



# PharmaNet

Professional and Software Compliance Standards

## Volume 3 – Technical Rules

### Emergency Department

Version 3.4

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3.3	January 2009	Removed language describing when a medication reconciliation report can be used. Refer to Volume 2 – Business Rules for usage language.
3.4	July 2009	Revised Medication Reconciliation Report to include a better example for data set limitations and filters.

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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.

## **1.3 This Document**

This volume contains the technical rules for access to PharmaNet data from hospital Emergency Departments.

## **1.4 *healthnetBC* / PharmaNet Operator Information**

Basic information regarding practitioners, prescribers and operators, must exist on PharmaNet before any message from a Provider will be accepted for processing. This information may be sent to PharmaNet in an electronic format by authorized individuals. Detailed specifications for this process are described in the document titled '*healthnetBC* / PharmaNet Practitioner and Operator Data Interface Specifications'.

## 2 TRANSACTION DETAILS

### 2.1 General Processing Rules

#### 2.1.1 Interpreting Transaction Responses

There are several ways to determine whether a *healthnetBC* message was successful or not. They are:

1. The ZZZ Segment

Each transaction submitted will include at least one ZZZ segment. The response status field of this segment will contain a value of either 0 or 1 on every response. A value of 0 means the transaction itself was successfully transmitted across the network and a response was received.

Note, even though the transaction was successful, its intended function might not have been successful (e.g., a record may not have been added because the record already existed).

A value of 1 means the transaction itself was not successful and it did not perform its intended function.

In addition to the response status field, the transaction text field contains a message related to the transaction. If the response status is 0, the transaction text field will contain one of the following:

- a) All blanks (i.e., successful)
- b) '0 – Operation Successful'
- c) A warning message (i.e., '66 – Warning – Last Name and First Name do not match supplied names').

If the response status field is 1, the transaction request was not successful and the transaction text field will contain the application error message.

Examples of these messages are:

108 – No matches found for selection criteria chosen

101 – PRESCRIBER not found

121 – This is a Duplicate Prescription

## 2. The ZCE Segment (Claim Response Elements)

The ZCE segment is used for the transmission of claims information (i.e., TAC transaction). It contains two fields which indicate the action taken with the claim:

- a) Response code field. Up to five CPhA response codes could be listed (i.e., 'A3' which translates to 'Identical claim has been processed')
- b) Response status field.

A complete list of response statuses and response codes may be found in the Canadian Pharmaceutical Association Pharmacy Claim Standard.

The most complicated message is related to the filling of a prescription. In this case, the input message may be TAC/TDU/TRP.

- a) Transaction text field in ZZZ for TAC was blank
- b) Response status field in ZZZ for TDU was '0'
- c) Transaction text field in ZZZ for TDU was blank or '0 – Operation Successful'
- d) Response status field in ZZZ for TRP was '0'
- e) Transaction text field in ZZZ for TRP was blank or '0 – Operation Successful'
- f) Response status field in ZCE was either 'A (Accepted as transmitted-no adjustments), or 'V' (Reversal Accepted); and,
- g) All five response codes in ZCE are blank.

This combination would only be deemed successful if the Response status field in ZZZ for TAC was '0'

### **2.1.2 Mandatory Display of Response Message Status**

Warning and error messages must be displayed and must comply with the minimum mandatory display standards for each transaction. These messages must be triggered by any of the following:

1. A response status field not equaling '0' for each ZZZ segment returned
2. A response status field not equaling 'Y' for each ACG segment returned
3. A response status field non equaling 'Z' for each ZCH segment returned
4. A transaction text field not equaling 'blanks' or 0 – Operation Successful' for each ZZZ segment returned
5. A response status field in the ZCE segment (if returned) not equal to 'A' or 'V'; and the response codes field in the ZCE segment (if returned) is not blank.

### **2.1.3 Combinations of Transactions**

Where combinations are permitted, *healthnetBC* requires only one ZCA segment.

1. TAC/TDU (update 01, 04)
2. TAC/TDU (reversal 11)
3. TAC/TDU/TRP (update 01, 04)
4. TAC/TDU/TRR (update 01, 04)
5. TAC/TDU/TRS (update 01, 04)
6. TDU/TRP (inquiry 00)
7. TDU/TRR (inquiry 00)
8. TDU/TRS (inquiry 00)

#### **2.1.4 Trace Numbers**

Trace numbers are used on *healthnetBC* for auditing purposes. They are also used to track what happened with a transaction when it was processed by *healthnetBC*. Trace numbers must be unique for the day, and must be in ascending order. A re-transmit must be sent with the same trace number as the original message (i.e., the local system must store the trace number for as long as there is a possibility of re-transmitting the message).

#### **2.1.5 Multiple PHNs**

The local system must be capable of recognizing and clearly indicating to the Provider, a response (ZCC segment) which has a different Personal Health Number (PHN) from that submitted in the input message (ZCC Segment). In some cases, a PHN may be assigned to a patient when one already exists for that patient. The multiple PHNs are subsequently merged on CRS to a single PHN record. If a PHN has been merged with another PHN(s), CRS will return the consolidated PHN. If it appears the merge has been done incorrectly, or the Provider is aware of an incorrect PHN, the Provider must contact the PharmaNet Help Desk or the CPBC to request a correction or unmerge.

If the Provider agrees that the PHN merge is appropriate, the local system must have its files updated to reflect the consolidated PHN by choosing one of the following options:

1. The local software can use an 'export log' of PHN merges available from the MoHS to search for PHNs which must be merged on their local system. This option would usually only be considered for large *healthnetBC* participants due to the large number of PHNs on the export log.
2. The local software can recognize a new, merged PHN as part of the *healthnetBC* response and update local records.

