential as a portal to access a range of Health Services. Lack of stakeholder engagement will inhibit this growth.

The Delivery Model must be clear and supported. It is important to resolve how centralised the 811 Service will be and the role of Outsourcer vs Government and/or Health Authorities in delivering the service.

811 must be integrated into the Primary Health Care System. The extent to which 811 is integrated into the Primary Health Care System will make significant difference to the long term value of the Service.

Delivery should be staged to reduce risk. A ‘Big Bang’ launch may be politically attractive as a means of showcasing a new capability but it will increase risk. Given that the public do not have 811 now, there seems little to gain and much to lose in proceeding

too rapidly. However if the intent of a Jurisdiction is simply to use 811 as the 'easy to remember' number for an existing service then implementation can proceed relatively quickly, otherwise a soft launch or phased geographic rollout would significantly reduce risk.

The correct Technology must be implemented and must work. While this may appear totally obvious it is nevertheless critical to success and therefore must have appropriate focus.

Knowledge Management Solutions are required. This includes the gathering, maintenance and distribution of all the information required by the 811 Service, without which it cannot operate.

Effective Privacy and Data Security procedures must be in place. Failure to comply with privacy regulations will be at best upsetting for customers and at worst a public relations and legal nightmare. It will be necessary to develop comprehensive privacy and data management policies, training, monitoring, enforcement and reporting.

Marketing must be done right. It will be essential that the public know what 811 offers them versus the other N11 services. Since awareness is the key driver of call volumes (which in turn are the prime driver of costs), awareness levels must be matched to processing capacity if Service Levels are to be maintained within budget expectations.

There must be enough staff to answer the phones. The Jurisdictional interviews revealed a substantial variance in customer use of the existing services which appears to be partly related to awareness. 811 will considerably increase awareness and thus call volume, including to existing NurseLines where there is a shortage of qualified staff (ie Nurses) in some jurisdictions. This must be resolved unless the delivery model changes.

There must be effective plans for public emergencies. 811 may be a powerful tool to use in the event of a public emergency. Lack of an 811 Service emergency response plan and or BCP/DRP will leave the 811 Service vulnerable to unmanageable high demand that will make it impossible to get through.

The focus must remain on the customer. This provides a rallying point for otherwise conflicting views. Use of focus groups and surveys will best establish what the customer really wants and can use.

1.9. Jurisdictional Considerations

The main purpose behind this aspect of the study was to ensure that there were no key differences between Jurisdictions that would significantly alter the framework.

There are differing models for the delivery of the existing services (centralised, decentralised, outsourced, via the Health Authorities) and they are in different stages of evolution (although in generally similar directions.) However there were surprisingly few environmental differences that were significant enough to affect the overall framework.

The most striking difference was the different levels of uptake (expressed as a percentage of calls/population) which ranged from 6-29%, While much of this can be explained by differing levels of awareness there was insufficient data to derive an empirical relationship. The obvious conclusion is there will likely be a very substantial increase in call volumes in many Jurisdictions if 811 is promoted.

1.10. Potential Synergies

There appear to be two general areas of possible synergy - The opportunity to share services and the opportunity to share infrastructure.

The benefits of sharing are primarily driven by the opportunity to achieve economies of scale and/or to centralise expertise in a 'centre of excellence' with high clinical quality that can be shared and enjoyed by multiple Jurisdictions. In practise each Jurisdiction has similar implementation problems to solve and thus must develop very similar solutions. Rather than develop each solution seven times why not develop it once and share it – rather like this study? Indeed many component solutions are probably equally needed nationally for the other Jurisdictions.

In general:

- The MJSC should continue to act upon areas of mutual benefit and potentially expand its role to steer national initiatives and resolve broad national issues of common value.
- Efforts should be made to identify, engage and as far as possible leverage existing national steering groups to avoid duplication and minimise the potential to be surprised by conflicting decisions made elsewhere.
- The most obvious candidates for sharing services are the Territories since their call volumes are so small compared to the Provinces, thus represent a small incremental workload.

Specific opportunities include:

- **Common National 811 Branding:** Preferably there would be a national agreement for a core service that will thereby permit national branding.
- **Common Telco/Multi-Jurisdictional/N11 Marketing:** All N11 Service Providers and the Telecom Service Providers should share a concern regarding the effective repositioning of 811, it would be advisable to investigate the opportunities for coordinated marketing activities, especially using unpaid media.
- **Shared Wayfinding Infrastructure:** Serious consideration should be given to establishing shared wayfinding capabilities (operationally and as well as the underlying infrastructure) for 211 and 811 services.
- **Shared Centres of Excellence for Specialist Services:** Second Tier services need not be Jurisdiction specific (eg Smoking Cessation) and thus there may be opportunities to centralise delivery in regional 'Centres of Excellence'.
- **Shared Emergency Backup:** There is an opportunity to position 811 as the lead contact centre in Public Emergencies and co-opt other services in other Jurisdictions into a distributed mode of operation to spread the load.
- **811 Implementation Planning:** There will doubtless be many similarities between Jurisdictions and thus a detailed plan developed for one could be used as the basis to build the plan for another.

- **Common Telecom Working Group**: Since most of the technical issues are common for all Jurisdictions this suggests that a national working group be established to work with the Telecom Service Providers.
- **National 811 Website:** There is an opportunity to develop one shared national 811.ca website providing standard medical information and wayfinding capabilities in multiple languages. There may also be the opportunity to fulfil other national objectives such as those related to Public Health Information.
- **Common Applications:** Consideration should be given to shared development and maintenance of applications required by all Jurisdictions and with 211 & 311 specifically for wayfinding.

1.11. Next Steps

Each Jurisdiction is at a different stage in its thinking about what to do with 811. Each Jurisdiction has $150,000 of funding available to assist with the next phase of planning. While this is not sufficient to complete full planning on all the Topics discussed in this Framework, it would adequately fund the first and most important part which is the completion of the Planning Framework.

It is therefore recommended that each Jurisdiction create a small team to complete the Planning Framework (as a minimum), using this document as the basis to request the allocated funding. This team should include both internal policy staff and external expert consultants as required. Once the Planning Framework is complete then subsequent work can be undertaken as and when the Jurisdiction wants to proceed based on the conclusions from the Planning Framework. Smaller Jurisdictions who are interested in shared delivery may want to pool resources with larger both for efficiency and to gain access to additional skills.

In parallel to this Jurisdictional activity, the MJSC should determine which service or infrastructure sharing projects they want to pursue jointly and request funding to resource these. Each can then be set up and managed either nationally or via the MJC.

Main Body of the Framework

2. Introduction

2.1. Objective

The objective of this document is to provide a framework to be used for the subsequent development of detailed business and implementation plans for the deployment of specific individual Jurisdictional 811 services by all members of the Multi Jurisdictional Collaboration (MJC) regarding Healthlines in the 4 Western Provinces & 3 Territories,

The framework required to implement 811 as simply an "easy to remember number" to call could be a relatively straightforward technical undertaking. It could be no more than the considerations required to substitute a 3 digit number to call in place of a 10 digit number for existing Healthline (predominantly NurseLine) Services. But 811 does offer the possibility to redefine Healthline Services and how they are delivered. It is this broader opportunity that drives many of the considerations in this Framework

2.2. Scope

This project is to produce "the plan for a plan" that will enable each jurisdiction to have an informed set of common considerations that each can use to develop detailed and specific plans for the deployment of 811in their individual Jurisdictions.

The scope does not include:

- Detailed implementation planning.
- Development of an economic business case for 811 deployments.
- Exploration of deployment consideration in non MJSC jurisdictions.
- Direct examination of other jurisdictions who have implemented 811 (although reference to the MJC's Howard Research Literature review covering that looked into this area is included)

2.3. Information Gathering

The following information gathering activities were completed:

2.3.1. Review existing MJC documentation

This review encompassed the following documents in order to understand the background to the project and extract key relevant information:

- Telecom Decision CRTC 2005-39: Alberta Health & Wellness' request for code 811 for non-urgent health teletriage services.
- Telecom Decision CRTC 2001-475: Allocation of 3 digit dialling for public information and referral services
- Decision Analysis Telecom Decision CRTC 2005-39 (Telus, 6 July 2005)
- 811 & CHARD Project Proposal (BC Ministry of Health, Draft 1 Jan 2006)
- Health Lines MJC Information Gathering Survey: Core Health Line Services (anon, undated)
- Health Lines MJC Information Gathering Survey: Unique Health Line Services (anon, undated)

- Health Lines MJC Marketing Strategy for 811 Lines in W Canada & the Territories (Stratus Partners, 18 Nov 2005)
- Literature Review: Evaluative Aspects of Health Line Initiatives (Howard Research & Management Consulting, Draft 2.0, June 2005)
- Literature Review: Assessment of the use of Remote Agents to deliver Health Line Services (Howard Research & Management Consulting, Draft 2.0 August 2005)
- United Way of Canada – Centraide Canada 211 Business case (Deloitte, Final Presentation July 2005)
- National Benefit/Cost Analysis of three digit accessed Telephone Information and Referral Service (Ray Marshall Centre, Final Report Dec 2004)
- Toronto 211 Telecommunication Implementation (Toronto 211 Ad hoc Telecommunications Group, 11 Feb 2002)

2.3.2. Telephone Interviews with Jurisdictions regarding their Situation

The Multi Jurisdiction Steering Committee (MJSC) representative for each Jurisdiction was invited to be interviewed to provide input around the following:

- The scope of existing related Healthline services (ie NurseLine, other health related services, social services).
- Experience with existing services.
- 211 and access to social type services in the Jurisdiction.
- Historic call volumes and matching awareness statistics for existing Healthline services (eg NurseLine services).
- Jurisdiction specific issues.
- Current thinking in the Jurisdiction regarding 811deployment.
- Opportunities for 811 service collaboration/sharing.

Interviews were conducted with representatives from British Columbia, Alberta, Saskatchewan, Manitoba, Northwest Territories, and the Yukon.

Annex A summarises the key findings from these interviews and is supplemented by information extracted from the report “Health Lines MJC Information Gathering Survey: Core Health Line Services”.

2.3.3. Telephone Interviews with Telecom Service Providers regarding Telecom Technical Considerations

Telus participated in a number of discussions and provided input regarding key general telecom issues as well those expected to specifically apply in Alberta & BC. This served as a proxy for most of the issues likely to apply across the MJC. In addition interviews were conducted with NorthwesTel to identify possible issues arising specifically in the Territories. MJSC Interviews with MB and SK supported the assumption that neither Jurisdiction expects any additional specific Telecom issues to impact the framework that differ from those already identified.

2.4. The Structure of this Framework

The first step in preparing a plan for the deployment of 811 in a Jurisdiction is to determine what the Jurisdiction seeks to achieve from 811, tempered by the implications of the **CRTC Decision**. This involves determining the Vision for the Service, its Scope and Objectives. This will be achieved through completion of the **Planning Framework** as detailed in this document. The Planning Framework will then provide the business requirements needed to drive the Technology Solution, the various components of which are discussed in the **Technology Framework.** Concurrently it will be necessary to determine how best to market the 811 Service as discussed in the **Marketing Framework.** Having now established what is to be done the next step is to determine how to implement the Service, the considerations for which are described in **Deployment Framework.**

Each Jurisdiction will doubtless have to provide some form of Business Case for the Service and the key considerations for this as described in the **Business Case Framework.**

All Jurisdictions are different but there are possibilities for achieving some synergies. These are discussed in the section on **Jurisdictional Considerations.**

The penultimate section highlights the **Critical Success Factors** that are the most important areas to address to ensure the success of an 811implimentation. This is followed by a brief recommendation as to the most appropriate **Next Steps** that each Jurisdiction should consider.

Thus the structure of this document itself provides a Framework not just for the Topics that must be considered in the next phase of planning, but also the approach that should be adopted.

- First it is necessary to define Business requirements (**Planning Framework**)
- Only then should work progress to Solutionning (**Technology Framework and Marketing Framework**)
- Next the Implementation Plan (**Deployment Framework**)
- This can then be brought together in a Business Plan (**Business Case Framework**)

Many of the Topics discussed within the 5 Frameworks are substantial and complex. It is not the intent of this document to provide in-depth analysis of each. The intent is:

- To identify the **Key Questions** that must be answered as part of a Jurisdiction's implementation planning in order to sufficiently address the Topic.
- To highlight some of the most significant **Considerations** that must be taken into account in answering these key questions.
- To provide where appropriate a simple **Proposed Approach** to addressing a Topic that may prove suitable for initial direction setting in some Jurisdictions as they develop detailed plans. This final section is the most speculative part of the framework since it depends so much on each individual Jurisdiction's circumstances.

3. CRTC Decision

This section describes the most significant aspects of the CRTC decisions and their implications.

3.1. Core Decision

3.1.1. Key Points from Ruling

The CRTC ruled that:

- Ministries of Health must endorse 811 Service Providers in each Jurisdiction;
- It considers 211 and 811 to be sufficiently different; and
- It approves 811 for "*access to non-emergency health teletriage services*."

3.1.2. Considerations

United Way (211) opposed the application with these main concerns:

- 811 would cause confusion in terms of access to "*heath and social services*";
- There would be a duplication of infrastructure; and
- There would be competition for scarce resources.

In their response Alberta Health & Wellness stated that:

- 211 is for "*community services and programs*", while…
- …811 provides access to "*specially trained nurses…specific medical information*"

3.1.3. Implication

There is no clear definition of what constitutes providing access to "*non-emergency health teletriage*" versus "*health and social services*". It appears likely that an 811 Service that is a portal to access a range of Health Services and which includes wayfinding (ie that goes beyond the existing NurseLine services) is likely to overlap with some of the proposed aspects of the 211 Service. However provided both services can efficiently and accurately direct callers to the appropriate destination, then such overlap should not be a customer issue, especially since it will decrease over time as callers become more familiar with each service.

