



# PharmaNet

## Professional and Software Compliance Standards

### Volume 1 – Introduction

**THIS IS A DEPRECATED LEGACY DOCUMENT**

For the latest conformance standards refer to:

<https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/software/conformance-standards/>

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# 1 GENERAL INFORMATION

The Professional and Software Compliance Standards Document for PharmaNet has been revised into volumes, divided by PharmaNet participant functionality requirements.

The 'library' approach provides more logical formatting while reducing redundancy and repetition.

There are common volumes required by all software developers and both business and technical volumes for the different functions. This enables software developers to download only the necessary volumes. The documentation is available on the *healthnetBC* Products and Services Catalogue web site. <http://healthnet.hnet.bc.ca/catalogu/index.html>

## 1.1 The Volumes

The 6-volume documentation set contains:

### Volume 1 – Introduction

Volume 1 introduces the reader to common development components, such as:

- Document Conventions and Structures
- Related Standard
- Contacts
- Support Responsibilities
- Compliance Evaluation Process
- Mandatory policies and procedures to ensure compliance with all standards.

### Volume 2 – Business Rules

Volume 2 has been further divided into separate documents for the functionality requirements of Hospital Admitting (HA), Emergency Department (ED), Medical Practice (MP), and Pharmacy access.

This volume contains the *implementation requirements* and the *business rules* related to the use of the available transactions and the local system requirements.

### **Volume 3 – Technical Rules**

Volume 3 has been further divided into separate documents for the functionality requirements of Hospital Admitting (HA), Emergency Department (ED), Medical Practice (MP), and Pharmacy access.

This volume contains the *general processing* and the *technical rules* related to the use of the available transactions and the *local system requirements*.

### **Volume 4 – HL7 Message Catalog**

Volume 4 identifies transaction details and message responses, such as:

- Network Transmissions and Responses
- Health Level 7 (HL7) Standards
- Message Formats and Data Definitions
- Input and Output Message Segments and Fields

### **Volume 5 – Security**

Volume 5 provides security objectives, requirements and guidelines and a framework for developing policies and implementing local security controls.

### **Volume 6 – Glossary**

Volume 6 lists a glossary of terms persistent through out *healthnetBC*.

## **1.2 The Audience**

The compliance standards documentation is intended for software developers, health care providers, administrators and other health care professionals who share responsibility for implementing compliant software in their organization.

This document describes the minimum standards required for Provider software (local software) to be considered compliant with professional requirements established by the appropriate governing body (e.g., CPBC), as well as functional requirements established by PharmaCare and organizations within the Ministry of Health Services (MoHS). The local software must provide the ability for the PharmaNet participant and provider to perform the mandatory functions described in this document. CPBC

Connection of the local software to PharmaNet is conditional on the use of compliant software, as determined by the requirements described in this document.

In addition to being compliant, Providers must ensure the following requirements are met before any local software may connect to PharmaNet:

1. Training
2. Confidentiality undertakings where applicable
3. Telecommunications lines
4. Adequate hardware and software

Any amendments to this document will be published in the form of *healthnetBC* Bulletins that may include replacement pages to this document.

## 1.3 How to Use These Volumes

### 1.3.1 Document Conventions

The following conventions are used in each volume:

1. 'Must' or 'will' or 'minimum' or 'mandatory' indicates a mandatory function.
2. 'May' or 'should' indicates an optional, or suggested function.
3. Acronyms are used for repetitions of some system and organization names. The first time an acronym appears, it is accompanied by the full name. Refer to the Glossary for acronym definitions.
4. Underlined text specifies:
  - a) The minimum standards for acceptance of this software as compliant with the professional requirements established by the appropriate regulatory body
  - b) Provides clarification, explanation of information; and
  - c) Accompanying subscript text identifies the regulatory body. Sample
  - d) Mandatory requirements that are not underlined are to be taken as requirements of the MoHS.

- e) The term ‘PharmaNet’ is used in this document to specify functions, requirements, and descriptions unique to the PharmaNet application in the MoHS and the use of PharmaNet by community pharmacies and other providers.
- f) The term ‘*healthnetBC*’ is used in this document when referring to the overall functionality offered by the MoHS, including PharmaNet.

### 1.3.2 Related Standards

These Compliance Standards are based on:

1. The Canadian Pharmacists Association (CPhA) Pharmacy Claim Standard – Version 3 (updated)
2. The Health Level Seven (HL7) Standard for electronic data exchange (versions 2.2 and 2.3)
3. The document titled ‘Security and Privacy Guidelines for Health Information Systems’ published by COACH Canada’s Health Information Association.
4. The Freedom of Information and Protection of Privacy Act (FOIPPA)
5. The Pharmacists, Pharmacy Operations and Drug Scheduling Act (PPODS)
6. The Medical Practitioners Act

As *healthnetBC* and PharmaNet functions have been developed based on electronic data interchange standards, communication between the ‘client’ (e.g., a local pharmacy system) and the ‘server’ (e.g., PharmaNet), is simply data in a predetermined standardized format.