### **2.1.6 PharmaNet Participant Messaging**

1. Messages only need to be displayed at one terminal when they are received.
2. Processing of the current transaction at the designated terminal(s) receiving the message may be completed before displaying the message. However, processing must be interrupted and the message displayed and printed before the next transaction begins.
3. In situations where the designated terminal is processing a batch, the message may be either held until the batch is completed or printed automatically.
4. PharmaNet will not transmit unsolicited messages to the client system. Even the PharmaNet Participant Messaging facility relies on a request to deliver a response.

### **2.1.7 Truncating**

Users should be able to enter the maximum number of characters into every enterable field transmitted to PharmaNet.

The local software should be capable of displaying full field lengths for all fields. Only trailing blanks should be truncated.

No truncating is permitted in the following fields:

1. ZPE: Interaction advisory source
2. ZPE: Interaction advisory code
3. ZPE: Interaction advisory severity
4. ZPE: Interaction advisory text
5. ZPB3: Block 1 (drug information)
6. ZPB#: Block 2 (drug information)
7. ZPD: Generic name / manufacturer
8. ZPD: Dosage form
9. ZPD: Dosage strength description

- 10. ZPD: Long manufacturer name
- 11. ZPD: Information text
- 12. ZPB1: (Rx information)
- 13. ZPB2: (Rx information) CPBC

### **2.1.8 Network Down**

The local software must maintain any information required to allow business continuation when HealthNet/NC is unavailable.

SSOs must ensure that their local systems can recover from unexpected loss of *healthnetBC* connections or power failures (e.g., the local system may send a transaction to *healthnetBC* and prior to receiving a response from the network there may be a power failure at the local site). The transaction will have been processed by *healthnetBC*.

One possibility for handling this situation would be for the local system to write a copy of the messages being sent to *healthnetBC*, to disk prior to transmitting them. After successfully processing the response, this information would be erased. If the power fails prior to completion of the local transaction then the transaction would be available on disk and the local system can take appropriate action on power-up (e.g., alerting the Provider, reversing the transaction, re-transmitting the transaction, etc.).

A transaction may fail within the DIS module, PCIS module, Router or within *healthnetBC*. The only way for the Provider to verify the result of the transaction is to inquire on the transaction once the system is back on-line, or phone the PharmaNet Help Desk for verification of the transaction, or re-transmit the original transaction.

### 2.1.9 Backup

The local system must provide the ability to backup and recover all relevant data files. The backup process will utilize either diskette or tape based media. Simple backup to hard disk is not acceptable.

A recovery process of appropriate files must be available. Examples of a suitable backup and recovery process is by utilizing the MSBACKUP facility to backup the directories on a workstation which contain the actual data files. Another process could be built into the application code that will prompt the provider to backup certain data files and / or recover certain data files from external media.

A set of complete backup tapes or diskettes should be stored at a different physical location at all times.

The SSO training package must include the steps necessary to backup and recover data files.

## 2.2 Transaction Permissions by Provider

The following matrix indicates which *healthnetBC* transactions are permitted by each Provider type. Each row lists all existing *healthnetBC* transactions (functions) and each column represents current Provider types. The intersection indicates approved transactions for the Provider type.

LEGEND	
X	NOT PERMITTED. Compliance evaluations will ensure the local software does not allow this function.
M	MANDATORY- This function must be provided for use by the Provider type
O	OPTIONAL. This function may be provided for use by the Provider type; Approvals are in place; MoHS will manage roll out and priorities

The PharmaNet Client Registry transactions described in this document may be replaced with their corresponding Health Registry transactions as follows:

PHARMANET TRANSACTION	HEALTH REGISTRY TRANSACTION
TID – Patient Identification	R03 – Get Person Demographics
TPA – Patient Address Update	R07 – Update Person Address
TPH – PHN Assignment	R02 – Record New Person
TPN – Patient Name Search	R09 – Search for Person

Use of the Health Registry transactions is mandatory in software installed at new agency sites where the use of HNSecure was permitted six months prior to the new installation.

Health Registry transactions are documented in the current version of the Application Services Professional and Software Compliance Standards, Health Registry Standard.

<b>TRANSACTION ACCESS PERMISSIONS</b>	
Transaction	Provider
	Hospital Emergency Department
TAC/TDU - Adjudicate Claims and Drug Utilization Evaluation (DUE) Update	X
TCP Patient Keyword	X <sup>1</sup>
TDR Drug Monograph Information	O
TDT Daily Totals Inquiry	X
TDU DUE Inquiry	O
TDU DUE Update	X
TDU DUE Reversal	X
TDU/TRP,TRR,TRS Combination	O
TID Patient Identification	M
TIP Prescriber Identification	M
TMU Medication Update	M
TMU Medication Update Reversal	M
TPA Patient Address Update	O
TPE Patient Eligibility	X
TPH PHN Assignment	M <sup>2</sup>
TPI Patient Clinical Information Update	X
TPM Profile Mailing Request	X
TPN Patient Name Search	M
TRP Patient Profile Request	M
TRR Patient Profile Request (Most Recent Only)	M
TRS Patient Profile Request (Filled Elsewhere)	X

1 Although TCP is not permitted, the processing rules listed may apply to other transactions.

2 See the business rules for hospital EDs regarding limitations on the use of TPH.

## 2.3 Specific Transaction Details

### 2.3.1 Local System Master Files

1. Changes to the local software data records (e.g., PHN merges, change to a Drug Identification Number (DIN) must only result from a deliberate procedure by a Provider or on a specific documented direction to another computer operator designated by a Provider.
2. Any alterations or deletions to the master files (practitioner, DIN, drug, SIG codes or glossaries) must not alter any previous patient medication history.
3. Changes made to master files (practitioner, DIN, drug, SIG codes or glossaries) must record the identification of the Provider responsible for the change and the date of the change.
4. All patient information fields (name, address, phone number, date of birth, comments, allergies, clinical conditions and PHN) must permit changes. Any change to these fields must be reflected in that patient's prescription history.
5. The local software must provide an easy method of recognizing and selecting drugs other than by DIN.