The nature of the 811 and 211 services (if delivered independently) would indeed lead to a duplication of some infrastructure and consequent increased overall costs. This may be a concern to Jurisdictions if they are providing some funding for both services. However this potential duplication creates an opportunity to share infrastructure and thus reduce overall costs. One scenario is the operation of two branded services (211 and 811) with an accepted degree of overlap, but which share some common infrastructure. This is one of many reasons it is important to define the scope of the 811 services in relation to other N11 services, especially 211.

3.2. Vacating the Use of 811 by Existing Users

3.2.1. Key Points from Ruling

The CRTC ruled that that the following dates would apply for each Telecom Service Provider currently using 811 to cease using 811 for their own purposes:

- 12/2005 for Bell Mobility, MTS Allstream, TBayTel & Telus;
- 06/2006 for NorthwesTel; and
- 12/2006 for Aliant Telecom & SaskTel

But the CRTC also required that the 811 Service Providers must give the Telecom Service Providers six months notice of their intent to use 811.

3.2.2. Considerations

It is possible that existing 811 users may continue to call 811 for the old services after the new 811 Service starts operation. This should self correct simply and quickly but there could be the potential for some operational or cost exposure from unexpected volumes arriving from old users.

Cessation of existing use of 811 may prove easier than launching the new use, thus a 6 month lead time that can start now presents no practical hindrance. Other constraints will likely be more significant in determining a launch date.

3.2.3. Implication

These timelines are not an obstacle to deployment. However 811 Service Providers would be well advised to commence an early dialogue with all Telecom Service Providers (both wireless and wireline) in order to identify and resolve issues to ensure there are no obstacles to meeting their project timeframes. Since most of the technical issues are common for all Jurisdictions this suggests that a national working group be established to work with the Telecom Service Providers.

3.3. Integration with 911

3.3.1. Key Points from Ruling

In their ruling the CRTC noted that

- Privacy Issues will need to be resolved, perhaps as they have been for 911.
- Where a Jurisdiction wants to link 811 and 911 services then the 811 Service Providers and the Telecom Service Providers "should negotiate an equitable solution"

3.3.2. Considerations

First it is important to note that 911 is neither ubiquitous nor consistent:

- Enhanced 911 is available where there is the ability to tie a phone number to an address in order to pass location information to the 911 service.
- Regular 911 is provided where there is no locating capability (eg in most of NorthwesTel's service area).
- There may be no 911 service if the municipality concerned is not prepared to fund its establishment, although this is increasingly rare.

Generally a 911 call is routed to the local switch and then forwarded to special 911 switches which in turn route the call to the appropriate end destination (ie the various local 911 Service Providers) based on the origination location of the call as determined by the Telecom Service Provider.

It is worth noting that the "included in your phone bill" cost of the 911 levy only covers the call to the first termination point. The transfer and dispatch costs involved in routing the call from a 911 Operator to a responding Agency are not included and are paid by the 911 Service Providers rather than the Telecom Service Providers.

Where Enhanced 911 Service is available the call is located and this information passed to the 911 Service Provider. This is unaffected by the caller's privacy settings (ie the number cannot be hidden). In contrast calls to 811 may have the caller information hidden just like normal calls and any call transferred from 811 to 911 may therefore not be automatically located. This situation already exists for NurseLine services that currently transfer calls to 911 Services by means of a "hot transfer" where the Nurse remains on-line until the call is successfully passed to a Dispatcher. It is considered more advantageous to keep the caller on-line than it is to ask them to redial (which would otherwise improve the odds of providing the locating data automatically to 911.)

In the opposite situation where a non-emergency 911 call is transferred to 811 the call would tie up a 911 trunk until the call is released. This would become a provisioning issue if such transfers were to become a significant volume, although a simple solution would be simply to tell the caller to hang-up and dial 811 instead

3.3.3. Implication

There are no new risks arising from the CRTC decision since the current situation remains unaffected. Current risks regarding the receipt of 911 calls by NurseLines or vice versa would be replicated in the 811 world but could increase if there is no clear branding

of the various N11 services. The existing call handling for transfers from NurseLine to 911 and vice versa and would not be changed by this decision.

Clear branding of 811 services is essential to reduce the possibility of confusion for callers seeking emergency aid vs non-emergency health assistance.

3.4. Promoting Awareness

3.4.1. Key Points from Ruling

In their ruling the CRTC stated that:

- It expects all 811 Service Providers to undertake comprehensive and effective public awareness campaigns…while "*considering it necessary….to promote awareness of their 811 services especially for the purpose of minimizing confusion between emergency and non-emergency services and between 311 or 211 services*"; and
- Telecom Service Providers must undertake a public awareness campaign in relation to reclamation of 811.

3.4.2. Considerations

It should be noted that the CRTC does not require 811 Service Providers to undertake the promotion, just "expects". However there is no doubt that it will be to the advantage of 811 Service Providers to promote 811 since it will be essential that the public know what 811 offers them versus the other N11 services. Although the Telecom Service Providers are required to undertake a campaign, realistically this will likely only be to tell their existing 811 users to call a new number for those services (eg a bill insert telling them a new number to call for billing inquiries).

It seems likely that variations in 811 scope in different Jurisdictions will make branding difficult. For example using 811 as a simple and easy to remember access number for an existing NurseLine is a different value proposition and branding to using it as the portal to the range of Provincial Healthline and/or wayfinding services.

The greatest potential value of 811 arises from enabling easier and more appropriate access to a range of Health Services. This will only be achieved through high awareness of the 811 service's existence and clarity on its scope and purpose. As the awareness and scope increase so will volume of calls and the total cost of the service.

3.4.3. Implication

Appropriate customer awareness on the use of 811 is essential. Failure to do so correctly and in a controlled manner will mean:

- Customer will not understand why they should call and thus will either not call or call for the wrong reason.
- This in turn will make the service less efficient and increase costs.
- Failure to meet customer expectations will reduce customer satisfaction and thus reduce use.
- There will be the potential for unexpected high volumes of inappropriate calls and consequent poor service levels.

811 awareness must take in to account:

- A common national brand
- Differences in scope and access at the jurisdictional level
- Managing initial awareness in order to throttle demand to manageable volumes/costs.

Given that all N11 Service Providers and the Telecom Service Providers should share this concern, it would be advisable to investigate the opportunities for coordinated marketing activities, especially in partnership with 211 and the Telecom Service Providers.

3.5. Cost Recovery

3.5.1. Key Points from Ruling

In their ruling the CRTC stated that:

- "*Call routing arrangements should be based on exchange boundaries unless otherwise negotiated by the 811 Service Provider and the Telecom Service Providers*".
- Telecom Service Providers assume the costs of "*the basic switch modifications and network changes necessary for the implementation of the 811 service*".
- Service Providers "*requesting special routing arrangements should bear the cost of provisioning such arrangements*".
- Cost must not be charged on telephone bills.
- Callers pay the costs associated with calls from payphones and cell phones.
- Costs for credit card, collect and toll calls must be negotiated between 811 Service Providers and Telecom Service Providers.
- Routing of 811 calls in areas where the 811 service is not available will have to be negotiated between 811 Service Providers and Telecom Service Providers.
- It may be impossible to correctly route 811 calls from VOIP terminals (especially nomadic).
- Telecom Service Providers must develop a solution to VOIP call routing for 911 and thus the CRTC views this solution may be useful for the routing of 811 calls.

3.5.2. Considerations

Wireline Calls:

The fundamental understanding is that the Telecom Service Providers must enable the local 811 caller to get to a local destination without additional costs to the caller or 811 Service Provider, but moving the call further (ie to a provincial centre) is at the 811 Service Provider's expense. This expense is simply the competitive long-distance charge arising from forwarding the call from the local Telco. Although long distance cost is theoretically competitive throughout the Jurisdictions not all carriers chose to provide service in all locations. Fortunately this is not a problem since the call can easily be forwarded at switch to a "toll free" number for the 811 Centre. Toll free numbers are accessible for free to the consumer throughout North America and the toll costs of their use can be competitively negotiated by the 811 Service Providers.

The routing of wireline calls is relatively straightforward since the caller's originating location is clear, thus the appropriate 811 Service Provider destination is also clear. Configuration of the switches for the wireline Telecom Service Providers should be simple if the calls are all routed to a single centralised Jurisdictional Service Provider as 811 will most likely be. This contrasts with the problems that arise with the routing of 211 and 311 calls to more local centres whose catchment areas do not correspond with exchange boundaries.

Cell Phone Calls:

The routing of cell phone calls is less straightforward since:

- The call may not originate from the home Jurisdiction of the caller. The routing is based on the local calling area of the location of the caller at the time the call is made rather than their home Jurisdiction (ie based on their phone's area code).

For example a Vancouver resident with a Vancouver cell phone number who dials 811 while in Toronto will get routed to the Ontario 811 Service Provider.

- The call is routed based on local calling areas that are generally much larger than the local exchange boundaries used to determine the routing of wireline calls. Fortunately for a central Provincial Service this is not likely to be an issue.

The airtime costs for local access (equivalent to the free local access provided for wireline 811 callers) are born by the caller, but the cost of any long distance to connect from the local switch to the 811 Service Provider is paid by the 811 Service Provider, just like wireline calls.

Radio Phone Calls:
Where basic service is provided by radio under normal tariffs then the treatment of the call is similar to wireline, otherwise Radio Phone users will have to pay for a Radio Phone call which may be answered by an operator who must then determine what 811 Jurisdiction to transfer to. Although this is not ideal the local nature of radio services means that the determination of the required destination should generally be simple,

Satellite Phone Calls:
Since Satellite Phone calls are terminated at few select global locations and Satellite Phone's telephone numbers are generally not associated with the caller's location it is unlikely that 811 calls will be routed without an operator intervention similar to that required for Radio Phones. However unlike Radio Phones the absence of localisation will likely present a greater challenge in determining the correct destination.

Voice over IP Calls (VOIP)
VOIP calls pose significant problems since callers may make use of a VOIP Service Provider based outside of Canada and may have a phone number in a Jurisdiction that is both different from both their resident Jurisdiction and the call origin Jurisdiction, plus the VOIP service may itself be nomadic (be used in any physical location). For example a Vancouver resident wanting to access BC's 811 services may try to dial 811 while in Regina using their VOIP phone (which has a New York number) using their hotel's internet connection to access their (Texas based) VOIP Service Provider's outbound service to connect to the public network through the Provider's connection in Virginia. In this scenario they would likely get connected to 811 Virginia - if anything.

Consequently there are many possible customer access scenarios. The customer may use:

- A fixed home/office based VOIP terminal physically located in their resident 811 Jurisdiction
    - with a local telephone number consistent with their home/office resident location's 811 Jurisdiction (eg Edmonton subscriber to Shaw cable with an Edmonton Phone Number wanting to access Alberta's 811);
        - with a service address inside their resident 811 Jurisdiction; or
        - with a service address in an entirely different Jurisdiction.
    - with a telephone number from a totally different Jurisdiction (eg Edmonton subscriber to Vonage with a New York Phone Number)
        - with a service address inside their desired 811 Jurisdiction; or
        - with a service address in an entirely different Jurisdiction.

- A Nomadic VOIP terminal that may be located anywhere
  - with a telephone number consistent with the VOIP Subscriber's resident 811 Jurisdiction;
    - with a service address inside their resident 811 Jurisdiction; or
    - with a service address in an entirely different Jurisdiction.
  - with a telephone number applicable to a totally different Jurisdiction;
    - with a service address inside their resident 811 Jurisdiction; or
    - with a service address in an entirely different Jurisdiction.

Since 911 calls have the same issues it should be noted that currently it is not possible to automatically route 911 VOIP calls based on the caller's location, nor pass location information. While the latter is not an issue for 811, the former means that VOIP calls cannot yet be automatically routed to the appropriate Jurisdiction 811 Service Provider.

At present the CRTC requires any VOIP Service Provider (desiring to offer Canadian telephone numbers) to intercept 911 calls using an Operator and transfer them to the appropriate 911 Service Provider. This cannot be required of overseas providers who provide non-Canadian phone numbers. However this is only a temporary measure to be replaced by a solution being developed under the NENA initiative. NENA is looking at how to associate a call to the changing IP address of the VOIP terminal. This IP address can be linked to an Internet Service Provider and thence to the subscriber ID associated with the changing IP address, then the subscriber ID is linked to a physical service location. The address of this location will then be linked with a separate 911 database to determine the correct destination of the call which can then be sent along with the address information to the appropriate 911 Service.

3.5.3. Implications

Wireline Calls:

- In theory all switches should be able to receive and forward an 811 call but it will be necessary to determine if any Telecom Service Provider is unable to do this for technical reasons.
- A long distance provider must be identified to handle the routing of calls from the local exchange to the 811 Service Provider's location. This can be achieved by forwarding to a toll-free number

Cell Phone Calls:

- In theory all switches should be able to receive and forward an 811 call but it will be necessary to determine if any Telecom Service Provider is unable to do this for technical reasons.
- A long distance provider must be identified to handle the routing of calls from the local wireless exchange to the 811 Service Provider's location. This can be achieved by forwarding to a toll-free number
- Callers will need a regular 10-digit number (ie the same toll free number as the switch forwards to) in order to access their home Jurisdiction's 811 service when travelling.

Radio Phone Calls:

- Provided the radio phone operator is in the same Jurisdiction as the caller they should simply be able to dial 811 on behalf of their caller and connect them to the public network. Failing that they would dial the alternate 10 digit number.