This is radically different from the ‘host-based screens’ technologies of the previous decades. As a result, the MoHS and its stakeholders have limited influence on how client software (i.e., local software) is designed. Local software must satisfy all mandatory requirements specified within the Compliance Document(s), but subjects such as screen layouts, navigation between screens, functionality, and ease of use are mostly under the control of the SSO and their customers. This fact must be remembered when contacting the PharmaNet Help Desk or other areas of Ministry, as Ministry staff may have no familiarity with characteristics unique to each SSO’s product.



## 1.4 Disclaimer

All reasonable care has been taken by the Ministry of Health Services, the College of Pharmacists of British Columbia and the College of Physicians and Surgeons of British Columbia to achieve accuracy of this document, but we cannot guarantee the accuracy of this document's contents. By proceeding to the information beyond this notice, each provider waives and releases the Province of British Columbia, the College of Pharmacists of British Columbia and the College of Physicians and Surgeons of British Columbia to the full extent permitted by law from any and all claims related to the usage of material or information made available. In no event shall the Province of British Columbia, the College of Pharmacists of British Columbia and the College of Physicians and Surgeons of British Columbia be liable for any incidental or consequential damages resulting from the use of this material.

## 1.5 Changes to the Standard

The *healthnetBC* change management process ensures that changes introduced into a *healthnetBC* standard retain the objectives of the standard, are beneficial to the widest possible audience and are introduced with appropriate consultation and agreement. The *healthnetBC* Change Management Committee (HNCCMC) that includes members from program areas, regulatory bodies and other organizations, review proposed change requests. The *healthnetBC* change request process ensures:

1. Any stakeholder/participant may request a change to a standard
2. Each change request provides sufficient and appropriate information
3. Each change request is reviewed and given due consideration as to benefits and impact; and
4. All stakeholders/participants have the opportunity to review and comment on proposed change requests.

Approved change requests posted on the *healthnetBC* web site remain until they are included in the next published version of the standard. SSOs developing new or modifying existing software should incorporate approved changes into their products as necessary to ensure success in completing future compliance evaluations. SSOs will be notified of urgent changes by *healthnetBC* bulletin. Urgent changes must be implemented in timeframes specified by *healthnetBC*.

This standard is published annually, incorporating all change requests approved during the previous year. The deadline for inclusion of approved change requests is three months prior to the publication date.

To review proposed and approved change requests or to submit a comment on a change request, visit the Change Management at <http://healthnet.hnet.bc.ca/changeman/index.html>.

Note: Change requests must be submitted using the electronic change request form. Change requests submitted by phone, e-mail or fax will be by exception only. Change requests that do not provide the necessary information will be returned to the originator.

## 1.6 Contacts

### 1.6.1 New Product Development & Technical Support

|   |
|---|
| <a href="mailto:Hlth.Hnetconnection@gems3.gov.bc.ca">Hlth.Hnetconnection@gems3.gov.bc.ca</a><br>Telephone: (250) 952-1234 |
|---|

### 1.6.2 Quality Assurance

Quality Assurance agents will assist with:

1. Post-implementation support
2. Compliance specifications
3. Access to development and training databases

|   |
|---|
| Telephone: Victoria 952-3508<br>Facsimile: (250) 952-1625 |
|---|

### 1.6.3 Schedule a Compliance Evaluation

|  |
|--|
| <a href="mailto:Nancy.Law@gems6.gov.bc.ca">Nancy.Law@gems6.gov.bc.ca</a><br>Telephone: (250) 952-2898<br>Facsimile: (250) 952-1625 |
|--|

#### **1.6.4 Access to Production PharmaNet**

Access and maintenance of the production PharmaNet system for:

1. Community pharmacies
2. Dispensing physicians
3. Out-Patient hospital pharmacies
4. In-Patient hospital pharmacies
5. Non-pharmaceutical suppliers
6. Medical Practice Access
7. Emergency Departments

[HLTH.Pharmgasupport@gems2.gov.bc.ca](mailto:HLTH.Pharmgasupport@gems2.gov.bc.ca)

Telephone: (250) 952-3508

Facsimile: (250) 952-1625

#### **1.6.5 PharmaNet Business Development Team**

[Chuck.Watson@gems4.gov.bc.ca](mailto:Chuck.Watson@gems4.gov.bc.ca)

Telephone: (250) 952-2905

#### **1.6.6 Access to Production System – All Other Providers**

[HLTH.hnetconnection@gems1.hnet.bc.ca](mailto:HLTH.hnetconnection@gems1.hnet.bc.ca)

Telephone: (250) 952-1234

#### **1.6.7 College of Pharmacists of British Columbia**

[Melva.Peters@bcpharmacists.org](mailto:Melva.Peters@bcpharmacists.org)

Telephone: (604) 733-2440

Facsimile: (604) 733-2493

#### **1.6.8 College of Physicians and Surgeons of BC**

Telephone: (604) 733-7758

Rest of BC 1-800-461-3008

### **1.6.9 BC Pharmacy Association**

Telephone: (604) 279-2053

### **1.6.10 PharmaNet Help Desk**

Victoria: (250) 952-2866  
Vancouver: (604) 682-6849  
Toll free elsewhere in BC: 1-800-554-0250