### 2.3.2 Data Retention

Local systems must be capable of recording and retaining all information as required by *healthnetBC* or superceded by a regulatory body.

### 2.3.3 Detection of Browsing – PharmaNet Access Reconciliation

1. All accesses to *healthnetBC* must be logged automatically by the local software. The access log is used to meet the 'Detection of Profile Browsing' and audit trail requirements of *healthnetBC*. The Access Log must contain the following:
  - a) Network facility ID (identifies the business area) as assigned by the MoHS
  - b) Operator ID
  - c) College ID of the Provider responsible for the patient in ED. Note that PharmaNet uses the Physician ID number as assigned by the CPSBC. Local systems must not use the MSP billing number for any *healthnetBC* interaction nor use it to look up physicians on the local system.
  - d) Date and time
  - e) Patient PHN and patient demographic information including name, date of birth and gender
  - f) Transaction type ID and reason for access.
  - g) For the 'patient name search' transaction, include the patient demographics (i.e., surname, first name, DOB, gender) of the search criteria.
2. SSOs are encouraged to use 'access card' technology to restrict access to authorized staff only.
3. Where technologically possible, terminals must have password protected screen savers in use.

4. There must be no ability to invoke the ED software to access PharmaNet from areas of the hospital other than the ED or ED patient registration locations. If the software is not installed on the computer that is local to the ED, then access to the software on a LAN must be limited to only the Provider and / or computer authorized to perform PharmaNet access on behalf of the ED. The Provider must also be instructed to not access PharmaNet from any other areas of the hospital. The following examples show how this might be accomplished:
  - a) Restrict access to the application by IP address
  - b) Restrict access to the application by Ethernet address
  - c) Have an administrative user install a software based key with an expiry date on each machine that is authorized to use the software; and,
  - d) Use a parallel port or Universal Serial Bus (USB) hardware lock to restrict access to specific workstations.

#### **2.3.4 PharmaNet Reconciliation**

1. The reconciliation may be performed manually by comparing the reports or electronically by developing a computer program that compares data from the access transaction log with data from the ED registration program.
2. For the stand-alone software the access log must be compared with ED registrations in a specific time period. Verification must be designed to minimize manual effort. The preferred method is to:
  - a) Establish an electronic comparison between the local system recording ED encounters and the stand-alone system used to access PharmaNet.
  - b) Record the patient number / ED encounter number (uniquely identifying the ED encounter) on the stand-alone system
  - c) Electronically compare the access log to treatment records by using the data unique to the patient such as PHN (preferred method), patient demographics (surname, first initial, gender, date of birth), or patient number / ED encounter number; and,

- d) Produce a report of cases where an access log record exists without an ED treatment episode occurring +/- 24 hours of the access. This report is called an 'Access Discrepancy Report'. The Access Discrepancy Report and access log verification must be executed at least once per week.
3. For both stand-alone and integrated systems, a report must be available to individual patients who request a list showing all accesses to their information obtained through *healthnetBC*. This applies to accesses made to an electronic copy of the profile retained either on the local integrated system or on *healthnetBC*. This report must be made available upon demand by either the PharmaNet Compliance Team or the patient.
  4. For integrated systems, access to patient medication profiles is prevented by the software in cases where the patient is not registered on the local system. Therefore, the access log verification is not required for any accesses except for patient demographic access (i.e., name search and patient identification). For these patient demographic accesses, the business rules described earlier for access log verification and the 'Access Discrepancy Report' must apply.

## **3 PROCESSING RULES & MANDATORY SCREEN DISPLAYS**

### **3.1 Patient Identification – TID**

This transaction will return a patient record using the patient's PHN.

#### **3.1.1 Processing Rules**

1. When the PHN returned is different from the PHN that was submitted, the local software must clearly indicate to the Provider that a consolidated PHN has been returned. The message displayed should advise the Provider to perform a patient identification (TID) transaction prior to updating the local system with the new PHN in order to confirm the PHN has been correctly consolidated.
2. The requested MoHS patient address record on PharmaNet must cause a comparison between the latest mailing address on the local software and the MoHS patient address record. This comparison can be done automatically by the software or manually by the Provider. If these records do not match, the Provider must update the incorrect or out of date record(s) on both systems.

### 3.1.2 Mandatory Screen Display Standards

The following table defines the minimum mandatory display standards for a successful TID transaction, as well as those fields that must be displayed on the first screen of information presented. CPBC

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
PHN	ZCC	Y	Y
Patient First Name	ZPA	Y	Y
Patient Initials	ZPA	Y	Y
Patient Last Name	ZPA	Y	Y
Patient Date of Birth	ZCC	Y	Y
Patient Gender	ZCC	Y	Y
Patient Address (line 1)	ZPA	Y	Y
Patient Address (line 2)	ZPA	Y	Y
City	ZPA	Y	Y
Postal Code	ZPA	Y	N
Province Code	ZPA	Y	N
<i>healthnetBC</i> Participant Message	ZPI	Y	N
Mandatory Display of Response Message Status.	ZZZ	Y	Y

## 3.2 Patient Name Search – TPN

The Patient Name Search uses the name, date of birth and gender to find the patient's record and PHN on *healthnetBC*.

### 3.2.1 Processing Rules

1. A TPN transaction coming through PharmaNet will be processed by CRS. If CRS is not available, the search will be processed by PharmaNet via its 'Stand-in' function.
2. SSOs must provide both name search options as follows:
  - a) A CRS search using full surname, complete or partial given name, gender and full date of birth (CCYYMMDD) to return all exact matches, as well as matches where the day (DD) is equal to 01. Note the 'Stand-in' search on PharmaNet will return only the exact matches.