Satellite Phone Calls:

- Callers will need a regular 10-digit number in order to access their home Jurisdiction's 811 Service. This could be the same toll free number used at the local switch or an alternate toll 10 digit toll number for overseas access.
- Discussion can be held with Satellite Providers for a more sophisticated solution but the volumes are unlikely to be large enough to justify anything sophisticated.

Voice over IP Calls (VOIP)

- Discussions should be held at the national level to determine what aspects of the 911 solution can be adopted by 811 and will be permitted within privacy restrictions.
- Since 811 has a greater tolerance for error than 911 it may be possible to use the VOIP Customer address as the key rather than the IP address. Although this would be much simpler it would suffer from inaccuracies arising from out of date service addresses but would have the advantage of routing a nomadic caller to their home Jurisdiction. Nevertheless it would still require a national solution to be developed.
- Meanwhile callers will need a regular 10-digit number in order to access their home Jurisdiction's 811 Service. It is likely that this will always be the case for customers of foreign VOIP Service Providers.

General

- Finally it is important to note that 811 is not necessarily a free call. The 811 caller must pay the access costs for calls from cell phones, satellite phones, radio phones and payphones, including operator charges if required but excluding long-distance. 811 calls will be free for wireline callers while any long-distance costs required to connect any type of call to the 811 Service Provider will be paid by the 811 Service Provider from the call's local termination except for callers using an alternate 10 digit number (eg from overseas).

4. Planning Framework

This section will consider the main Topics that must be addressed during initial planning as they establish the core of the business requirements.

4.1. Stakeholder Engagement

4.1.1. Key Questions to Resolve

- Who needs to be engaged in the development of the 811 program?
- What are the roles of different organisations within the Jurisdictions?
- What are their needs and priorities?

4.1.2. Considerations

- Each Jurisdiction will have a different political environment as well as differing organisational and political objectives with different stages of evolution and even different models for the delivery of Health Services, especially those by phone.
- Thus the essential first step is to understand all these opportunities and constraints in developing the Vision for 811 in each Jurisdiction. These forces will shape the business requirements and solution.
- Initial Stakeholder engagement may include:
  - The Health Regions.
  - The Service Providers of 211 services.
  - The Service Providers of 311 services.
  - The Service Providers of 911 services.
  - Tier 1 and Tier 2 Healthline Services that may integrate with 811.
  - Professional Medical Associations.
  - Government Information & Referral Services.
- Ongoing Stakeholder engagement will likely change as it is largely determined by the outcome of decisions made regarding;
  - The scope of the 811 Service.
  - The degree of integration with other N11 services.
  - The degree of integration with other Healthline Services.
  - The role of the Health Regions.
  - The extent of integration into the Primary Health Care System.
  - The degree of inter-jurisdictional cooperation.
  - The intra-organisational agreements regarding data capture, maintenance and sharing.
  - The politics of a Jurisdiction.
- Stakeholder engagement will exists at two levels
  - Advisory stakeholders groups
  - Formal governance structures

4.1.3. Risks

- The strategic benefit from 811 is its potential as a portal to access a range of Health Services. Lack of stakeholder engagement will inhibit this growth.
- However excessive reference to what may be conflicting stakeholder views may significantly slow or prevent the deployment of the Service.

4.1.4. Possible Approach

- Despite the predominance of common government funding the degree of autonomy that exists between organizations in the health sector makes it unlikely that a solution can or will be imposed on Stakeholders. It is only through engagement that support for the program will occur.
- Healthline Services may be seamlessly integrated within 811 ("First Tier Services" or may be more loosely linked "Second Tier Services")
- Stakeholder engagement will be required at multiple levels for:
    - Intra-Jurisdictional opportunities.
    - Cooperative N11 opportunities.
    - Jurisdictional wayfinding services to multiple decentralized Tier 2 Healthline Services.
    - Centralized delivery of Tier 1 Healthline Services.
    - Data gathering and maintenance.
    - Integration into the Primary Health Care system.

4.2. Scope of 811 Service

4.2.1. Key Questions to Resolve

- What is the Vision for the 811 Service?
- Which Healthline Services are better off being included in the 811 umbrella versus left to their separate focused delivery?
- How will Scope change over time?

4.2.2. Considerations

- Since 811 forms part of Health Care delivery it is a Provincial/Territorial responsibility and must align with each Jurisdiction's Health Care Strategy.
- Is 811 to be simply an 'easy to remember' number to call for NurseLine services, should it provide wayfinding services or should it be a Portal to many non-emergency Health Services? Each of these is a different value proposition to the user and has different implementation implications.
- Who is 811 serving? The public may require different programs from those that are desired and required by Health Care Providers.
- Which channels will 811 use to reach its customers? To what extent will delivery be automated rather than delivered using real people?
- What languages must 811 serve in a fully integrated manner? Adding integrated and effective language treatments of calls increases complexity and cost.

4.2.3. Risks

- Lack of clarity of scope one of the most common reasons programs fail.
- Differing scope in each Jurisdiction may be unavoidable and will create branding issues.
- Certain services with limited function and small focussed groups of repeat customers may be better left operating independently rather than be included in a broad 811 service.

4.2.4. Possible Approach

- It is essential for each jurisdiction to have a clear Vision and Scope for their 811 service.
- Preferably there would be a national agreement for a core service that will thereby permit national branding.

4.3. Overlap with Other N11 Services

4.3.1. Key Questions to Resolve

- How are the various N11 services going to be differentiated?
- What are the problems that arise due to overlap with 211,311 & 911?
- What are the opportunities that exist to synergise across N11 Services?

4.3.2. Considerations

- 911 access to emergency services has clear public branding, however the potential exists for 811 to become the de facto destination for emergency health calls in areas where 911 does not exist. In addition callers may not be able to determine if their medical condition is an emergency or not, thus giving rise to 811 calls going to 911 that are better served by 811 and vice versa.
- 311 is for municipal services and by its nature is highly localised and can be clearly differentiated from Health Services unless municipalities provide any municipal health related services.
- 211 Services potentially overlap in providing access to Health Services and response to public emergencies, have common wayfinding functional needs, have overlapping needs for wayfinding data and its maintenance, plus share common needs for wayfinding staff, call steering and call handling infrastructures. Although 211 is generally envisioned as a localised service and 811 as a provincial service, there may be benefit in combining aspects of infrastructure and operations and this may also speed 211's deployment.

4.3.3. Risks

- Appropriate customer awareness on the use of 811 vs other N11 services is essential. Failure to develop appropriate awareness and in a controlled manner will mean:
    - The customer will not understand why they should call and thus will either not call or call for the wrong reason.
    - This in turn will make the service less efficient and increase costs.
    - Failure to meet customer expectations will reduce customer satisfaction and thus reduce use.
    - It will increase the potential for unexpected high volumes of inappropriate calls and consequent poor service levels.
- Developing a collaborative approach between 211 and 811 will complicate the planning and implementation and add extensive new stakeholder consideration's that will inevitably delay and defocus an 811 deployment.

4.3.4. Possible Approach

- Care should be taken in deploying 811 somewhere where 911 is not available; however the risk can be reduced through appropriate communication. Regardless, access to emergency services via 811 can occur and does happen now for medical emergencies via 24/7 NurseLines where trained nurses using defined protocols are well able to effect an appropriate triage decision and transfer the call to Ambulance services. Although not desirable, such usage may actually be beneficial in the absence of 911, although additional liability concerns would arise

if staff have to deal directly with the delivery of emergency support by phone unless they are appropriately qualified.

- 311 services can be clearly differentiated and where there is access to municipal Health Services there is nothing wrong with enabling it through multiple channels.
- Serious consideration should be given to establishing shared wayfinding capabilities (operationally and as well as the underlying infrastructure) for 211 and 811 services. Each would still strive to establish clear differentiated branding and have quite different second tier services, but would enable transparent referrals regardless of the caller's choice of entry point. Although 811 is intended to be a Province/Territory wide Service, while 211 is generally more localised, that does not mean that sharing cannot occur and it might even accelerate the deployment of a less localised 211 Service.

4.4. Integration with other Health Services within a Jurisdiction

4.4.1. Key Questions to Resolve

- What Health Services will 811 access?
- How seamless will the delivery of these services be?
- How will Healthline Services be integrated under 811?
- How will the services be integrated with conventional Primary Health Care delivery?

4.4.2. Considerations

- It is important to differentiate the delivery of wayfinding Information and Referral (I&R) services from the delivery of Health Services. The focus of the former is to determine the most appropriate Service to meet a caller's need and provide information and assistance in reaching that service, while the latter is the delivery by specialist staff of the Health Service itself. This in turn may be delivered remotely as part of the Healthline service (eg NurseLine) or via the conventional Primary Health Care System.
- If the scope of 811 is simply an 'easy to remember' number for a stand-alone NurseLine then the rest of this section is moot since there is no significant integration. However if 811 is to be a Healthline portal for a variety of Health Services including those delivered by the Primary Health Care network then it will be necessary to determine which Services these are and the extent to which they can/should be integrated.
- Healthline Services may be seamlessly integrated within 811 ("First Tier Services" or may be more loosely linked "Second Tier Services")
- Integration can be at various levels such as;
    - Simply acting as a referral service and giving out the number to call for the referred service.
    - Transferring the call without the Transferor waiting for the Receiver to answer ("cold transfer").
    - Transferring the call but with the Transferor waiting for the Receiver to answer ("warm transfer").
    - Transferring the call but the Transferor "briefs" the Transferee on the call, confirms the appropriateness of the transfer and keeps the call if required for another attempt ("hot transfer").
    - Sharing facilities between services (eg shared office space or call handling technology).
    - Sharing management between services but each having different operational pools of staff.
    - Sharing operational staff (eg agents).
    - Sharing personal information about the caller
- Second Tier services need not be Jurisdiction specific (eg Smoking Cessation) and thus there may be opportunities to centralise delivery in Regional 'Centres of Excellence'.
- Call Centre costs are driven largely by agent costs and the agent occupancy factor (how much of their available time they actually spend taking calls). Typically agent costs are high and occupancy is low at the low call volumes typical of Healthline Services requiring specific specialist clinical staffing. This means these

services are inherently inefficient by conventional call centre standards. The greater the integration the lower the unit costs.

- A much larger consideration is the extent to which Healthline Services can be more fully integrated into the Primary Health Care system to form part of the continuum of care. This leads to the need to consider the emergence of technical solutions such as the electronic health record but also the existence of a professional working environment that will accept and benefit from information shared through Healthlines.

4.4.3. Risks

- There are different stakeholders for different health related services and despite the fact that most of them probably are funded provincially there will be varying appetites for integration.
- Expectations of the savings to be gained from integrating Healthline Services may be unrealistic since it may not be possible to achieve deep integration due to the specialist nature of the services. The exception to this is probably in the provision of wayfinding services.
- Mixing substantial wayfinding into a NurseLine Service will distract the limited and valuable clinical staff from their primary specialist functions.
- Clinical quality will suffer if the specialist expertise required for clinical Quality Assurance (QA) is diluted in a shared environment. However the presence of a "best practices" QA cell may actually help raise the general quality standard if approached in conjunction with the maintenance of specialist clinical oversight.
- Integration leads to a loss of control (or at least a sense of loss).

4.4.4. Possible Approach

- Wayfinding staff do not require specialist clinical skills; however specialist Healthlines typically require specialist clinical staff and this will limit the extent to which the same staff can or should be used for all services.
- If there is a significant volume of wayfinding calls (as in the 811 portal scenario) then the most cost-effective of use of staff will be to handle wayfinding calls separately.
- It may be difficult to share clinical management across a range of Healthline Services, however common operational management may offer some economies but with the attendant complexity of divided command and control.
- Since the infrastructure needed by all Healthline Services is similar, a shared platform should offer economies of scale as well as improved call handling and reporting.
- Initially 811 could simply supplement direct access to existing Healthline Services. Customers can choose between direct access to a known service or entry via 811, which is only more valuable if they are initially uncertain what services they need. A service can enjoy the benefits of catching occasional customers through 811 as well as enabling a fast track for repeat users on the their direct channel.
- Jurisdictions should investigate the potential for combined delivery of low volume Healthline Services in Centres of Excellence (and efficiency) that need not be Jurisdiction specific.

4.5. Target Audiences

4.5.1. Key Questions to Resolve

- Who will 811 serve? The Public and/or Health Care Providers?

4.5.2. Considerations

- The Public and Health Care Providers are different audiences. The information they seek may be different, the depth and complexity of that information may be different and the way they prefer to access it may be different.
- The privacy and security considerations surrounding their required information will likely also be different.
- The Public and Health Care Providers probably do share similar or at l east symbiotic needs regarding wayfinding to improve access to Health Services.
- The "easy to remember" 811 access is a benefit to both the Public and Health Care Providers.

4.5.3. Risks

- Mixing the public with Health Service Provider may sub optimise the experience for both.
- Qualitatively these may be very different services that may confuse and thus slow their implementation if combined.

4.5.4. Possible Approach

- Serving both the Public and Health Care Providers via 811 makes sense only if there is a strong commonality of needs that can be met via the service.
- Therefore it is necessary to define what these needs are before deciding if combining both into a common 811 service is a good approach.
- It will be necessary to engage with the Provider community to determine their role and needs.

4.6. Delivery Channels

4.6.1. Key Questions to Resolve

- The primary focus in this document is on delivery of 811 via the telephone. However is 811 purely a voice service or can other channels be used?
- To what extent can customers be empowered and their needs be self fulfilled using the Internet? What is the 811.ca strategy?