### **1.6.11 Help Desk for Medical Practice Access to PharmaNet**

Victoria: (250) 952-2867  
Vancouver: (604) 682-7120

### **1.6.12 Web sites of interest**

PharmaCare: <http://healthservices.gov.bc.ca/pharme/>  
Ministry of Health Services: <http://gov.bc.ca/healthservices/>  
College of Pharmacists of BC: <http://www.bcpharmacists.org/>  
College of Physicians & Surgeons of BC: <http://www.cpsbc.bc.ca/>

## **1.7 Support Responsibilities**

### **1.7.1 Ministry of Health Services**

The Ministry will maintain the following:

1. Test environment (PSV2)
2. HNSecure test environment
3. Training environment (TRAIN2)
4. Network management
5. Compliance standards and evaluation schedule
6. Message structure definitions
7. Help Desk

Note: The PharmaNet Help Desk does not have access to medication profiles and cannot answer questions regarding medication and professional

information and are not familiar with the individual characteristics unique to each developer's product.

### **1.7.2 College of Pharmacists of British Columbia (CPBC)**

The CPBC is responsible for the following:

1. Maintenance of the PPODS Act and bylaws.
2. Conducting compliance audits at all sites using drug information system (DIS) transactions.
3. Maintaining compliance standards for pharmacies, pharmacists and any software accessing DIS transactions.
4. Participating in compliance evaluation of any software accessing drug information transactions.
5. Approving of the disclosure of drug information from PharmaNet via the PharmaNet Committee. CPBC

### **1.7.3 College of Physicians and Surgeons of British Columbia (CPSBC)**

The CPSBC is responsible for the following:

1. Investigation of concerns identified by the compliance team during spot audits and inspections of hospital Emergency Departments, if these concerns are regarding a physician.
2. Enforcement of those professional standards and confidentiality standards that apply to physicians.
3. Being a prime contact for questions of a professional nature from physicians when related to the use of *healthnetBC* applications and services. CPSBC

## **1.8 Available Documentation**

### **1.8.1 College of Pharmacists documentation**

The following documentation can be obtained from the College or from the CPBC Web site.

1. PPODS Act, bylaws and rules
2. Confidentiality undertakings
3. PharmaNet connection packages for hospital pharmacies and dispensing physicians.
4. Pharmacy licensure and opening packages
5. Pharmacists' Guide to the Professional and Software Compliance Standards
6. College of Pharmacists Bulletins.

### **1.8.2 Ministry of Health Services documentation**

The following documentation can be obtained from the Ministry of Health Services, PharmaCare Web site, <http://healthservices.gov.bc.ca/pharme>.

1. PharmaCare newsletters
2. PharmaNet bulletins
3. Policy and Procedures Manual
4. LCA/RDP Booklet
5. Source information for the general public.

### **1.8.3 Compliance standards**

Copies of the Professional and Software Compliance Standards – PharmaNet documents and *healthnetBC* bulletins are available for download on the *healthnetBC* <http://healthnet.hnet.bc.ca> Web site along with the following:

1. Health Registry Standard
2. Lab Test Standard
3. HNSecure Standard
4. HNCLient & HNServer functional specifications
5. HNClient & HNServer design specifications
6. HNSecure developers toolkit
7. Application programming interface programmer's guide (API)
8. Message transport security framework
9. PharmaNet practitioner and operator data interface specifications.
  - a) Basic information regarding practitioners, prescribers and operators must exist on PharmaNet before any message from a Provider will be accepted for processing. Authorized individuals may send this information to PharmaNet in an electronic format.
10. Compliance evaluation documents and check list.

### **1.8.4 PharmaNet Help Desk**

1. Reference material such as Pharmacy Reference Guides

### **1.8.5 College of Physicians and Surgeons**

1. Medical Practitioners Act
2. Code of Ethics for Physicians

## **2 COMPLIANCE PROCESS**

### **2.1 Overview**

The MoHS Quality Assurance staff plus a member of a regulatory body will perform the compliance evaluation, where appropriate. The evaluation will prove that the local software complies with all the requirements stated in these documents and that all functions and processes of the local system provide accurate results. Both a construction and destructive evaluation will be performed.

The compliance evaluation process will evaluate all aspects of PharmaNet functionality available on the local software regardless of whether or not the functionality is used by the Provider at the evaluation location.

### **2.2 Release Management**

The following requirements for release management apply to all PharmaNet compliant software, including the HNSecure security tool kit.

Written notification to the Quality Assurance Administrator describing changes or upgrades to the local software is required before SSOs may release the changes to production users.

Prior to compliant software being installed for production use, the SSO must sign a Service Level Agreement (SLA) with the MoHS and a Confidentiality Agreement with the Provider.

The Quality Assurance Administrator will have the option of evaluating any release of local software before it is put in a production environment on HealthNet/BC. Evaluation facilities will be provided by the SSO for all compliance evaluations. Evaluation dates will be scheduled by mutual agreement.