- b) A CRS search using full surname, complete or partial given name, gender and partial date of birth (CCYY only) to return all exact matches, as well as matches for patients whose date of birth falls within a +/- five (5) year window of the year provided. Note the 'Stand-in' search on PharmaNet will return only exact matches.
3. The following options must be presented to the Provider for each search:
  - a) Change search criteria; and,
  - b) Select a PHN from the list displayed.
4. Regardless of patient gender entered ('M' or 'F'), the search will return exact matches on the gender provided and any records with a gender of 'U' (unknown). Note the 'Stand-in' search on PharmaNet will return only exact matches.
5. All matches that are returned will be in alphabetic order and where the surname and given names are the same, in ascending order by name and PHN.
6. If no matches are found, the transaction will be completed successfully, the Transaction Segment Count will be zeros and either of the following messages will be returned.

If CRS is available:  
'CRNS002 Nothing found matching search parameters'

For Stand-in Processing:  
'108 No matches found for selection criteria chosen'
7. Both the CRS and 'Stand-in' searches will return up to 25 matches. If the number of matches exceeds 25, the Transaction Segment Count will be zeros and the following message will be returned '106 Selection criteria chosen resulted in too many matches'. In this case, the criteria must be narrowed and the search repeated.
8. The name search will first attempt to find exact matches using all the characters of the given name provided. If no matches are found, then a re-search is automatically done using only the first letter of the given name. This re-search does not function during 'Stand-in' processing.
9. Names must begin with A – Z.
10. Date of birth must not be greater than current date and must be in valid date format.

### 3.2.2 Mandatory Screen Display Standards

This table defines the minimum mandatory display standards for a successful TPN transaction, as well as those fields that must be displayed on the first screen of information presented. CPBC

INFORMATION RETURNED BY <i>healthnetBC</i>	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
PHN	ZCC	Y	Y
Patient Date of Birth	ZCC	Y	Y
Patient Gender	ZCC	Y	N
Patient First Name	ZPA	Y	Y
Patient Initials	ZPA	Y	Y
Patient Last Name	ZPA	Y	Y
Patient Phone Number	ZPA	Y	N
Patient Address Type	ZPA	N	N
Patient Address (line 1)	ZPA	Y	Y
Patient Address (line 2)	ZPA	Y	Y
City	ZPA	Y	Y
Country	ZPA	N	N
Postal Code	ZPA	Y	N
Province Code	ZPA	Y	N
Mandatory Display of Response Message Status.	ZZZ	Y	Y

### 3.3 Patient Address Update – TPA

This transaction is used by the Provider to update a patient’s address on *healthnetBC*. It uses the PHN of the patient to find the existing address.

#### 3.3.1 Processing Rules

1. A TPA request coming through PharmaNet will be processed by CRS. If CRS is not available, the TPA update process will be process via PharmaNet’s ‘Stand-in’ function.
2. To ensure that the address is updated correctly on *healthnetBC*, the complete address must be entered. All required fields and the Address Prefix 2 field (if it contains data), must be filled in. If the Address Prefix 2 field is left blank, it will be updated as blank on the CRS. CRS currently combines the Address Prefix 2, City, Province and Postal Code into an unstructured field.
3. All changes to the patient’s mailing address maintained on the local system should be transmitted to *healthnetBC*.

4. The local software must provide the ability to capture a local phone number for a patient.
5. Canada post mailing standards must be used for Canadian address. Format for postal code six (6) alphanumeric characters with no spaces (e.g., V9V9V9). Out-of-country zip codes are stored in the postal code field, since the entry of a country code other than Canada eliminates the format checking.
6. The requirements for address verification are:
  - a) If the country is Canada, then the province code must be a legitimate province code
  - b) If the province code is legitimate, then the first position of the postal code must be a legitimate entry for the province; and,
  - c) If the country is something other than Canada, then the postal code is not required.

Please note this is presently not working correctly. PharmaNet returns an error if the postal code is left blank. Providers should be instructed to enter their facility's postal code if the patient's zip code or equivalent code is not available.

7. Postal codes must be edited on the local system based on the following:

PROVINCE	PROVINCE CODE	POSTAL CODE FIRST CHARACTER
Alberta	AB	T
British Columbia	BC	V
Manitoba	MB	R
New Brunswick	NB	E
Newfoundland	NF	A
Nova Scotia	NS	B
Northwest Territories	NT	X
Nunavut	NU	X
Ontario	ON	K,L,M,N,P
Prince Edward Island	PE	C
Quebec	PQ	G,H,J
Saskatchewan	SK	S
Yukon Territories	YT	Y

### 3.3.2 Mandatory Screen Display Standards

This table defines the minimum mandatory display standards for a successful TPA transaction, as well as those field which must be displayed on the first screen of information presented. CPBC

INFORMATION RETURNED BY <i>healthnetBC</i>	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
Mandatory Display of Response Message Status.	ZZZ	Y	Y

### 3.4 PHN Assignment – TPH

This transaction will create a new patient record and assign a PHN.

#### 3.4.1 Processing Rules

1. The local system must enforce a TPN transaction prior to a TPH transaction (assigning a PHN).
2. Prior to assigning a PHN, the local system software must prompt the Provider with the following statement ‘This transaction will cause a new PHN to be assigned. Are you certain this patient does not have a PHN – Y/N?’
3. The default condition must be set to ‘N’ to cancel the transaction. The Provider must enter ‘Y’ to cause the transaction to proceed.
4. Names must begin with A – Z.
5. Date of birth must not be greater than current date and must be in valid date format.