4.6.2. Considerations

- Delivery of specialist (ie clinical) Health Services via the phone is expensive relative to non-Health Services because of the complexity of the calls and the cost of the staff, although it is probably less expensive than delivering them conventionally in situ.
- Wayfinding services need not be delivered by clinical specialists.
- Delivery of health information (clinical and wayfinding) via automated systems over the phone is less expensive than via agents but also less effective and considerably less attractive to the customer.
- Delivery of health information (clinical and wayfinding) via the internet is substantially less expensive than via the phone. However it lacks the personal touch that customers may prefer especially for health related matters.
- The opportunity exists for delivery via a combination of voice and internet integrated channels that optimise the best of each. For example New Zealand has a strong web centred approach to the delivery of wayfinding information supported by voice (http://webhealth.co.nz/page/central_3.php)
- Much of the general health information that can be delivered over the Internet is not unique to a jurisdiction, although its approval may be a provincial responsibility.
- Although much of the wayfinding information is specific to a Jurisdiction, its delivery over the Internet is not unique to a Jurisdiction, the mechanical process will be similar, although its approval may be a provincial responsibility.

4.6.3. Risks

- Over-reliance on agent delivery will increase costs unnecessarily.
- Under-reliance on agent delivery may decrease customer satisfaction and thus use.
- There may not be sufficient clinical staff (especially Nurses) available to meet the demand for voice services.

4.6.4. Possible Approach

- The primary channel for 811 will be agent delivery however the 811 phone programs should be supported by an 811 internet program delivering general health information, program information and wayfinding services that empower the user and are promoted as the first stop for general health information and wayfinding.
- Internet delivery will be particularly important in periods of crisis when a call centre is overwhelmed.
- There an opportunity to develop a shared national 811.ca website providing standard medical information and common wayfinding search and presentation in

multiple languages. Although there is a risk that such a national initiative may be slowed by the overhead inherent in cooperative ventures there may also be the opportunity to fulfil other national objectives such as those related to Public Health Information.

4.7. Target Cultures/Languages

4.7.1. Key Questions to Resolve

- What segments of the Public should 811 target?
- How should cultural and linguistic minorities be served?

4.7.2. Considerations

- Canada has two official languages yet in many Jurisdictions there is a substantial use of other languages (eg Mandarin, Cantonese, and Punjabi).
- Translation services for 130 languages are used by many Jurisdictions but these are expensive and may not provide optimum interaction with the customer.
- It is very difficult to provide an attractive multilingual service because of the practical difficulties in quickly and (from the customers perspective) painlessly recognising the language they need to converse in. If the caller does not understand the greeting language they may simply not stay long enough to access a translation service.
- Automated voice services pose even greater challenges to delivering language services, but the Internet may be better suited.
- Different cultures will have different attitudes to accessing Healthline Services, especially if they are obliged to make use of translation services. While this may prove a barrier to adoption by certain segments of the population who potentially need improved access the most, there will be advantages in enabling anonymous medical advice to be provided outside a small community. Some patients will prefer anonymity over advice from people who know them.

4.7.3. Risks

- A token approach to offering multiple languages for 811 may not offer an attractive service to non-English speakers. While it may appear to meet the need it may suppress usage as non-English callers are turned away by their initial interaction before being enabled to access a translation service
- A whole hearted commitment to enabling full service in the “majority” minority languages will be both expensive due to the increased inefficiency of subdividing calls into smaller volumes and will be difficult to achieve due to more limited pool of foreign language staff, especially clinical staff.

4.7.4. Possible Approach

- More work is required to determine how a Healthline service should best be designed to remove cultural barriers. Ultimately it may not be the best way to serve certain segments of the population and the extra effort trying to make it fit may be better spent on other programs more suited culturally to specific minority groups.
- Language needs and cultural barriers will vary substantially between Jurisdictions. Each Jurisdictions need to make a clear decision regarding which primary languages they want to offer. The more languages the higher the costs and the greater the case for combining services (including across Jurisdictions) to increase the call volumes and thus lower unit costs.
- Call flow design must streamline entry for non-English speakers to a language service that can recognise and deal with their language.

- The design of an 811 Internet site should allow for multiple languages. This is a substantial undertaking but since the need is common across Jurisdictions it would be more cost effective to build it nationally.

4.8. Delivery Approach

4.8.1. Key Questions to Resolve

- What is the general business model for Service Delivery?
- How centralised will the operations and infrastructure be?
- Who will provide what? Consider the roles of Government, Health Regions and independent Health Care Providers.
- What should be outsourced, by whom, to whom?

4.8.2. Considerations

- There are a number of models for the delivery of the main 811 service components in various permutations and combinations:
    - 811 Service Infrastructure (eg technology components) provisioning and operation may be via a combination of different approaches:
        - Provisioned centrally by Government and provided to all 811 Service Providers for their own decentralized use.
        - Provisioned centrally by outsourced contract and provided to all 811 Service Providers for their own decentralized use.
        - Provisioned independently and decentrally by Health Regions and/or Independent Health Care Providers for their own decentralized use.
    - Core 811 Service Operations (ie 811 wayfinding and Tier 1 integrated Healthline Services such as a NurseLine)
        - Run by Government and centrally operated using Government Staff or an outsourced contractor.
        - Run by Health Region(s) and decentrally operated by their Staff or an outsourced contractor.
    - Tier 2 Health Service Operations (ie linked specialist Healthline Services such as Smoking Cessation))
        - Run by Government and decentrally operated using Government Staff or an outsourced contract(s).
        - Run by Health Region(s) and decentrally operated by their Staff or an outsourced contract(s).
        - Independently run and decentrally operated by independent Health Care Providers using their staff or outside contractors

4.8.3. Risks

- A centralized approach will:
    - Be easier and faster to implement.
    - Allow for greater efficiency and thus lower unit costs.
    - Enable consistent quality control.
- A decentralised approach will:
    - Allow greater autonomy.
    - Create greater ownership and participation.
- The engagement of Health Regions will depend very much on the dynamics within a Jurisdiction. The more engaged the Health Regions are in the delivery of 811 the better the prognosis for tighter integration with their delivery of Primary

Health Care. However if their priorities lie elsewhere then 811 may lack the focus needed to ensure its success.

4.8.4. Possible Approach

- A variety of models should work and the optimum will depend very much on the dynamics within a Jurisdiction. Each must resolve its preferred approach.
- It is important to resolve how centralised the infrastructure provisioning and operation should be versus service delivery.
- It is important to resolve the role of outsourcer vs Government and/or Health Authorities/Regions in delivering the service.

4.9. Staged Deployment

4.9.1. Key Questions to Resolve

- What is the timeline for launching 811?
- What services and functions are provided when?

4.9.2. Considerations

- The deployment of 811 can be broken into the following phases:
  - Concept development:
    - Understanding the environment.
    - Formulating the business requirements.
  - Solution planning:
    - Technology planning.
    - Marketing planning.
    - Deployment planning.
  - Plan approval.
  - Implementation:
    - Detailed implementation planning.
    - RFPs for services.
    - Infrastructure development, recruitment, training.
    - Launch (limited awareness with limited initial scope and services).
  - Growth:
    - Additional awareness of the 811 Service and volume.
    - Additional scope.
    - Additional services.
  - Sustainment:
    - Ongoing steady state operations.
    - Organic growth.
    - Occasional change.
- The time and effort required to launch 811 will depend on the scope of the service and the other factors detailed in this document.
- A staged approach may permit "quick wins" and will reduce the risk of launching a full blown 811 portal to access integrated services that may not be quite ready.
- Staging can be achieved a number of different ways:
  - Soft launch the service. Minimal promotion would allow for organic growth of staff to respond to gradual increases in call volume and time to iron out issues while few customers are affected.
  - Activation of 811 by area would control volumes and allow experience to be gained prior to Jurisdiction wide activation.
  - Limited initial scope. Many Jurisdictions already have a NurseLine service and thus it is a relatively small step to supplement their existing access numbers with 811 and allow for gradual transition to the new number. The service will then have to be repositioned later as a Health Service Portal when other services are added.
- The 811 website could be developed on an independent timeline from the voice service.

4.9.3. Risks

- A 'Big Bang' launch may be politically attractive as a means of showcasing a new capability but it will increase risk.
- Given that the public do not have 811 now there seems little to gain and much to lose in proceeding too rapidly.

4.9.4. Possible Approach

- If the intent of a jurisdiction is simply to use 811 as the 'easy to remember' number for an existing NurseLine then implementation can proceed relatively quickly. There would be no need for a strong launch, rather gradual promotion and repeat use can be used to convert callers from the existing numbers (which would remain in Service for some time) to the new 811 access. The effect on volumes of the increased awareness and recall stemming from 3 digit dialling over 10 digit dialling would be gradual, thus reducing risk.
- However if the intent is to have 811 as the Health Service Portal it may be better to wait until it can actually deliver on this promise by enabling access to a range of core services. Since the effect on volumes is less predictable then a soft launch or phased geographic rollout will significantly reduce risk

4.10. Governance

4.10.1. Key Questions to Resolve

- What is the formal Governance Structure for the 811 Service?

4.10.2. Considerations

- Stakeholder engagement during the detailed concept development is not necessarily the same as that required once the concept is fixed or when the Service is operational.
- Stakeholder engagement in ongoing governance will be largely determined by the decisions made regarding:
    - The scope of the 811 Service.
    - The degree of integration with other N11 services.
    - The degree of integration with other Healthline Services.
    - The role of the Health Regions.
    - The extent of integration into the Primary Health Care System.
    - The degree of inter-jurisdictional cooperation.
    - The intra-organisational agreements regarding data capture, maintenance and sharing.
    - The politics of a Jurisdiction.

4.10.3. Risks

- Lack of a correct formal Governance structure with the authority to commit their required organisations and funding will negatively impact the service.

4.10.4. Possible Approach

- During the initial concept development phase a number of working groups could be formed representing stakeholder sub groups. These would be advisory in nature.
- Government will need to determine to what extent they engage the stakeholders within a formal governance structure however it would be advisable to include members who are able to commit their organisations to decisions should these commitments be essential to the implementation.
- The structures and membership put in place during concept development will be superseded by those required for implementation and operation.
- The MJSC should continue to act upon areas of mutual benefit and potentially expand its role to steer national initiatives and resolve broad national issues of common value.
- Efforts should be made to identify, engage and as far as possible leverage existing national steering groups to avoid duplication and minimise the potential to be surprised by conflicting decisions made elsewhere.

5. Technology Framework

The solutionning of the Telecom & IT components is a substantial task that is driven by the Business Requirements that arise from the completion of the Planning Framework. This section outlines these technology components.

5.1. Call Steering

5.1.1. Key Questions to Resolve

- Once a call is received at 811 how is it steered to its appropriate destination? Is wayfinding done by people or technology?
- To what extent should call steering be automated through the use of automated menus and to what extent should these be voice driven versus touch tone?

5.1.2. Considerations

- Callers generally do not like automated voice systems of any type, especially if they offer many choices.
- Automated call steering systems by their nature offer only "cold transfer" capabilities.
- Although voice driven systems can simplify navigation compared to complicated touch tone hierarchal menu driven systems, they can also be frustrating to use, especially by callers who have a strong accent.
- Health Services engender an expectation for a high degree of personal contact. It should be noted that 211 specifically positions its service as calls answered by people that is better than the treatment received from typical government or corporate voice services.
- Call Steering using technology is cheaper than using agents.
- As the 811 Service's scope evolves the call steering systems will have to be reconfigured to navigate to new services.

5.1.3. Risks

- Excessive use of automated call steering may be frustrating for callers.
- However total reliance on agents may lead to long delays at periods of unexpected high demand and an automated alternate may be preferable to waiting.

5.1.4. Possible Approach

- There is little doubt that the caller will prefer a well trained agent helping them rather than an impersonal machine.
- In simple terms the choice will be one of personal service versus cost.
- A realistic compromise may be to use a simple touch-tone front end menu to allow callers to self select between personal wayfinding and the major well used tier 1 services if they already know what they want.
- Automated systems should be available to support high demand Public Emergency scenarios.

5.2. Call Handling

5.2.1. Key Questions to Resolve

- Once the call is at its target destination to what extent is it handled by people or technology?
- To what extent should caller inquiries be answered by Integrated Voice Response Systems (IVRs) and to what extent should these be voice driven versus touch tone?
- To what extent should Computer Telephony Integration (CTI) be used to identify a caller and access data about them?
- What Call Centre equipment does the 811 Centre Require (ie PBX/ACD) to enable Agents to process calls? Should this be a premises based solution or a network based solution?
- How will this equipment be supported? By whom?

5.2.2. Considerations

- Callers generally do not like IVR systems of any type, especially if the interaction is complex.
- IVRs do not offer the flexibility of an agent interaction.
- IVRs are typically used in a defensive mode to reduce agent calls and costs.
- IVR delivery is generally cheaper than using agents.
- Although voice driven systems can simplify interaction compared to complicated touch tone hierarchal menus driven systems, they can be frustrating to use.
- Although voice driven systems can simplify interaction compared to complicated touch tone hierarchal menu driven systems, they are better suited to Call Steering navigation than Application use. They can also be frustrating to use, especially by callers who are not native English speakers.
- Health Service customers have an expectation for a high degree of personal contact. It should be noted that 211 specifically positions its service as ‘calls answered by people’.
- CTI may reduce call handling times and thus costs, but requires that the caller identify themselves. This may not be attractive functionally (ie another step to discourage use), may be impractical; and will likely have privacy implications.
- The use of a premises based PBX/ACD is likely to be more cost effective for high volume environments where the high fixed cost of the equipment is amortised across many calls. A network solution may offer financial advantages for smaller centres together with the potential for easier call distribution and the use of remote agents and distributed sites.
- As services change so systems will have to be reconfigured to navigate to them.