An SSO may be exempted from a compliance evaluation at the discretion of the Quality Assurance Administrator if 'functionality accessing PharmaNet is not affected, and / or the SSO commits to pay the cost of any network data corruption caused by the failure of the unevaluated version.



The SSO must submit the following documentation before an exception will be considered:

1. Purpose of the change
2. Description of change and / or functionality
3. Anticipated impact on *healthnetBC* data and / or transactions
4. Version number
5. Anticipated release date.

Ad hoc requests for implementing SSO's software version changes will be accepted from 8:00 am to midnight, Monday through Thursday and 8:00 am to 4:30 pm on Fridays.

Requests for changes will be accepted from either the pharmacy manager or SSO.

1. Requests will be in writing (fax or e-mail)
2. Friday evenings or weekends will require sufficient advance notice to provide time for scheduling authorized staff
3. A telephone request will require a follow-up fax or e-mail.

Quality Assurance will inform the Help Desk of all compliant versions for each SSO.

Quality Assurance staff will perform changes from 8:00 am to 4:30 pm, Monday through Friday. PharmaNet Help Desk supervisory staff will perform the 'off hour' changes. All changes require supporting paper documentation to be filed by individual pharmacy.

## **2.3 Version Control**

A version number must uniquely identify each version of the local software that has been proven compliant. A PharmaNet software version number must be transmitted with every *healthnetBC* message whose destination is PharmaNet (ZCA segment). The local software must check the CPhA version number and be capable of maintaining and adhering to CPhA version structures. Audits will be done to ensure that the version number being transmitted correlates to the version that was approved during the compliance evaluation. The local software version number must increment when a major new release is issued.

## **2.4 Emergency Upgrades**

If emergency changes to compliant software must be performed to local systems, notification of the changes must be provided in writing to the Quality Assurance Administrator by the following working day.

The notification must identify the following:

1. Installation date
2. Affected sites
3. Reason
4. Description of software changes
5. Impact assessment

## **2.5 Compliance Evaluation Process**

The following is a general description of the compliance evaluation process and is subject to change.

After an SSO has successfully tested their software and is satisfied their program is working according to required specifications, they should contact the Quality Assurance Administrator to schedule a compliance evaluation. A mutually agreeable evaluation date will be scheduled. Questions regarding the compliance evaluation process should be directed to the Quality Assurance Administrator. To assist SSOs with compliance evaluation planning, a checklist is available.

All compliance evaluations will be held in British Columbia at a mutually agreed location. Written authorization is required if an SSO wants a compliance evaluation held at an out-of-province location. This request must be submitted to the Quality Assurance Administrator at least seven weeks prior to the anticipated evaluation date. Travel expenses associated with an out-of-province compliance evaluation will be assumed by the SSO.

Unless specifically requested and agreed to, all requirements as outlined in the compliance standards document will be evaluated.

The compliance team will supply the SSO with a list of data required for the evaluation. It is recommended that the SSO incorporate this data on their local system prior to the evaluation.

Local system maintenance screens will be validated to ensure that the current versions of CPhA format designations are followed.

The compliance team will instruct and observe the transmission of transactions to the Ministry test databases. Each transaction will be verified against a set of expected results. When applicable, the compliance team will also examine the local system to ensure transactions have not stored PharmaNet data on the local system, unless specifically required.

When evaluating third party payers, it is the responsibility of the SSO to schedule the availability of the third party test environments.

During the evaluation the compliance team will record details of the SSO software including version, date and file size(s).

If an application fails, the evaluation may be halted. The compliance team may depart and a new evaluation will be scheduled when the SSO believes they have the problem rectified. The compliance team are not required to remain on site while debugging is undertaken.

A written evaluation report will be provided to the SSO no more than five business days following the evaluations. This report will detail all deficiencies and corrective actions required or provide approval for distribution to providers.

The compliance evaluation process may take up to 5 consecutive days. Evaluations will take place during normal business hours, Monday through Friday.

Software applications that include HNSecure will be evaluated to determine if HNSecure has been altered or compiled for a different environment. If it has, there will be a compliance evaluation performed specific to HNSecure.

## **2.6 Charges and Penalties**

### **2.6.1 Compliance Evaluations**

For each software release, the compliance team will be available at no cost to the SSO to a maximum of one compliance evaluation (up to 5 days) and one follow up evaluation (up to 5 days), otherwise, the SSO will be responsible for wage and travel costs of the compliance team. Travel expenses associated with all out-of-province compliance evaluations will be assumed by the SSO.

When additional evaluation dates are required, the SSO must provide a written request to the Quality Assurance Administrator. MoHS management must then authorize this request. Travel costs, wages and other out-of-pocket expenses for members of the compliance team may be the responsibility of the SSO for additional evaluations.

For SSO funded compliance evaluations, statements of expenses and receipts will be provided for the amount payable, if required. Payment must be received no more than 2 weeks following the completion of the compliance evaluation.

### **2.6.2 Penalties**

If non-compliant software is released for production use, SSOs may be instructed to remove the non-compliant version.