6. Postal codes must be edited on the local system based on the following:

PROVINCE	PROVINCE CODE	POSTAL CODE FIRST CHARACTER
Alberta	AB	T
British Columbia	BC	V
Manitoba	MB	R
New Brunswick	NB	E
Newfoundland	NF	A
Nova Scotia	NS	B
Northwest Territories	NT	X
Nunavut	NU	X
Ontario	ON	K,L,M,N,P
Prince Edward Island	PE	C
Quebec	PQ	G,H,J
Saskatchewan	SK	S
Yukon Territories	YT	Y

7. All PHNs assigned by *healthnetBC* must be stored on the local system as part of the patient’s demographic data.

### 3.4.2 Mandatory Screen Display Standards

This table defines the minimum mandatory display standards for a successful TPH transaction, as well as those field which must be displayed on the first screen of information presented. CPBC

INFORMATION RETURNED BY <i>healthnetBC</i>	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
Personal Health Number	ZCC	Y	Y
Mandatory Display of Response Message Status.	ZZZ	Y	Y

### 3.5 Prescriber Identification – TIP

This function may be used to obtain information on a Provider (e.g., physician, pharmacist, podiatrist, dentist, veterinarian, etc.) by either searching by name or by the unique identification number assigned by the appropriate regulatory body.

Please note that MSP billing numbers are not used to identify prescribers anywhere on *healthnetBC*.

### 3.5.1 Processing Rules

1. Practitioner demographics and practice information is retrieved by either a combination of Practitioner ID number and Reference ID or by using Family Name and optionally, any or all characters of the First Name.
2. If more than 100 matches are found, none will be returned. The transaction Segment Count will be 100, and the following message will be returned '106 Selection criteria chosen resulted in too many matches'. If less than or equal to 100 matches are found, the number of matches will be returned in the Transaction Segment Count of the ZZZ.
3. If a unique match is found, the response will be the prescriber record. If a unique match is not found, a list (maximum of 100) in alphabetical order by first name of practitioners matching the search criteria will be returned. Where there is more than one record matching on the first name, these records will be displayed in ascending practitioner ID order.

### 3.5.2 Mandatory Screen Display Standards

The following table defines the minimum mandatory display standards for a successful TIP transaction, as well as those fields which must be displayed on the first screen of information presented. CPBC

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
Practitioner Id	ZPH	Y	Y
Practitioner Id Ref	ZPH	Y	Y
Practitioner First Name	ZPH	Y	Y
Practitioner Initials	ZPH	Y	N
Practitioner Last Name	ZPH	Y	Y
Type of Address	ZPH	N	N
Address (line 1)	ZPH	Y	N
Address (line 2)	ZPH	Y	N
City	ZPH	Y	Y
Province Code	ZPH	Y	N
Postal Code	ZPH	Y	N
Country	ZPH	N	N
Effective Date	ZPH	N	N
Area Code	ZPH	Y	N
Phone Number	ZPH	Y	N
healthnetBC Participant Message	ZPI	Y	N
Mandatory Display of Response Message Status.	ZZZ	Y	Y

## 3.6 Drug Monograph Information - TDR

This transaction will access detailed information about a particular drug.

### 3.6.1 Processing Rules

1. Drug monograph information may be retrieved by DIN, or brand name, dosage form, strength and units. The recommended method is retrieval by DIN. If the other retrieval method is used, the data transmitted to PharmaNet must match PharmaNet exactly or no match will be found.
2. Drug monograph information comes from FDB in textual form. In order to transmit this data as a response to a TDR request, PharmaNet uses the following process:
  - a) Read a line of data from the FDB file, terminate the line with ZPB3
  - b) If the line is blank, insert a ZPD3

This means that if there is a blank line between two paragraphs, then there will be two ZPD3s adjacent to each other in the data stream. As well, only the number of characters in the field will be sent in the ZP3. (i.e., if the data supplied has 25 characters, then the ZPD3 will contain only 25 characters and the next ZPD3 will follow).

3. The local software must not allow the Provider to alter the drug monograph information supplied by PharmaNet.
4. The software must provide functionality to retrieve all three types of patient education monographs.
5. The software must provide functionality to print patient education monographs.
6. If a drug monograph is requested with or without generic equivalents, it must be presented to the Provider.

### 3.6.2 Mandatory Screen Display Standards

The following table defines the minimum mandatory display standards for a successful TDR transaction as well as those fields which must be displayed on the first screen of information presented. CPBC

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
DIN/GP#/PIN	ZPD	Y	Y
Generic Name/Manufacturer	ZPD	Y	Y
Dosage Form	ZPD	Y	Y
Drug Strength Description	ZPD	Y	Y
Long Drug Manufacturer Name	ZPD	Y	N
Therapeutic Class	ZPD	N	N
Generic Equivalent: DIN/GP#/PIN Drug Brand Name	ZPD1	Y <sup>1</sup> Y <sup>1</sup>	Y <sup>1</sup> Y <sup>1</sup>
Information Source	ZPD2	N	N
Information Type	ZPD2	N	N
Information Text	ZPD3	Y	Y <sup>2</sup>
Mandatory Display of Response Message Status.	ZZZ	Y	Y

<sup>1</sup> Mandatory display only if generic equivalent requested from HealthnetBC.

<sup>2</sup> If drug information and information text is too large for first screen or if information regarding generic equivalents is presented first, information text may be presented on subsequent screens.

### 3.7 Drug Utilization Inquiry – TDU

DUE functions are only performed on valid DINs. DUE will not be performed on PINs or Provider defined DINs, which are temporary PharmaCare entries.