5.2.3. Risks

- Use of IVRs will be frustrating for callers and thus decrease use.
- However total reliance on agents may lead to long delays at periods of unexpected high demand and an IVR alternate may be preferable to waiting.

5.2.4. Possible Approach

- There is little doubt that the caller will prefer a well trained agent helping them to an impersonal machine.

- IVR systems may offer a useful back-up for periods of high demand and/or as an adjunct to agents for the delivery of answers to frequently asked questions.
- The opportunity for CTI to improve agent efficiency should be investigated but it is unlikely to be a significant factor.
- The degree of service integration and the transfer protocols will feature prominently in an analysis of what PBX/ACD to select and whether a network solution's advantages outweigh its disadvantages.

5.3. Telecom Network

Please also refer to the extensive discussion in Sec 3.5 which will not be duplicated here.

5.3.1. Key Questions to Resolve

- How is an 811 call from the caller's local switch (the Telecom Service Provider's responsibility) connected to the 811 Call Centre?
- What local trunking is required at the 811 Call Centre?
- What long distance services are required?
- What message will be played to callers dialling 811 from an area where it is not available?
- How will 811 be accessed from Centrex and PBX phones?
- How will Radio Phone calls be handled? What operator intervention is required?
- How will satellite phone calls be routed? What operator intervention is required?
- How will VOIP calls be handled? What operator intervention is required?

5.3.2. Considerations

- There must be sufficient local trunking capacity between the 811 Call Centre's call handling equipment (ACD/PBX) and the Call Centre's local Telco Central Office (CO) in order to accommodate maximum call volumes including callers on hold, with an allowable expectation of blockage (ie busy signals). It should be noted that if substantial wait times occur the number of callers on hold can require significant additional trunking if excessive busy signals are to be avoided.
- The carriage of calls from the 811 caller's local exchange termination (regardless of call type) to the 811 Call Centre if outside the caller's local calling area will be at the 811 Service Provider's cost as a long distance call. The long distance unit cost of moving the 811 call to the 811 Call Centre should be no different from the cost of using a toll free number experienced by existing Healthlines today.
- If a long distance call is received at the 811 Call Centre then transferred elsewhere outside the 811 Call Centre's local calling area then another long distance charge will arise. While Release Link Trunking can free up the trunk lines between the 811 Call Centre and its local exchange (thus reducing the local trunking required), both legs of a transferred call would remain active until the call is terminated. This would double the long distance cost should the origin and transferred destination of the call both not be local to the 811 Call Centre.
- The long-distance costs might be reduced by the use of pre-paid government facilities where available (eg forwarding via a VOIP backbone) although this will increase the complexity of the technical solution and service risk.

5.3.3. Risks

- Failure to provision adequate capacity between the network and the 811 Call Centre will result in a caller getting a busy signal, although this could be considered a desirable alternative to a long wait.
- A policy of transferring calls rather than simply providing callers with a number to dial could potentially double long-distance costs.
- Failure to adequately plan for VOIP, Satellite and Radio Calls will make it difficult to access 811. Telecom Service Provider involvement is essential.

5.3.4. Possible Approach

- In order to meets the needs of certain call types which cannot automatically directly route to the appropriate Jurisdiction 811 Service Provider it will be necessary to provide a regular 10 digit local number (for local and overseas access) and a 10 digit toll free number (for North American access)
- A joint working group should be established with the Telecom Service Provider's to work through the common Telecom routing issues, especially with respect to VOIP calls. Most of these issues will be similar to those experienced for other N11 services. This should be at the national level for common issues (eg VOIP) and at the local level for Jurisdiction specific issues. This will need to include all local wireline service providers, wireless providers, satellite providers and VOIP providers.
- Each Jurisdiction must determine their approach to handling excess call volume. Should it be handled through giving callers busy signals, or by requiring them to wait in queue for an agent, or should automation be used to handle some calls?
- The purchase of long distance service required to route all call types from their local termination to a Jurisdiction's 811 Service Provider and to transfer calls to a subsequent long-distance destination is competitive and must be negotiated by each Jurisdiction. However it is likely that implementation issues will be simplified working with the local Telco since they have to do most of the network configuration required to handle the 811 calls.

5.4. Applications (Build & Maintain)

5.4.1. Key Questions to Resolve

- What applications are required to support the 811 service?
- What are the Information & Referral (I&R) requirements for 811 wayfinding?
- How will these applications be supported? By whom?

5.4.2. Considerations

- Jurisdictions are likely to have similar application needs depending on their intended 811 scope. This suggests that shared development and maintenance may be financially advantageous.
- Likely shared application needs include:
  - Information & Referral (wayfinding)
  - Customer relationship management
  - Reporting
  - Quality assurance
  - Triage
  - Call Charting
- In addition each specialist Health Service delivered under the 811 Service will likely require its own unique applications in support of its primary mission.
- The 211 & 311 Services will have similar Information & Referral application requirements.

5.4.3. Risks

- Failure to provide the appropriate applications will mean that the service will not function effectively.
- Disparate or poorly designed systems will increase call handle time and increase costs.
- It is difficult to maintain small systems built by small organisations in response to low cost implementations.

5.4.4. Possible Approach

- The scope of the Service will drive the application requirements
- Consideration should be given to shared development and maintenance of applications required by all Jurisdictions and with 211 & 311 for wayfinding.

5.5. Data Management & Security

5.5.1. Key Questions to Resolve

- What are the database requirements?
- How do you ensure the data is secure and accessed only by authorised users?

5.5.2. Considerations

- Data Management & Security is a standard consideration of all technology implementations.
- Privacy considerations will require strict attention to data security and access control.
- Security Administration is a required process with clear accountabilities and responsibilities.
- Shared use of the data and/or applications will make addressing these questions more complex.

5.5.3. Risks

- Poor data management and security could compromise both the accuracy of the wayfinding service, the effectiveness of the applications and the integrity of the service.
- Addressing these issues across multiple organisations will slow deployment.

5.5.4. Possible Approach

- A shared application does not require shared data, thus it may be possible to jointly develop an application that is then used and administered by each Jurisdiction.
- Public data (ie most wayfinding data) could be shared between 811, 211 & 311.
- Private data will likely have to remain highly controlled and restricted to specific institutional use.

5.6. Website

5.6.1. Key Questions to Resolve

- What are the business requirements for the website?
- What functions are to be made available online?
- To what extent can this be a shared national initiative?

5.6.2. Considerations

- Internet delivery has low incremental costs compared to Voice delivery. The probable lack of a quantifiable business case for 811 will mean a strong pressure to control the high potential costs of substantial voice access.
- A well designed web site can offer a significantly lower cost delivery of certain information such us:
  - Wayfinding information
  - Commonly asked questions
  - General medical information
- Jurisdictions may have common general requirements for an 811 internet site but may have different content requirements based on the scope of their 811 services.
- A shared website:
  - would have to allow for Jurisdictional variations and 'breaking news';
  - would require a common database to support national I & R functions; and
  - need agreement on common content (eg general health information)
- Internet use and availability has matured to a point where it is common and expected for customers to choose to access services via the Internet rather than by voice.

5.6.3. Risks

- A poorly implemented web site will not reduce calls and therefore offer no financial benefit.
- The content currency of the website must be maintained.
- A cooperative approach would stretch out the implementation timeline.

5.6.4. Possible Approach

- 811 deployments would benefit from internet delivery of selected services and the positioning as a web based service will encourage primary internet access.
- There is an opportunity for a national 811 website (811.ca) to achieve an economy of scale.
- The design would have to accommodate different regional content.

5.7. Desktop Working Environment

5.7.1. Key Questions to Resolve

- What desktop PC and related infrastructure is required by 811 Call Centre and 811 Service Management?
- How do I establish an ergonomically attractive workplace?

5.7.2. Considerations

- What telephones and headsets will the agents use?
- Will agents work from a computer 'soft phone' or a real phone?
- What PCs and monitors will they have?
- What personal application software will they use? To what extent must this conform to a set standard?
- What are the local area network requirements?
- Lighting, desks, chairs all make a difference to the ergonomics.
- Nurses in particular are highly sensitive to a static work environment since this is not normal for them.

5.7.3. Risks

- Failure to provide an attractive environment will depress recruitment.
- Failure to provide the correct environment will increase repetitive strain injuries and increase sick time.

5.7.4. Possible Approach

- These are all relatively straightforward decisions that will be made as part of the IT and office planning.

5.8. Data Network

5.8.1. Key Questions to Resolve

- What data network must be established to support the various applications to be used by the 811 Service Provider?
- What Wide Area Network must be established to support integrated service delivery involving multiple participants at multiple locations?
- What Wide Area Network must be established to support data collection and maintenance?

5.8.2. Considerations

- In its simplest incarnation the 811 Service may require little in the way of multi-location, multi-organisation secure access.
- However since implementation may include distributed delivery and shared intra and inter Jurisdictional services involving multiple different organisations it will be essential to maintain a robust and secure network

5.8.3. Risks

- The more distributed the IT solution and its various users, the more significant the effect would be of a network failure and the more points of failure that exist.
- Although a localised solution has the advantage of simplicity, it lacks the latent redundancy of network based solution.

5.8.4. Possible Approach

- This should be resolved as part of the overall IT solution based on the business requirements.

6. Marketing Framework

This section considers the Marketing and Communications that are required to position and promote the 811 Service.

6.1. Branding

6.1.1. Key Questions to Resolve

- What is the "value proposition" for 811?
- What is the 811 Service? How will evolve over time?
- How to accommodate a national brand with regional variations?
- How to position internet versus voice access.

6.1.2. Considerations

- The greatest value of 811 will be realized from maximising its use but only for the services that it offers. This will only be achieved through high awareness of the 811 service's existence and clarity on its scope and purpose.
- The CRTC expects 811 Service Providers to promote the service.
- It will be essential that the public know what 811 offers them versus the other N11 services.
- It seems likely that variations in 811 scope in different Jurisdictions will make branding difficult. For example using 811 as a simple and easy to remember access number for an existing NurseLine is a different value proposition and branding to using it as the portal to a broad range of Health Services.
- Although 911 service is not available everywhere, where it is available it is clearly understood what it is for, how it works and there is little regional variation.

6.1.3. Risks

- Lack of a coherent brand will confuse the customer and may lead to inappropriate use.
- Inappropriate or ineffective positioning of internet versus voice access will increase costs and/or decrease customer satisfaction.

6.1.4. Possible Approach

- Resolution of the issues raised in this framework will be required in order to brand the 811 Service correctly.
- It will be beneficial to have national cooperation of the branding of the service if we are to avoid confusing the customer.

6.2. Marketing Plan

6.2.1. Key Questions to Resolve

- How to promote the service.
- The use of paid vs unpaid media.
- The development of a marketing plan.
- How to maximise 811 promotion nationally while allowing for specific Jurisdictional messaging.

6.2.2. Considerations

- The greatest value of 811 will be realised from maximising its use but only for the services that it offers. This will only be achieved through high awareness of the 811 service's existence and clarity on its scope and purpose.
- As awareness and scope increase so will call volume which will then require increased budget, infrastructure and operational capabilities.
- Although the Telecom Service Providers are required to undertake a campaign to retire their existing 811 use, realistically this will likely only inform their existing 811 users to call a new number for their old services (eg a bill insert telling them a new number to call for billing inquiries).
- The nature of the 811 offering will likely mean that there will be considerable unpaid media promotion.
- There are tremendous unpaid opportunities to promote 811 through the billions of interactions the public have with the Health Care System, both physically and via documents.
- Once 811 awareness is achieved there will be no need for significant sustaining marketing unless the 811 Service itself changes.
- However a staged increase in 811 scope would require ongoing marketing to change customer expectations to optimize their awareness of the services offered as they evolve.

6.2.3. Risks

- Appropriate customer awareness on the use of 811 is essential. Failure to do so correctly and in a controlled manner will mean:
    - The customer will not understand why they should call or visit the website and thus will either not call or call for the wrong reason.
    - This in turn will make the service less efficient and thus increase costs.
    - Failure to meet inappropriate customer expectations will reduce customer satisfaction and thus reduce use.
    - There will be an increased risk of high volumes of inappropriate calls causing poor service levels.
- Since awareness is the key driver of call volumes (which in turn are the prime driver of costs), awareness levels must be matched to processing capacity if service levels are to be maintained within budget expectations.

6.2.4. Possible Approach

- Resolution of the issues raised in this framework will be required in order to brand the 811 Service correctly. A marketing plan must be developed to raise awareness of the 811 service and its scope.
- Given that all N11 Service Providers and the Telecom Service Providers should share a common concern around branding and common needs to communicate the existence of their N11 service, it would be advisable to investigate the opportunities for coordinated marketing activities using unpaid media and especially in partnership with 211 and the Telecom Service Providers.
- Health Authorities will pay a crucial role in promoting the appropriate use of the 811 service with their customers.
- Awareness must be managed carefully as 811 expands in order to throttle demand to manageable volumes and thus costs.

6.3. Communications Plan

6.3.1. Key Questions to Resolve

- Who are the target audiences for 811 communications?
- What are the key messages? For each audience?
- How does the audience and message change over time?
- How and when do I communicate to whom?
- How does this change over time?

6.3.2. Considerations

- Communications play a key role in:
  - Managing stakeholder expectations.
  - Optimising intra-agency and intra-jurisdictional cooperation.
  - Optimising national branding.
  - Promoting the 811 service to stakeholders and customers.

6.3.3. Risks

- Lack of a coherent communication plan will hinder development of the service and lead to confusion amongst stakeholders and customers.
- Communications are significant in mobilising unpaid media to promote the 811 service and thus minimise marketing costs.