If the installation of non-compliant software results in a system error or failure (i.e., PharmaNet time-outs, table corruption, etc.), the SSO will be responsible for the resources required to rectify the situation.

Other penalties include the immediate termination of access to *healthnetBC* applications and telecommunications facilities and where applicable, referral to the appropriate regulatory body for investigation and disciplinary action.

## **2.7 Compliance Audits / Inspections**

### **2.7.1 Pharmacies**

An audit / inspection team with representatives from the CPBC will perform random, unannounced audits / inspections of the software and professional standards as described in these document(s) are being used.

The manager of the location will be given a deficiency report by the audit team and will be required to have the software and procedural deficiencies corrected within a specified period of time. In situations where the deficiencies are not corrected by the deadline, a report may be forwarded to the Inquiry Committee of the CPBC for review. CPBC

### **2.7.2 Other *healthnetBC* Participants**

A team with representatives from Quality Assurance, the CPBC (where medication profiles is involved) and the CPSBC (where physicians are involved) will perform random, unannounced audits / inspections of software.

## 2.8 Requirements for Connection to *healthnetBC*

Customers should be notified that they should not run other communications packages (e.g., Trumpet) while communicating with *healthnetBC*. Other packages can interfere with transactions being processed and cause the transactions to fail. This results in unnecessary down time for the Provider and unnecessary phone calls to the PharmaNet Help Desk.

A direct connection to *healthnetBC* can be obtained by acquiring a link from:

1. SPAN/BC, or
2. A commercial network provider.

Due to security considerations there may be restrictions on the type of *healthnetBC* services available to providers using a commercial network provider.

This table summarizes the options for establishing a network connection to *healthnetBC*:

| NETWORK CONNECTION OPTIONS           |  |  |                             |
|--------------------------------------|--|--|-----------------------------|
|                                      | SPAN/BC<br>Provided by MoHS <sup>2</sup> | Commercial<br>ISP<br>Dedicated<br>Line | Commercial ISP<br>Dial Line |
| <b>Community Pharmacy</b>            |  |  |                             |
| PharmaNet API                        | Y  | N <sup>1</sup>                         | N/A                         |
| HNSecure                             | Y  | N                                      | N/A                         |
| <b>Out-Patient Hospital Pharmacy</b> |  |  |                             |
| PharmaNet API                        | Y  | N <sup>1</sup>                         | N/A                         |
| HNSecure                             | Y  | N                                      | N/A                         |
| <b>In-Patient Hospital Pharmacy</b>  |  |  |                             |
| PharmaNet API                        | Y  | N <sup>1</sup>                         | N/A                         |
| HNSecure                             | Y  | N                                      | N/A                         |
| <b>Hospital Admitting</b>            |  |  |                             |
| PharmaNet API                        | Y  | N <sup>1</sup>                         | N                           |
| HNSecure                             | Y  | Y                                      | Y <sup>2</sup>              |
| <b>Hospital Emergency Department</b> |  |  |                             |
| PharmaNet API                        | Y  | N <sup>1</sup>                         | N                           |
| HNSecure                             | Y  | Y                                      | Y <sup>2</sup>              |
| <b>Medical Practice</b>              |  |  |                             |
| PharmaNet API                        | N  | N                                      | N                           |
| HNSecure                             | Y  | Y                                      | Y <sup>2</sup>              |

<sup>1</sup> Access must be via Span/BC or other approved Internet Service Provider.

<sup>2</sup> See section 2.8.1 Span/BC Access, Provided by MoH.

### **2.8.1 SPAN/BC access, provided by MoHS**

Currently, all pharmacy access to PharmaNet must be via a SPAN/BC connection. Commercial network provider connections are not allowed for pharmacies, however some specific *healthnetBC* test environments can be accessed from commercial network connections. This is to provide a facility for out-of-province SSOs to test their software with *healthnetBC*.

For community pharmacies and acute care hospitals the MoHS will be responsible for providing each Provider with a leased line, 19,200 baud modem, and router. The cabling to connect the leased line to the modem, and the modem to the router, will also be provided.

If requested, additional services such as firewall schemes or higher speed network connections can be provided. These services are also available for other locations that require access to local systems for support reasons. The Provider is responsible for the additional cost of these services.

The MoHS is responsible for arranging the connection to SPAN/BC.

The Provider must arrange for installation of the network adapter card in the local computer and the cable to connect the local computer to the router. They must also ensure that the software is installed after the hook-up date.

After the initial installation, the MoHS is responsible for ensuring that the wide area network, modem and router, up to and including the Ethernet port of the router, are working properly. It is the responsibility of the Provider / SSO to ensure that the local system, including the Ethernet cabling, hardware, software and local area network is working properly.

### **2.8.2 Commercial ISP Access**

In order to communicate with the MoHS, each transmitting computer must be connected to the Internet. The computer must have TCP/IP software and a connection to a router which itself is connected to the Internet. This may be achieved by connecting the computer to the local area network (LAN) that has a connection to the router, or by dial-up access. If the router being used is not an ITSD router, the sub-domain name or the IP address range for the site must be communicated to the *healthnetBC* Connections Coordinator to ensure site access is enabled.