#### 3.7.1 Processing Rules

1. Leaving the display of warning messages will be done by a deliberate keystroke that indicates the Provider has acknowledged receipt of the messages. The Provider is allowed to clear the DUE message at any time.
2. DUE messages may be stored on the local system after review by the Provider. The messages returned must be reviewed first before storage.
3. The local software may calculate the days supply when the instructions for use are entered as a code (SIG). The Provider must have the ability to review the value calculated and correct it, if necessary, prior to sending to PharmaNet.
4. If the Quantity is entered, either Days Supply or Maximum Daily Units / Maximum Daily Unit Code must be entered to enable dosage range checking and duration of therapy DUE checks.
5. Prescription details for DUE responses are returned in reverse chronological order by expiry date. PharmaNet calculates the expiry date by adding the Days Supply to the Dispensing Date.
6. The DUE messages must be displayed in the order returned by PharmaNet. The order is as follows:

Drug to Drug Interactions	up to 10 encounters
Drug to Prior Adverse Reactions	up to 5 encounters
Min/Max Dosages	up to 1 encounter
Duplicate Ingredient/Therapy	up to 10 encounters
Duration of Therapy	up to 1 encounter

7. Compliance checking is not performed on a TDU Inquiry.

8. When the PHN returned is different from the PHN that was submitted, the local software must clearly indicate to the Provider that a consolidated PHN has been returned. The message displayed should advise the Provider to perform a patient identification (TID) transaction prior to updating the local system with the new PHN in order to confirm the PHN has been correctly consolidated.
9. The following is a brief description of each type of DUE encounter.

#### Drug-to-Drug Interactions

There are three different severities of a drug-to-drug interactions. A DUE response code of 'ME' (Significant Drug-to-Drug potential) is returned for each encounter along with severity level, the clinical effect code and reference from Evaluations of Drug Interactions published by FDB.

SEVERITY LEVEL	DESCRIPTION	ENCOUNTERS RETURNED
1	Most significant	Return up to 10 Level 1 encounters.
3	Possibly Significant <i>(insufficient clinical data to assess severity of interaction)</i>	If Level 1 returns less than 10 encounters, then Level 3 encounters will be returned until a maximum of 10 Level 1 and Level 3 encounters are returned.
2	Significant	If there are less than 10 occurrences of Level 1 and Level 3 encounters, then Level 2 encounters will be returned until a maximum of 10 Level 1, Level 3 and Level 2 encounters have been returned.

A DUE response code of 'ME' (Significant Drug-to-Drug Potential) is returned for each encounter along with severity level, the clinical effect code and reference from Evaluations of Drug Interactions published by FDB.

#### Drug-to-Prior Adverse Reaction

The GCN Sequence Number of the current medication is compared to the GCN Sequence Numbers of the drugs known to cause a patient's adverse reactions. If a match exists, a DUE response code of 'MM' (Prior Adverse Reaction on Record) is returned to the pharmacy. The response code is returned to the pharmacy, together with the DIN/PIN previously recorded as having created an adverse reaction for the PHN, and an advisory message.

## **Min/Max Checking**

Dose range checking is performed to ensure that the prescribed dose is neither too high or too low. If the maximum daily dose is too high, DUE response status 'MJ' (Dose Appears High) is returned. If the maximum daily dose is too low, DUE response status of 'MK' (Dose Appears Low) is returned.

## **Duplicate Ingredient / Therapy**

### Duplicate Ingredient

The duplicate ingredient checking is performed only on new prescriptions for ingredient specific overlap of medications. It checks the new medications being dispensed at the ingredient(s) level against the ingredient(s) in the 'active' drugs on the patient record.

If a DUE encounter is found, a DUE response status of 'MS' (Duplicate Ingredient) is returned. A maximum of 10 encounters will be returned. If a match is found for duplicate ingredient checking, no duplicate therapy checking will be performed.

### Duplicate Therapy

The duplicate therapy checking is performed only on new prescriptions for therapeutic overlap of medications and only if there were no duplicate ingredients found. It checks the therapeutic class code for the new medication being dispensed against the therapeutic class codes for all 'active' (based on the calculated expiry date) drugs on the patient record.

If a DUE encounter is found, a DUE response status of 'MX' (Duplicate Therapy) is returned. A maximum of 10 encounters will be returned.

## **Duration of Therapy**

Duration of Therapy checking is based solely on the patient's age and the days supply of the current medication. The GCN Sequence Number is used to retrieve the maximum duration of age group per drug.

Age groups are:

Pediatric	(0 – 4,380 days)
Adult	(4,381 – 21,900 days)
Geriatric	(>21,900 days)

If a DUE encounter is found, a DUE response status of 'MQ (Duration of Therapy May be Excessive)' is returned.

## **Refill Too Soon / Too Late (Compliance)**

Compliance checking is done for refills or partial refills (as indicated by a refill indicator value of 'R' or 'Q' respectively). The Date of Service of the current medication is checked against the Expiry Date of the most recent historical medication with the same GCN Sequence Number, to see if the refill is being dispensed 'Too Soon or Too Late'.

If the Dispensing Date is less than the Too Soon Date minus a tolerance, a DUE response status of 'D7' (Refill Too Soon) is returned.

If the Dispensing Date is greater than the Too Late Date plus a tolerance, a DUE response status of 'DE' (Fill / Refill – Non-compliant) is returned.