6.3.4. Possible Approach

- A communication plan must be developed to cover:
  - The Development, Launch, Growth and Sustainment phases of 811 Service deployment.
  - To address stakeholder groups, customer groups and the media.

6.4. Customer Focus & Satisfaction

6.4.1. Key Questions to Resolve

- What do my customers need?
- Are customers satisfied with my service? What do they like/dislike?
- How can I improve the service?

6.4.2. Considerations

- Focus groups with target customer segments can help in both the conceptual development of the Service and in designing how it is best implemented.
- Once the service is launched further focus groups can be used to refine the Service and test new concepts.
- A standing regular customer satisfaction survey can be used as a delivery benchmark and as a means of tracking the effect of changes.

6.4.3. Risks

- Lack of end-user input may not be critical but it inevitably leads to sub-optimisation that costs more in the long run.
- Lack of any consistent measurement of service quality from an end-user perspective inhibits improvement and exposes the organisation to having to respond to anecdotal concerns.

6.4.4. Possible Approach

- Focus groups will be useful in helping with defining the optimal scope of the 811 Service, understanding how consumers may want to interact with the service and developing its branding and marketing.
- A regular customer satisfaction survey should be benchmarked prior to 811 launch (on the existing service) and measured periodically thereafter to determine the effect on existing and new customers of the introduction of 811 and its subsequent evolution.

7. Deployment Framework

Once the Business Requirements have been decided there are a number of significant deployment questions that must be resolved prior to the finalization of the overall Implementation Plan.

7.1. Project Staffing

7.1.1. Key Questions to Resolve

- What resources are needed to plan the 811 service?
- What resources are needed to implement the 811 Service?

7.1.2. Considerations

- Expertise will be required across the range of Topics described in this document to plan and implement the 811 service. This will include expertise in:
    - Project Management staff to manage the overall implementations.
    - Contract Negotiators.
    - Contact Centre Management.
    - Human Resources.
    - Labour Relations.
    - Privacy.
    - Information Technology.
    - Telecommunications.
    - Communications and Marketing.
    - Training.
- The resources required will vary through the phases of service development and will depend on the delivery approach. For example:
    - Concept Development will require:
        - Business & leadership skills – part time senior staff and consultants.
    - Solution planning will require
        - Business & leadership skills – part time senior staff and consultants.
        - Marketing planning skills – can be easily subcontracted.
        - Technology planning skills – specialists, consultants and/or service provider staff.
        - Deployment planning skills – project management team.
    - implementation will require:
        - Detailed implementation planning skills – 811 program leader & project management team.
        - RFP management and contracting skills (if RFPs are required) – part time senior staff and consultants and specialists depending on the nature of any RFP.
        - Infrastructure development, application development, data management, operational management, recruitment and training skills.
        - Marketing & communications skills.
    - Growth will require:

        - Program leadership.
        - Detailed implementation planning & project management.
        - Operations & technology management, delivery & support staff.
        - Marketing & communications skills.
    - Sustainment will require:
        - Program leadership.
        - Operations & technology management, delivery & support.
        - Communications.
- The effort required will depend on the business requirements, size of the Jurisdiction and extent to which services are currently in place and whether they will change substantially.
- Each jurisdiction has $150,000 available to assist in funding the detailed 811 service planning in their Jurisdiction.

7.1.3. Risks

- Inadequate resourcing of the 811 Project will increase the risk of delay and failure.

7.1.4. Possible Approach

- There will doubtless be many similarities between Jurisdictions and thus a detailed plan developed for one could be used as the basis to build the plan for another.
- Each Jurisdiction must first secure a planning team followed by an implementation team for their 811 Service.
- Outsourcing the delivery of the Service will reduce the direct resources a Jurisdiction needs to apply, however considerable effort is still required in the early stages to manage and assist the contractor.
- If a Jurisdiction is in no hurry it could wait until it can take advantage of the detailed planning completed for an early adopter Jurisdiction.
- If a Jurisdiction is in even less of a hurry it could wait until it can take advantage of the implementation experience of an early adopter Jurisdiction.

7.2. Operations Staffing

7.2.1. Key Questions to Resolve

- What resources are needed to operate the 811 service?

7.2.2. Considerations

- Internal or outsourced resources will be required covering:
  - General Management.
  - Contact Centre Management (including scheduling and reporting specialists).
  - Quality Management.
  - Human Resources.
  - Labour Relations.
  - Privacy Policy and oversight.
  - Information Technology.
  - Telecommunications.
  - Communications and Marketing.
  - Training.
  - Knowledge Management.
  - Data gathering and maintenance.
  - Website construction and maintenance.
  - Application development & maintenance.
  - Wayfinding (Information & Referral) Agents.
  - Specialist clinical staff as required for Healthline component service to deliver and support the services (eg Nurses for NurseLines).

7.2.3. Risks

- Inadequate resourcing of support staff (ie non-Agents) will lower the quality of the service.
- Inadequate resourcing of front line staff (ie Agents) will create significant delays to handling calls and low service levels.
- A substantial increase in demand for NurseLine Services may arise due to the increased awareness and ease of use enabled by 811. It may prove difficult to hire enough Registered Nurses to meet this increased demand in certain Jurisdictions.

7.2.4. Possible Approach

- Each Jurisdiction will need to determine its staffing needs based on its Delivery Approach, Scope and Size.
- NurseLine staffing plans must be put in place to accommodate the increased volume of calls.

7.3. Outsourcing

7.3.1. Key Questions to Resolve

- What should be internal versus outsourced?

7.3.2. Considerations

- The extent to which outsourcing will be desirable or required will depend on:
  - The overall size of the operation.
  - Availability of internal resources.
  - The ability to marshal staff and resources for such an organisation within Government.
  - The scalability of an internal vs external delivery organisation.
  - The general Jurisdictional approach to service delivery outsourcing.
  - Political considerations.
  - Labour relations considerations.
  - Costs
  - Organisational culture.
- There is a complex series of pros and cons for outsourcing vs internal delivery. Each Jurisdiction will need to weigh this based on its individual circumstances.

7.3.3. Risks

- Care must be taken not to force or allow the outsourcer to bid too low in order to win the business. If they under estimate the effort/costs and cannot make a profit then all parties will suffer.

7.3.4. Possible Approach

- Each Jurisdiction can then decide what elements of the service it wants to outsource based on their own circumstances.

7.4. Contact Centre Sizing

7.4.1. Key Questions to Resolve

- What are the expected call volumes (by time of day, day of week, seasonally)?
- What are the expected call handle times?
- How many staff are needed to answer the phones?
- What are the desired service levels?

7.4.2. Considerations

- Call Handle Time and Call Volume and its daily distribution are the key drivers of agent staffing and thus costs.
- Sophisticated modeling is required to accurately schedule staff to match call demand. Staffing may itself be constrained by a collective agreement to prevent its optimization to demand.
- The nature of the 811 Service is such it cannot be assumed a significant proportion of new calls will be handled via technology (ie the web site or IVRs)
- Based on existing experience as reported by MJSC the Call Handle times are typically 11-14 minutes for Nursing calls and 3-5 mins for wayfinding calls.
- NurseLine call volumes are well known in most Jurisdictions but their relationship to awareness is not as clear. It is possible to express usage as a ratio of annual calls/population. This currently varies from 5-29% across the Jurisdictions.
- It is not possible to predict accurately how volume will increase, due to the unknown effects of:
    - Increased awareness of the Services.
    - Increased recall of the 811 number compared to current 10 digit numbers.
    - The effect of consolidating calls currently going to many different Services that are typically not well known.
    - The effect an 811 website will have on call diversion.

7.4.3. Risks

- Initially call volumes will be unpredictable and thus service levels may suffer with consequent bad press and cost overrun.

7.4.4. Possible Approach

- It should be possible to model possible order of magnitude call volumes based on population and projected awareness.
- A staged rollout should be considered to manage risk.

7.5. Service Levels

7.5.1. Key Questions to Resolve

- What are the desired Service Levels (eg the percentage of calls answered in a specified time?)

7.5.2. Considerations

- Although the focus will be on call handling Service Levels, these must be developed for all aspects of the 811 Service, eg:
  - Call Blockage
  - Time spent waiting for an answer
  - Expected call length
  - Transfer accuracy
  - Customer satisfaction
  - Website response
  - Data maintenance
  - Data quality
- Higher Service Levels cost more.
- Higher Service Levels require more staff.
- Low Service levels discourage use and are often considered bad politics.

7.5.3. Risks

- Staffing sufficient qualified staff is a Critical Success Factor.
- Initially call volumes will be unpredictable and thus service levels may suffer with consequent bad press and cost overrun.
- Efficient staffing for very 'spikey' call volumes is difficult to do and achieve service levels without considerable over manning and higher unit costs.
- Efficient staffing for very low call volumes requires relatively high over manning to maintain service levels due to the variability of call arrivals at low call volumes.
- It may be difficult to secure sufficient qualified staff to deliver high service levels in certain Jurisdictions.

7.5.4. Possible Approach

- A staged rollout should be considered to manage risk.
- Lower service levels should be permitted until the dynamics of the new 811 Service are clear.
- Initial Service Level expectations should be set low.
- Technology should be used to deal with high volumes creating unexpected poor service levels.

7.6. Privacy

7.6.1. Key Questions to Resolve

- What are the legal requirements to which the Service must conform?
- What will the Privacy Policies be?
- How does this constrain operating solutions (eg data sharing, caller identification, storage and retrieval of personal information)?
- How does this constrain call transfers?

7.6.2. Considerations

- There is extensive Federal and Provincial legislation governing the treatment of private information.
- Medical information is particularly sensitive.
- Transferring calls to third parties will require particular attention and is likely to limit the ability to transfer any meaningful information about the caller.

7.6.3. Risks

- Failure to comply with Privacy Regulations will at best be upsetting for customers and a worst a public relations and legal nightmare.

7.6.4. Possible Approach

- It will be necessary to develop comprehensive privacy management policies, training, monitoring, enforcement and reporting.

7.7. Office Facilities

7.7.1. Key Questions to Resolve

- Where is the service to be located?
- Are staff to be centralised or can they work remotely in a blended approach?

7.7.2. Considerations

- There are three types of contact centre models:
  - Single Call Centre (all staff in one central office)
  - Distributed Call Centres (staff grouped in satellite call centres but networked to act as one virtual call centre)
  - Both with/without Remote Workers who typically work from home but are part of a virtual call centre.
- It is simpler and easier to manage, train, supervise and equip all staff centrally.
- Recruitment of specialist staff may be easier if the catchment area is expanded by setting up distributed call centres.
- Recruitment of specialist staff may be further enhanced if they are enabled to work from home for at least some of the time.
- Local staff are generally more aware of local conditions and thus add value to the call. While it may be possible to preferentially route calls based on location, this does increase the complexity of call handling and ultimately may be to no avail since to maintain Service Levels calls should be routed to the next available agent regardless of location.
- The MJSC Literature Review indicated the following benefits would accrue from the use of remote agents:
  - Reduced turnover, improved recruitment, access to a larger labour pool.
  - Improved staff job satisfaction & quality of life.
  - Performance Improvements:
    - 2001 Telework survey found 75% of staff were more productive at home.
    - Intellicare found reduced call time in teletriage by remote agents.
    - McKesson found 10% productivity improvement.
    - Other call centres report 12% improvement.
  - Improved rostering efficiency (if not constrained by labour agreement.)
  - Improved Business Continuity.

7.7.3. Risks

- Distributed call centres and remote workers improve the fault tolerance of the service although this benefit can only be realised if the technical infrastructure is also decentralised and fault tolerant.
- Remote working will pose particular Privacy management issues and risks.

7.7.4. Possible Approach

- Since 811 wayfinding staff need no specialist clinical skills it should be possible to recruit reasonably easily in the major urban centres.
- However the shortage of nurses available to staff the NurseLine component of the service will continue to be a challenge that will increase as greater 811 awareness

encourages greater use. This challenge may be better met through establishing Distributed Call Centres and remote working capabilities.

7.8. Knowledge Management

7.8.1. Key Questions to Resolve

- What information is required?
- How is this gathered?
- How is accuracy ensured?
- How is data kept current?

7.8.2. Considerations

- Knowledge Management includes the gathering, maintenance and distribution of all the information required by the 811 Service.
- The Scope of these information requirements will depend on the Scope of the 811 Service within a Jurisdiction.
- It may include the following:
  - Database of Health Care Providers (ie the Information & Referral data)
  - Medical Knowledge Management (eg Triage software)
  - Patient Information (eg the Client Registry and the Electronic Health Record)
  - Call History
  - Caller Information and History
- The scope of Knowledge Management is far reaching and far more is required for the range of Tier 1 & Tier 2 Health Service beyond simple 811 Information & Referral.
- Requirements will be made substantially more complex if the service is targeted at the needs of Providers as well as the Public.

7.8.3. Risks

- Knowledge Management is a Critical Success Factor. If a Jurisdiction does not have a strategy in place yet to address this then the 811 Service will break new ground in this area as well.
- An 811 Information & Referral service is only as good as the completeness and accuracy of its Information & Referral database.
- Incomplete or inaccurate data will lead to inappropriate referrals which will add cost, frustrate users and ultimately will undermine the credibility of the service.
- Relying on aggregated data provided decentrally or voluntarily by Health Care Providers may not include all the information required and may not always be as accurate and consistent as needed by the end user.

7.8.4. Possible Approaches

- Ideally Information & Referral data can be extracted from existing sources that are known to be accurate and current.
- Failing this an Information & Referral data repository can be established that Health Care Providers can self maintain on a voluntary basis.
- However it seems likely that there will need to be a core Information & Referral data gathering and maintenance staff whose single focus is to secure and maintain the required information as well as periodically verify shared data accuracy.
- The 811 Service must be heavily involved in broader data initiatives within Health Service Delivery.