If the ISP does not assign the IP address, it must be registered with the Internet Assigned Number Authority at <http://www.iana.org/>.

### **2.8.3 Dedicated Line**

The Provider must arrange and pay for the following:

1. Router
2. Registered IP
3. Firewall.

### **2.8.4 Dial Line**

The Provider must arrange and pay for the following:

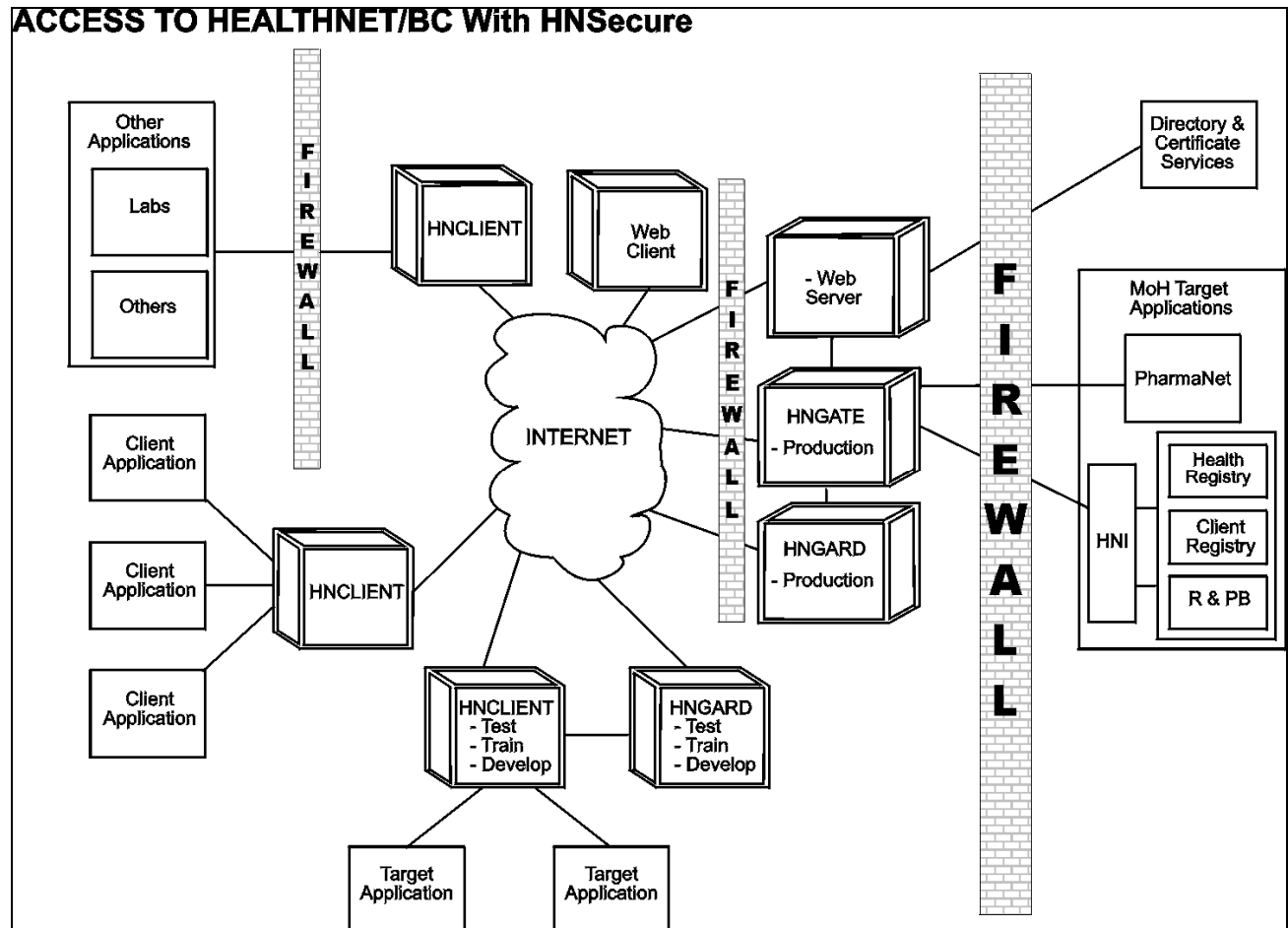
1. Modem
2. Router, if required
3. Registered IP.