### 3.7.2 Mandatory Screen Display Standards

The following defines the minimum mandatory TDU display standards. CPBC

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
PHN	ZCC	N	N
Interaction Advisory Source Reference	ZPE	Y	Y
Interaction Advisory Code <sup>1</sup>	ZPE	Y	Y
Interaction Advisory Severity Level	ZPE	Y	Y
Interaction Advisory Text	ZPE	Y	Y
DUE Response Status	ZPE	Y	Y
DIN/GP#/PIN <sup>2</sup>	ZPB3 Block 1	Y	N
Generic Name/Manufacturer <sup>2</sup>	ZPB3 Block 1	Y	Y
Same Store Indicator <sup>2</sup>	ZPB3 Block 1	N	N
Quantity <sup>2</sup>	ZPB3 Block 1	Y	N
Maximum Daily Dose <sup>2</sup>	ZPB3 Block 1	Y	N
Prescription Status <sup>2</sup>	ZPB3 Block 1	Y	N
Date Dispensed <sup>2</sup>	ZPB3 Block 1	Y	N
Intervention Code <sup>2</sup>	ZPB3 Block 1	Y	N
Practitioner Id <sup>2</sup>	ZPB3 Block 1	Y	N
Practitioner Id Ref <sup>2</sup>	ZPB3 Block 1	Y	N
Directions <sup>2</sup>	ZPB3 Block 1	Y	N
DIN/GP#/PIN <sup>3</sup>	ZPB3 Block 2	Y	N
Generic Name/Manufacturer <sup>3</sup>	ZPB3 Block 2	Y	Y
Same Store Indicator <sup>3</sup>	ZPB3 Block 2	Y	N
Quantity <sup>3</sup>	ZPB3 Block 2	Y	Y
Maximum Daily Dose <sup>3</sup>	ZPB3 Block 2	Y	N
Prescription Status <sup>3</sup>	ZPB3 Block 2	Y	N
Date Dispensed <sup>3</sup>	ZPB3 Block 2	Y	Y
Intervention Code <sup>3</sup>	ZPB3 Block 2	Y	N
Practitioner Id Reference <sup>3</sup>	ZPB3 Block 2	Y	N
Practitioner Id <sup>3</sup>	ZPB3 Block 2	Y	N
Drug Discontinuation Date <sup>3</sup>	ZPB3 Block 2	Y	N
Drug Discontinuation Source <sup>3</sup>	ZPB3 Block 2	Y	N
Directions <sup>3</sup>	ZPB3 Block 2	Y	N
<i>healthmetBC</i> Participant Message	ZPI	Y	N
Mandatory Display of Response Message Status.	ZCE	Y	Y

<sup>1</sup> The interaction advisory code may be translated into text by the software.

<sup>2</sup> References new drug filled. The information related to this drug may be displayed once at the top of the screen. If this is done, the information must remain on the screen while scrolling through all DUE messages. The other option is to display this information with each DUE message.

<sup>3</sup> References historical drug previously filled.

### 3.8 Patient Profile Request – TRP / TRR

These functions are used to retrieve a patient's profile.

#### 3.8.1 Processing Rules

1. There is no requirement to fully display the patient record. If displayed, all mandatory display requirements must be satisfied except, the Provider may escape or exit from the information at any time.
2. Within each of the clinical conditions, adverse reactions and medication history information, the minimum information that must be presented to the Provider is included as 'Display on first screen presented' in the Mandatory Screen Display Standards for TRP, TRR. Other mandatory display information must be available for access by the Provider.
3. The sequence of display must be ZPB1, then ZPB2, then ZPB3, etc.
4. The Provider must be able to scroll up and down within the displayed information if the information is presented on more than one page. CPBC
5. No prescription information will be returned when a prescription has been reversed with an intervention code of 'RE' – Data Entry Error. This applies to TRP, TRR and TRS.
6. The TRP, TRR, TRS transaction uses the drug generic name and manufacturer. This is true in all cases, except for those 'user-defined' drugs entered by PharmaCare. For these exceptions, the first 30 characters of the brand name are returned with the manufacturer.
7. When a name is supplied in the ZCC segment, the name is checked against the PharmaNet data for the identified PHN. If the first initial of the first name supplied does not match the PharmaNet first initial for the patient, the following warning message is returned '3052 Warning-First name does not match supplied'.
8. If the first two (2) characters of the last name supplied do not match the first two (2) characters of the last name of the patient recorded on PharmaNet, the following warning message is returned '3053 Warning-Last name does not match supplied'.
9. The TRP transaction will return prescriptions dispensed during the previous fourteen (14) months.

10. When the PHN returned is different from the PHN that was submitted, the local software must clearly indicate to the Provider that a consolidated PHN has been returned. The message displayed should advise the Provider to perform a patient identification (TID) transaction prior to updating the local system with the new PHN in order to confirm the PHN has been correctly consolidated.
11. Adverse drug reactions and clinical conditions returned by PharmaNet must not be stored on the local system.
12. The patient profile (TRP/TRR) must be displayed by the local software prior to the dispensing of any prescription. The only approved exceptions of this rule are for prescriptions filled for animals; long term care prescriptions; multiple, consecutive prescriptions being filled for the same person; and prescriptions batched during a network down situations.
13. The software must not provide functionality or means for the Provider to omit the TRP, TRR transaction except as noted above.
14. The software must not capture or store profile data transmitted by PharmaNet. Profile data is for display purposes only, and must be treated as transient data to support the current transactions. Retention of an electronic copy of the patient profile is not permitted.
15. The medication history portion of the medication profile may be summarized for the Provider by the DIN. If the record is summarized, the most recent dispensing date of the DIN as well as all other mandatory first screen requirements must be displayed. All of the other mandatory display requirements must be accessible to the Provider. CPBC
16. The total number of prescriptions should be presented with the first page of detail or first page of summary.
17. The functionality to obtain both full patient profiles (TRP) and most recent patient profiles (TRR) must be available in the local software for review by the physician.
18. There is no requirement to fully display the patient record prior to printing.
19. For integrated systems, inquiry access to the medication profile is permitted only if the PHN has been recorded on the local software, demonstrating a physician / patient relationship.