7.9. Emergency Planning

7.9.1. Key Questions to Resolve

- What is the role of the 811 Service in the event of a public emergency?
- What is the role of 811 Service generally in relation to the role of the specific NurseLine service in the event of an emergency?
- Does this role extend beyond health related emergencies?
- What capacity should be designed into the 811 Service in order to meet emergency demand?
- How should this emergency demand be met?

7.9.2. Considerations

- General business consideration will require the 811 Service Providers to staff optimally for normal volumes unless additional funding is forthcoming to maintain excess call handling capacity.
- Even if additional funding is forthcoming it is impractical to maintain significant excess capacity 'just in case' for an emergency whose impacts may vary from relatively minor to catastrophic, depending on the nature of the emergency.
- Adding large numbers of staff to 811 to quickly deal with large call volume increases is not practical. However it may be possible to co-opt staff from other lower priority government services if contingency planning and training are undertaken.
- Not all public emergencies are health related thus 811 may not be the obvious public emergency 'call to action' in all cases unless it is designated as such. However other types of public emergencies may spin off possible health implications that cause a secondary rise in 811 demand.
- There are other government contact centres as well as 211 who may see increases in demand and will have similar issues.
- The 911 Service will be at risk of additional unmanageable demand if other services such as 811 are unable to provide adequate information in a public emergency.
- A public emergency may impact 811 staff and reduce their availability just as demand increases.

7.9.3. Risks

- Lack of a coherent public emergency communication plan and awareness of it will leave callers to try whoever they think may be able to help. While this will at least spread demand it will be inefficient, frustrating and make the release of consistent accurate information difficult.
- Lack of an 811 Service emergency response plan will leave the 811 Service vulnerable to unmanageable high demand that will make it impossible to get through.

7.9.4. Possible Approach

- 811 may be a powerful tool to use in the event of a public emergency. However this will require active engagement in emergency planning with associated funding.

- Jurisdictions should determine how they want to use their affiliated contact centres in the event of a public emergency. There is an opportunity to position 811 as the lead contact centre and co-opt other services into a distributed mode of operation to spread the load.
- Since 811 is a national brand there is an opportunity for national positioning and possible funding for emergency preparedness and response.
- Automated alternatives should be provisioned to handle excess volumes, particularly the use of IVRs and the Internet to provide high demand information.

7.10. Business Continuity/Disaster Recovery Planning

7.10.1. Key Questions to Resolve

- What are the Business Continuity Planning (BCP) requirements?
- What are the Disaster Recovery Planning (DRP) requirements?
- What are the impacts on staffing, locations and technology?

7.10.2. Considerations

- BCP/DRP is concerned with ensuring the staff, facilities and/or technology infrastructure are in place to continue specific operations in the event of a failure of one or more elements of the operational infrastructure. This should not be confused with emergency planning which is concerned with the delivery of an additional Service in the event of a public emergency, although the nature of that emergency may also cause the BCP/DRP to be activated.
- The scale of the a BCP/DRP may vary from addressing minor technical considerations such as provisioning fault tolerant data servers, through ensuring duplicate distributed fault tolerant technology infrastructure, to distributed operations right up to the capability to relocate the entire operation to an unaffected location.
- As the probability of an event increases so does the requirement to protect against it.
- As the business impact of an event increases so does the requirement to protect against it.
- As the scale of the protection increases so does the cost.
- Thus it is necessary to balance probability and business impact against cost.

7.10.3. Risks

- Failure to have a BCP/DRP leaves the service open to outages.

7.10.4. Possible Approach

- The first step is to clearly establish the business requirements that will drive the BCP/DRP.
- A limited low cost BCP/DRP will deal with minor events, typically technical failures. This is required as a minimum and should form part of the technical solution.
- A fault tolerant IT and telecommunications architecture should not cost excessively more and it would be advisable to build this into the technical solution.
- Provisioning additional staff and facilities for use in the event of a major catastrophe is likely to be cost-prohibitive but consideration should be given to the use of remote workers and distributed call centers in the overall delivery approach as they improve survivability provided the technical infrastructure is also similarly redundant.

7.11. Alliance of Information and Referral Systems (AIRS) Certification

7.11.1. Key Questions to Resolve

- Must the 811 Service Provider be AIRS certified?

7.11.2. Considerations

- AIRS is an International Association that is in partnership with Inform Canada to accredit organisations and staff involved in the delivery of information and referral programs.
- The 211 service is intending to implement an AIRS certification program for its Service Providers.
- The AIRS certification appears to be oriented towards private sector organisations delivering Information & Referral services as a means of establishing a quality benchmark acceptable to contracting agencies.
- Many of the accreditation requirements are consistent with what the 811 Service Provider and their staff will need to do regardless.
- However there would likely be considerable work involved in completing the certification requirements.

7.11.3. Risks

- AIRS certification may distract management from their primary objectives, especially during the initial 811 service implementation and growth phases.

7.11.4. Possible Approach

- AIRS certification is not an absolute requirement thus each Jurisdiction can choose to require it or not.
- AIRS certification appears to be a good target in the long run.
- Consideration should be given to hiring consultants to prepare the AIRS accreditation in order to not distract the 811 Service Provider delivery team from their immediate primary objectives.

8. Business Case Framework

Although the development of a Business Case is not in scope for this study it may be necessary for a Jurisdiction to develop one. The following are the key considerations for that Business Case.

8.1. Key Variable Cost Drivers

The most significant cost is the staff to handle calls. No other variable or fixed cost is comparable. It is this cost that defines the magnitude of the overall 811 Service costs and will determine if a Jurisdiction is willing and able to fund the 811 Service.

8.1.1. Scope

The scope of the service will naturally make a significant difference to the demands placed on the service and thus the variable costs.

8.1.2. Staffing

The largest single cost will be the staff cost to service phone calls. This is primarily driven by the volume of calls and the time it takes to handle calls as modified by Service Levels. However staff productivity also plays as significant factor.

Staff are actually available to handle calls for significantly less hours than they are paid because they are sick, have breaks, attend training, take vacation, etc. Thus a full time agent working a notional 36 hours over a 5 day week may only have 202 of their 260 paid days actually available to man the phones after they take their stat holidays, paid vacation, sick time and training time. Even when they are available, their breaks typically take a further hour out of the day. The net effect is they are only ultimately available to take calls on only 66% of their paid time.

Furthermore agents have to wait for a call in order to quickly handle calls when they arrive randomly clumped together in order to meet Service Levels. These occupancy rates may vary from 20%-95% of the time they are actually available to handle a call. Occupancy varies depending on call volume, handle time and Service Levels.

Finally, contract agreements may limit the ability to schedule with sufficiently flexibility to optimise the staffing levels to the required number. This will result in over manning and rostering inefficiency

8.1.3. Call Volumes & Handle Time

These two factors are the main inputs to determine the level of staffing required.

Call volume will be driven primarily by the scope of the 811 Service and the awareness of it.

Handle time will depend on the nature of the call, the call handling protocols and the effectiveness of the staff in dealing with the call (and thus their training and supervision.)

8.1.4. Service Levels

Staffing will also be significantly affected by the Service Levels established for the call centre. These are a measure of how quickly the telephone is answered. Typically this is

expressed as a "Grade of Service" (% of calls answered with X seconds) or "Average Speed of Answer".

Higher Service Levels require more staff since they must be ready to answer the phones as calls arrive randomly. However the difference in staffing costs required for most typical Service Levels is not that great compared to the total costs provided call volumes are sufficiently large.

8.1.5. Telecom Long Distance

For the portion of the calls that are long distance and cannot be routed using fixed facilities then long distance charges will apply. This is typically an order of magnitude less than the agent cost involved in handling a call and is therefore not of undue significance.

8.2. Key Fixed Cost Drivers

Fixed costs are more significant in a low volume environment.

8.2.1. Management Overhead

These costs include the fixed staff needed to manage the service and its infrastructure.

8.2.2. Telecoms Infrastructure.

This includes the call handling equipment (IVRs. PBX, ACD, Call Recorders, etc), fixed trunking facilities, voice and data network and related fault tolerant infrastructure required to meet the BCP/DRP.

8.2.3. IT infrastructure

This includes the staff desktops, applications, servers, local area network and related fault tolerant infrastructure required to meet the BCP/DRP.

8.3. Benefits

The following comments are based on the findings of the MJSC Literature Review. This review did not report on any direct comparables with an 811 service but did find many Healthline services similar to the NurseLine component with indications that some also enabled broader access to health and social services.

8.3.1. Quantifiable Benefits

The MJSC Literature Review found Healthlines reported as expensive but that there are no economic evaluations of 811 Services and as yet little quantifiable evidence to support a proforma quantified business case:

- No evidence yet supporting reduction in ER visits.
- No evidence yet supporting changes to population health status.
- No evidence to support changes to use of Health Services.

However, although there is no quantified evidence yet to show Healthlines save money this does not imply they are not good value.

8.3.2. Qualitative Benefits

Although there was no clear definition of and degree of value there was plenty of support in the MJSC Literature Review for qualitative benefits from Healthlines such as:

- They improved overall access to Health Services.

- They direct patients to the most appropriate provider thus improving system efficiency.
- They reduced inappropriate access.
- They improved out of hours access and delivered it more cheaply.
- They provided quicker access to services.
- They overcome geographic barriers.
- They meet certain types of demand at lower cost than conventional delivery.
- Nurse delivered information is delivered at lower cost than in clinical settings.
- They may reduce office visits.
- They may reduce ER visits.
- They may reduce 911 calls.
- They may reduce physician workloads.
- They prevent adverse outcomes through safe, timely advice.
- They provide efficient risk management to direct callers to appropriate services.
- They may promote wellness through providing the public with better information to enable better decisions and self-care.
- Customer satisfaction was higher with a comprehensive service, but worse if it meant they could not get through easily or suffered long waits.

There was less evidence of helping special populations. Although the NHS showed use increases with poverty up to a point.

8.4. Funding

It is a given that the only way to fund 811 in the Canadian context of a public health care system is via the public purse. However who controls the purse?

Since 811 is conceived primarily as an adjunct to Provincial/Territorial Health Services it implies it is funded either directly by the Government or via grants to Health Regions (who can be considered the outsourced sub-contractors for a Provincial Service.)

Since 211 has little of its own funding and would rely on government funding it seems unlikely that cooperation will bring new funds although it might reduce duplication in spending.

However there is the potential to tap into national funding (probably via the Infoway program) particularly for those aspects of 811 that are common requirements. This will be discussed further in the next section.

9. Critical Success Factors

9.1. Introduction

Although there are 33 Topics to consider they are not all equally important. The following are the most significant. Failure to correctly address these Critical Success Factors will substantially increase risk and the probability of failure.

9.2. Twelve CSFs for 811

9.2.1. The Scope of 811 Service must be clearly defined.

- Since 811 forms part of Health Care delivery it is a Provincial/Territorial responsibility and must align with each Jurisdiction's Health Care Strategy.
- It is essential for each jurisdiction to have a clear Vision and Scope for their 811 service. Lack of clarity of Scope one of the most common reasons programs fail.
- In particular it is necessary to determine if 811 is to serve both the Public and Health Care Providers and what services will be integrated and how.

9.2.2. The appropriate Stakeholders must be engaged.

- The strategic benefit from 811 is its potential as a portal to access a range of Health Services. Lack of stakeholder engagement will inhibit this growth.
- However excessive reference to what may be conflicting stakeholder views may significantly slow or prevent the deployment of the Service.
- During the initial concept development phase a number of working groups could be formed representing stakeholder sub groups. These would be advisory in nature.
- Jurisdictions will need to determine to what extent they engage the stakeholders within a formal governance structure.

9.2.3. The Delivery Model must be clear and supported.

- It is important to resolve how centralised will the Service be, both in respect to its operations and its infrastructure provisioning.
- It is important to resolve the role of Outsourcer vs Government and/or Health Authorities in delivering the service.

9.2.4. 811 must be integrated into the Primary Health Care System.

- The extent to which 811 is integrated into the Primary health Care System will make significant difference to the long term value of the Service.
- It is important to differentiate the delivery of Information and Referral (I&R) services from the delivery of Health Services. The focus of the former is to determine the most appropriate Service to meet a caller's need and providing information and assistance in reaching that service, while the latter is the delivery by specialist staff of the Health Service itself. This in turn may be delivered remotely as part of the Healthline service (eg NurseLine) or via the conventional Primary Health Care System.
- Healthline Services may be seamlessly integrated within 811 ('First Tier Services' or may be more loosely linked 'Second Tier Services')

9.2.5. Delivery should be staged to reduce risk.

- A 'Big Bang' launch may be politically attractive as a means of showcasing a new capability but it will increase risk. Given that the public do not have 811 now, there seems little to gain and much to lose in proceeding too rapidly.
- If the intent of a jurisdiction is simply to use 811 as the 'easy to remember' number for an existing Service then implementation can proceed relatively quickly. However if the intent is to have 811 act as a Health Service portal it may be better to wait until it can actually deliver on this promise by enabling access to a range of core services. Since the effect on volumes is less predictable, a soft launch or phased geographic rollout will significantly reduce risk.

9.2.6. The correct Technology must be implemented and must work.

- While this may appear totally obvious it is nevertheless critical to success and therefore must have appropriate focus.
- This includes call steering and handling technologies (eg Premises Based Exchanges, Automatic Call Distributors, Integrated Voice Response Systems, Voice Recognition Systems), the voice and data networks, the IT hardware and operating systems and the applications required to support the Service (eg information and referral, quality assurance, health information, triage).
- It also includes the production and operation of an integrated 811 website.
- Particular attention must be paid to resolving the issues arising around call routing from non-wireline phones.