## 2.8.5 Platforms

### 1. Using HNSecure

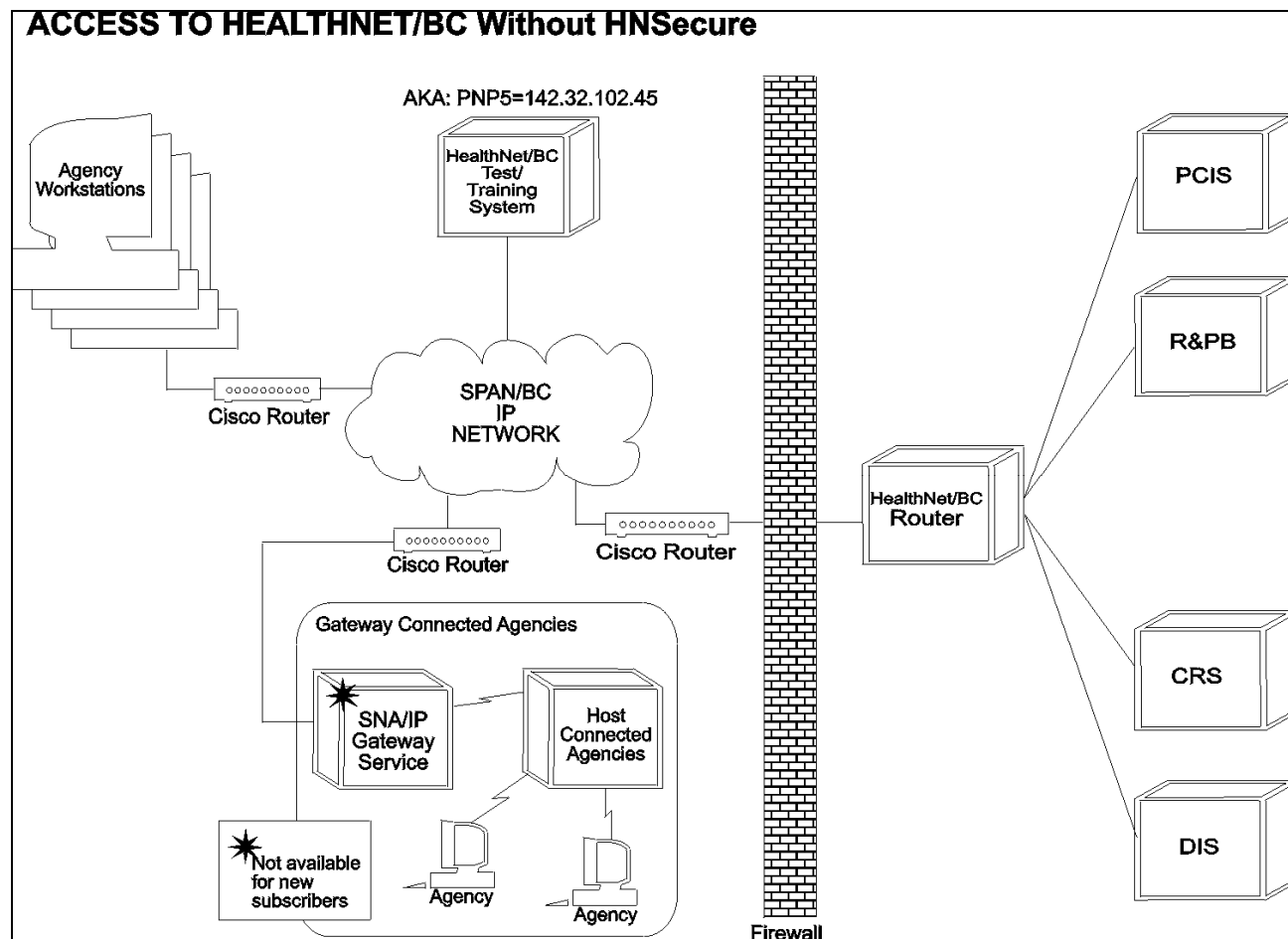
HNSecure will support Windows NT/95/98 or AIX directly. Other platforms, including DOS, Windows 3.1 or any platform that can communicate using Berkeley Sockets, can be supported via remote socket connections to a version of HNClient running on one of the supported platforms.



## 2. Without HNSecure

For DOS/Windows, Windows NT/9x, Novell, and Unix platforms, the network installed for *healthnetBC* is full TCP/IP network using Ethernet cards, complete with bridges, routers and leased lines. This solution allows multiple Internet addresses per leased line. Line speed of 19.2 BPS is the minimum throughput.

If the MoHS installs a router, a 10BaseT connector will be used.



Note: All lines depict two-way communication.

### 2.8.6 Network Cabling

The Provider is responsible for connecting the router to all workstations. Physically connecting the Ethernet card to the network requires a connection jack. SPAN/BC preference for connection is 10BaseT.

There are hardware and software configuration setting options. A card that provides for software settings is preferred to the hardware alternative. Installation of hardware and software is much easier without hardware jumper pin considerations.

See the Pin-out Table for the mapping of each wire in the Ethernet cable to the network connector.

| PIN-OUT TABLE |   |
|---------------|---|
| 1             | 3 |
| 2             | 6 |
| 3             | 1 |
| 4             | 4 |
| 5             | 5 |
| 6             | 2 |
| 7             | 7 |
| 8             | 8 |

### 2.8.7 Ethernet Cards

Ethernet cards should have at least 32K of RAM. In situations where the local software pushes the DOS 640K limit, networked software can be loaded onto the Ethernet card. In these situations a 256K card is recommended.