9.2.7. Knowledge Management Solutions are required.

- Knowledge Management includes the gathering, maintenance and distribution of all the information required by the 811 Service. The scope of these information requirements will depend on the scope of the 811 Service within a Jurisdiction.
- It may include the following:
  - Database of Health Care Providers (ie the Information & Referral data.)
  - Medical Knowledge Management (eg Triage software)
  - Patient Information (eg the Client Registry and the Electronic Health Record.)
  - Call History.
  - Caller Information and History.
- An 811 Information & Referral service is only as good as the completeness and accuracy of its Information & Referral database. Incomplete or inaccurate data will lead to inappropriate referrals which will add cost, frustrate users and ultimately will undermine the credibility of the service.
- Relying on aggregated data provided decentrally or voluntarily by Health Care Providers may not include all the information required and may not always be as accurate and consistent as needed by the end user.

9.2.8. Effective Privacy and Data Security procedures must be in place.

- Failure to comply with Privacy Regulations will at best be upsetting for customers and at worst a public relations and legal nightmare.
- It will be necessary to develop comprehensive privacy and data management policies, training, monitoring, enforcement and reporting.

9.2.9. Marketing must be done right.

- The greatest value of 811 will be realized from maximising its use but only for the services that it offers. This will only be achieved through high awareness of the 811 service's existence and clarity on its scope and purpose.
- This means getting the right branding. It will be essential that the public know what 811 offers them versus the other N11 services but it seems likely that variations in 811 scope in different Jurisdictions will make branding difficult.
- Since awareness is the key driver of call volumes (which in turn are the prime driver of costs), awareness levels must be matched to processing capacity if service levels are to be maintained within budget expectations.
- A communication plan must be developed to cover the different phases of the deployment and it must specifically address stakeholders, customers and the media.

9.2.10. There must be enough staff to answer the Phones.

- The Jurisdictional surveys showed substantial variance in customer use which appears to be partly related to awareness of the existing services.
- The use of 811 and expansion in service scope will considerably increase awareness and thus call volume including to existing NurseLines.
- There is a distinct shortage of qualified staff (ie Nurses) in some jurisdictions. This must be resolved unless the delivery model changes.

9.2.11. There must be effective plans for public emergencies.

- Emergency planning is concerned with the delivery of an additional Service in the event of a public emergency. It should not be confused with Business Continuity/Disaster Recovery Plans (BCP/DRP) which are concerned with ensuring the staff, facilities and/or technology infrastructure are in place to continue specific operations in the event of a failure of one or more elements of the operational infrastructure, although the nature of a public emergency may also cause the BCP/DRP to be activated.
- 811 may be a powerful tool to use in the event of a public emergency. However this will require active engagement in emergency planning with associated funding. Lack of an 811 Service emergency response plan and or BCP/DRP will leave the 811 Service vulnerable to unmanageable high demand that will make it impossible to get through.

9.2.12. The focus must remains on the customer.

- This provides a rallying point for otherwise conflicting views.
- Use of focus groups and surveys will best establish what the customer really can and will use.

10. Jurisdictional Considerations

10.1. Introduction

A summary of the current situation regarding 811 in the various Jurisdictions was compiled form the material they provided to MJSC and the interviews. It is summarised in table form in Annex A.

The main purpose behind this aspect of the study was to ensure that there were no key differences between Jurisdictions that would significantly alter the framework. Although the Jurisdictions are different there were surprisingly few environmental differences that were significant enough to affect the overall framework, although some will affect the individual jurisdictional implementation plans.

10.2. Comparisons

Serving rural and particularly northern populations is potentially more challenging due to the remoteness, isolation, culture of self sufficiency and a much higher percentage of First Nations. However some comparable considerations arise in the more populous Provinces regarding recent immigrants as both environments have similar language access issues and varying cultural attitudes to Health Services, especially Telehealth.

Although technical considerations might have been significant, it appears that the concentration of northern populations into (albeit mainly small) communities means that most people could access the 811 Service through the regular infrastructure and that the greatest number of call routing problems will arise from VOIP callers. Many Jurisdictions expressed the need to focus more on smaller communities rather than the larger ones where there is already a foothold for Healthline Services.

What was more pronounced was the differing models for the delivery of the existing services (centralised, decentralised, outsourced, via the Health Authorities) and their different stages of evolution (although in generally similar directions.)

The most striking difference was the different levels of uptake (expressed as a percentage of calls/population) which ranged from 6-29%, While much of this can be explained by differing levels of awareness there was insufficient data to derive an empirical relationship. The obvious conclusion is there will likely be a very substantial increase in call volumes in many Jurisdictions if 811 is promoted.

10.3. Potential Synergies

There appear to be two general areas of possible synergy - The opportunity to share services and the opportunity to share infrastructure. In order for collaboration to work it needs stakeholder support, political will, resources and funding. Working against collaboration will be the normal issues of differing agenda and views, and “we are different here”. Typically cooperative initiatives take longer and it is often found easier to collaborate informally at a low level ‘below the radar’ rather than seek approval to commit resources to a common project.

In general however:

- The MJSC should continue to act upon areas of mutual benefit and potentially expand its role to steer national initiatives and resolve broad national issues of common value.
- Efforts should be made to identify, engage and as far as possible leverage existing national steering groups to avoid duplication and minimise the potential to be surprised by conflicting decisions made elsewhere.

10.3.1. Shared Services

The benefits of sharing services are primarily driven by the opportunity to achieve economies of scale and/or to centralise expertise in a 'centre of excellence' with high clinical quality that can be shared and enjoyed by multiple Jurisdictions. There are also secondary benefits such as time shifting demand and load levelling across multiple centres plus access to a larger labour pool.

- The most obvious candidates for sharing services are the Territories since their call volumes are so small compared to the Provinces, thus represent a small incremental workload.

Other opportunities to share services include:

- **Common National 811 Branding:** Preferably there would be a national agreement for a core service that will thereby permit national branding to avoid confusing the customer.
- **Common Telco/Multi-Jurisdictional/N11 Marketing:** Given that all N11 Service Providers and the Telecom Service Providers should share a concern regarding the effective repositioning of 811, it would be advisable to investigate the opportunities for coordinated marketing activities, especially using unpaid media.
- **Shared Wayfinding Infrastructure:** Serious consideration should be given to establishing shared wayfinding capabilities (operationally and as well as the underlying infrastructure) for 211 and 811 services. Each would still strive to establish clear differentiated branding and have quite different second tier services, but would enable transparent referrals regardless of the caller's choice of entry point. Although 811 is intended to be a Province/Territory wide Service, while 211 is generally more localised, that does not mean that sharing cannot occur and it might even accelerate the deployment of a less localised 211 Service.
- **Shared Centres of Excellence for Specialist Services:** Second Tier services need not be Jurisdiction specific (eg Smoking Cessation) and thus there may be opportunities to centralise delivery in Regional 'Centres of Excellence'.
- **Shared Emergency Backup:** Jurisdictions should determine how they want to use their affiliated contact centres in the event of a public emergency. There is an opportunity to position 811 as the lead contact centre and co-opt other services in other Jurisdictions into a distributed mode of operation to spread the load. Since 811 is a national brand there is an opportunity for national positioning and possible funding for emergency preparedness and response.
- **811 Implementation Planning:** There will doubtless be many similarities between Jurisdictions and thus a detailed plan developed for one could be used as the basis to build the plan for another. If a Jurisdiction is in no hurry it could wait until it can take advantage of the detailed planning completed for an early adopter Jurisdiction. If a

Jurisdiction is in even less of a hurry it could wait until it can take advantage of the implementation experience of an early adopter Jurisdiction.

10.3.2. Shared Infrastructure

In practise each Jurisdiction has similar implementation problems to solve and thus must develop very similar solutions. Rather than develop each solution seven times why not develop it once and share it – rather like this study? Indeed these solutions are probably equally needed nationally for the other Jurisdictions. Thus there are a number of component projects that have the potential to tap into national funding (probably via the Infoway program).

These opportunities include:

- **Common Telecom Working Group**: Since most of the technical issues are common for all Jurisdictions this suggests that a national working group be established to work with the Telecom Service Providers.
- **National 811 Website:** There is an opportunity to develop a shared national 811.ca website providing standard medical information and common wayfinding search and presentation in multiple languages. An 811 web site should allow for multiple languages but since the need is common across Jurisdictions it would be more cost effective to build it nationally. There may also be the opportunity to fulfil other national objectives such as those related to Public Health Information. The design of a shared platform would have to accommodate different regional content.
- **Common Applications:** Consideration should be given to shared development and maintenance of applications required by all Jurisdictions and with 211 & 311 for wayfinding. These include:
    - Health Information
    - Information & Referral (wayfinding)
    - Customer relationship management
    - Reporting
    - Quality assurance
    - Triage
    - Call Charting

11. Next Steps

Each Jurisdiction is at a different stage in its thinking about what to do with 811. Each Jurisdiction has $150,000 of funding available to assist with the next phase of planning. While this is not sufficient to complete full planning on all the Topics discussed in this Framework, it would adequately fund the first and most important part which is the completion of the Planning Framework.

It is therefore recommended that each Jurisdiction create a small team to complete the Planning Framework (as a minimum), using this document as the basis to request the allocated funding. This Team should include both internal policy staff and external expert consultants as required. Once the Planning Framework is complete then subsequent work can be undertaken as and when the Jurisdiction wants to proceed based on the conclusions from the Planning Framework. By all Jurisdictions completing this first stage it will also enable a more complete approach to resolving issue such as how to brand 811 nationally.

Smaller Jurisdictions who are interested in shared delivery may want to pool resources with larger both for efficiency and to gain access to additional skills.

In parallel to this Jurisdictional activity, the MJSC should determine which service or infrastructure sharing projects they want to pursue jointly and request funding to resource these. Each can then be set up and managed either nationally or via the MJC.

Annex A
Summary of Jurisdictional Activity

	Current Service	Delivery Approach	Hours	Population (Statscan 04)	Annual Calls	Uptake	Handle Time	Awareness	Information & Referral Data	811 Direction
AB	Callers select Healthlink Nurses or Lay Wayfinding (13% of calls and most during business hours). Call transfer protocols varies but generally will do a Cold Transfer. Documentation of Teletriage calls is faxed to some referred Health Care Providers although degree of integration varies by region.	Northern Alberta callers are mapped to Edmonton and S Alberta callers are routed to Calgary. The Call Centres are operated and staffed by those 2 Health Regions.	24/7/365	3,204,800	Apr04-Mar05 921,954 calls up 12% on prior year	29%	11-12 mins (nurse); 5-6 mins (wayfinding); 80% answered in 120 secs Target.	1 year after launch by Jun 04 = 64%	Inform Alberta is an on-line directory of Community, Health. Social & Govt organisations, Health data is maintained by Health Regions. Intended to be used by multiple services (inc 211 & 311). Public don't see all data.	Current positioning for Nursing and some Wayfinding. Future direction tbd. Possibly simply an 811 access to existing Healthlink Service. Strategic direction is to increase Integration with the Primary Health Care system.
BC	Nurseline, Dieticians, Pharmacists (after hours). Trails in progress from CDM. Bedline is separate. No use of lay staff, not formal wayfinding.	Central, Outsourced	24/7/365	4,201,900	2003 - 177,000 2004 - 247,000 2005 243,000	6%	12.5 mins	Nurseline Jan04 39% Feb05 47%	None	Current separate positioning for Nurseline and other Services will change to an 811 Portal to range of Health Services
MB	Healthlinks/Info Sante includes NurseLine, some wayfinding, Public Health Information with links to some other related Services using mixture of staff.	Delivered somewhat independently by Winnipeg Regional Health Authority	12 hrs wd 8 hrs we	1,170,200	160,000 for Nurses 100,000 for others	22%	10 mins talk time	Unknown	Encompass is a web accessed database of Health Services (predominantly for Winnipeg), plus Contact internal database for internal use. Maintained by outsourcer working predominantly with RHAs.	No plans at all for 811 but generally looking to expand scope of existing service especially for outbound calling. May be some opportunity to work with Nunavut.
SK	NurseLine including limited wayfinding	Provincial Service delivered by Regina HA	24/7/365	994,300	59,000 reported (2k wayfinding, 11k health Info, 46k Nurse Triage) but now planning 80,000 pa after 3 years and recent marketing	6%	12-14 mins	Unknown	Limited wayfinding data in triage software. No networked or public shared capabilities.	No urgency to deploy 811, nor set direction. Want to develop next level plan. Otherwise will wait and see.
NT	Nurses delivery Family Heath and Support including some wayfinding (although predominantly a Nurseline)	Central, Outsourced	24/7/365	42,900	Apr-Nov 2005 run rate at 4980 up 14% on prior year	12%	10-12 mins	Unknown		Reposition as an improved Portal for Health Services. Must address the issue of no 911 service. How to better engage 50% pop not reached at present.
YK	No Central Service. Callers call Community Health Centres NXX-4444 inc Health Emergencies. After hours calls handled by Nurse Practioners who Triage inc Emergencies. May also handle after hours social services calls	Nurse Practioners in the Community. 24/7.	24/7/365	30,900 with 75% in Whitehorse - Nearly all pop are in communities.	N/A		N/A	N/A	Limited central data. Limited access to it although YK is highly connected.	Unit costs are too high for YK to afford standalone service. Would like to make use of any and all services BC deploy to achieve lower unit costs. In long run would like regional centres of excellence for specialist services.