## **2.8.8 Environments**

### **Test Environments**

There are four test environments:

1. Test Environment – Used by SSOs to test software development.
2. Training Environment – Used by SSOs to train Providers and customers.
3. Compliance Evaluation Environments – Used by the MoHS Quality Assurance when compliance testing the SSO software. Access to this database is restricted.
4. Preview Environment – Contains new versions of production ready MoHS software. This environment is used by SSOs to test / verify their software functionality against soon-to-be released MoHS software. This environment is only available as needed (i.e., the MoHS is releasing new software).

### **Environment Support**

The MoHS will provide technical support for test environments during regular business hours only.

### **Environment Data**

Each SSO will be provided with data for use in the SSO test and training environments. If the SSO requires data to be changed, they should contact that MoHS Quality Assurance group.

The training environment is refreshed to a base state every night.

The data in the compliance evaluation environment is controlled and is specific to the compliance evaluation.

The data in the preview environment is determined at the time when the preview environment is required.

## HNSecure Considerations

When accessing test environments with HNSecure, the following considerations apply:

1. When using the *healthnetBC* version of the HNClient software, run HNSETUP with the '-d' parameter to automatically setup HNClient to point to Test/Training/Compliance Test environments.
2. When requesting a Network Facility ID, SSOs should inform the *healthnetBC* Connections Coordinator what type of transactions their software will submit (i.e., PharmaNet, Health Registry).
3. SSOs should always resolve HNGARD DNS names using the DNS server. Do not use a HOSTS file entry.
4. SSOs should ensure their software is able to send transactions to different network facilities and domains.

Note: In production, different HNGATE Network Facility Ids may handle transactions.

### 2.8.9 PharmaNet Access – Test Environments

A SSO test environment is available for SSOs to test their inputs to, and responses from PharmaNet. This test environment will be available as an ongoing service to SSOs. Each SSO will be provided with data for use in the SSO test environment. If the SSO requires data to be changed, they should contact the MoHS Quality Assurance group. The data in this environment is not refreshed. Be aware that all SSOs can use this environment so SSOs should only reference data (i.e., PHNs) assigned to them.

The location of the test environment for SSOs is:

|                                       |           |
|---------------------------------------|-----------|
| TCP/IP network address: 142.32.102.45 | port 5374 |
|---------------------------------------|-----------|

### 2.8.10 PharmaNet Access using HNSecure – Test Environments

A test environment is available for SSOs developing PharmaNet software using HNSecure. There are two HNGARD facilities and one HNGATE facility available. The HNGATE is enabled for PharmaNet transactions, Health Registry transactions and network time transactions (HNETDTTN, HNETDTTM, HNETDTTI).

The location of the test environment for SSOs is:

HNGARD DNS Names:

hngard1d.hnet.bc.ca port: 19410

hngard2d.hnet.bc.ca port: 19420

HNGATE Network Facility ID: BC00001000 Domain: D

Note: The IP address and port for this facility must be obtained via an HNGARD directory request.

### 2.8.11 PharmaNet Access – Training Environments

A training environment is available to assist SSOs in training Provider staff. The data in this environment is refreshed nightly. Each SSO will be provided with data for use in the training environment. If the SSO requires data to be permanently changed, they should contact the MoHS Quality Assurance group.

The location of the training environment is:

TCP/IP network address: 142.32.102.45 port 5378

### 2.8.12 PharmaNet Access using HNSecure – Training Environments

An HNSecure Training environment will be available to HNSecure enabled applications. This environment will provide HNGARD and HNGATE services to route messages to training environments for each application.

The location of the training environment for SSOs is:

HNGARD DNS Names:

hngard1d.hnet.bc.ca port: 20310

hngard2d.hnet.bc.ca port: 20311

HNGATE Network Facility ID: BC00001015 Domain: T

### **2.8.13 PharmaNet Access – Compliance Environments**

During a compliance evaluation, a different environment will be made available with a controlled set of data constructed specifically for the compliance test.

The location of the environment will be made available when an SSO is ready to perform the compliance evaluation.

### **2.8.14 PharmaNet Access using HNSecure – Compliance Environments**

An HNSecure compliance evaluation environment will be made available to HNSecure enabled applications on a case-by-case basis. The environment will provide HNGARD and HNGATE services to route messages to compliance evaluation environments for each application.

The location of the compliance evaluation HNSecure environment will be made available when an SSO is ready to perform the compliance evaluation.

### **2.8.15 Preview Environments**

When there are significant changes to either an application or to the *healthnetBC* software that could affect the handling of transactions by the SSO software, the changes will be implemented in a Preview environment that will be made available when required.

Examples of changes requiring a preview environment:

- a) Change to the HNSecure protocol.
- b) New, changed or discontinued PharmaNet and / or Health Registry transactions.

After a length of time sufficient for SSOs to test against the new software, the changes will be moved into all of the other environments, and the Preview environment will be de-activated.

In all cases, the SSOs will be notified of the changes, and the Preview environment's addressing and configuration information.

The regular Test and Training environments will continue to be available when the Preview environment is available.