20. Retention of an electronic copy of the medication profile is permitted for integrated systems. Access to this electronic copy may eliminate the need for a printed medication profile, but is subject to all the same confidentiality and security considerations of a printed profile. Retention period of a stored profile and any requirements for automatic deletion are yet to be determined. The local system must log all accesses to this electronic copy. A report showing all accesses must be made available upon demand by either the PharmaNet Compliance Team or the patient.
21. Retaining an electronic copy of the medication profile is not permitted for stand-alone systems.
22. Printing the medication profile must be available. A printed medication profile must show:
  - a) Type of profile requested (i.e., TRP, TRR)
  - b) Date / time of the print out
  - c) User ID of the operator
  - d) Network Facility ID and name of the hospital ED
  - e) The College ID and name of the Provider requesting the profile
  - f) All patient demographics; and
  - g) All data fields labeled as 'Mandatory Display'
23. The optional Medication Reconciliation Report must contain all data fields labeled as 'Y - Mandatory for Medication Reconciliation' in the tables in section 3.8.4 Mandatory Medication Reconciliation Print Standards.
24. SSOs should provide an easy method to electronically send an e-mail to the CPBC when a correction to the profile is required. CPSBC

### **3.8.2 General Processing Rules – TRR**

1. If the Provider chooses to see more profile data than is provided by the TRR transaction, then the SSO's software must acquire the complete patient profile, via a TRP transaction, and be capable of displaying it to the Provider.
2. If the maximum amount of prescriptions are returned (currently 15), then the SSO's software must indicate to the Provider that there may be more profile data available.
3. When a TRR transaction returns successfully, the following message is returned in the transaction text field of the ZZZ segment 'Operation Successful: most recent <N1> Rx's'. (N1 represents the system variable, currently set to 15).

### 3.8.3 Mandatory Screen Display Standards

This table defines the minimum mandatory display requirements for TRP. CPBC

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
PHN	ZCC	N	N
Clinical Condition Information:	ZPB1		
Patient Condition	ZPB1	Y	Y
Chronic Indicator	ZPB1	Y	Y
Reported By	ZPB1	Y	N
Date Reported	ZPB1	Y	N
Comment Text	ZPB1	Y	N
Practitioner Id Reference	ZPB1	Y	N
Practitioner Id	ZPB1	Y	N
Date entered	ZPB1	Y	N
Adverse Reaction Information:	ZPB2		
DIN/GP#/PIN	ZPB2	Y	Y
Generic Name/Manuf <sup>1</sup>	ZPB2	Y	Y
Reported By	ZPB2	Y	N
Date Reported	ZPB2	Y	N
Comment Text	ZPB2	Y	N
Practitioner Id Reference	ZPB2	Y	N
Practitioner Id	ZPB2	Y	N
Date Entered	ZPB2	Y	N
Medhist Information:	ZPB3		
DIN/GP#/PIN	ZPB3	Y	N
Generic Name/Manuf <sup>1</sup>	ZPB3	Y	Y
Same Store Indicator	ZPB3	Y	Y
Quantity	ZPB3	Y	Y
Maximum Daily Dose	ZPB3	Y	N
Prescription Status	ZPB3	Y	Y
Local Prescription Number	ZPB3	N	N
Date Dispensed	ZPB3	Y	Y
Intervention Codes	ZPB3	Y	N
Practitioner Id Reference	ZPB3	Y	N
Practitioner Id	ZPB3	Y	N
Practitioner Family Name	ZPB3	Y	Y
Drug Discontinue Date	ZPB3	Y	N
Drug Discontinue Source	ZPB3	Y	N
Directions	ZPB3	Y	Y
Comment Text	ZPB3	Y	N
Practitioner Id Reference	ZPB3	Y	N
Practitioner Id	ZPB3	Y	N
Date Entered	ZPB3	Y	N
Mandatory Display of Response Message Status.	ZZZ	Y	Y

<sup>1</sup> Generic name/manufacturer can not be truncated; and is mandatory for display (can not substitute brand name).

### 3.8.4 Mandatory Medication Reconciliation Print Standards

These tables define the minimum mandatory print standards for the optional Medication Reconciliation Report.

POS Report Information	Mandatory for Medication Reconciliation
<b>Heading:</b>	
Type of Profile Requested (i.e. TRP: last 14 months or TRR: most recent 15 prescriptions)	N
Date / time of print out	Y
User ID of the operator submitting request	Y
Network facility ID and name of the facility	Y
The College ID and name of the responsible Provider	Y
Acknowledgement of PharmaNet as source of data for the report	Y
Data set limitations/filters - A description of the limitations/filters on the set of medications that have been included on the Medication Reconciliation printout, including any limitations/filters resulting from the transaction used (TRP or TRR), and, from any data elements/values used to further filter the data returned. This could include for example: date dispensed within last x months or prescriptions with status of filled, etc. The following paragraph provides an example of how the filters could be expressed.  e.g. "The following is a PharmaNet extract as of <Date> <Time> of the most recent filled or discontinued prescriptions for the above patient in the province of British Columbia over the last x months (up to a maximum of 14)."	Y
<b>Disclaimer:</b>  **** Do not assume the patient is currently taking these medications or in these doses ***  Please note that changes MAY have been made to the patient's provincial medication records since this report was printed. In addition, it MAY contain discontinued medications and does NOT contain updated instructions the patient may have received from their physician or such items as non-prescription drugs, samples, investigational or clinical trial drugs, complementary and alternative therapies, selected prescriptions obtained through provincial programs (e.g. antiretrovirals), or prescriptions obtained from outside the province or over the Internet."	Y
<b>Patient Demographics:</b>	
Patient Name	Y
Gender	Y
Date of Birth	Y

INFORMATION RETURNED BY PharmaNet	Output	Mandatory for Medication Reconciliation
<b>PHN</b>	ZCC	Y
<b>Clinical Condition Information:</b>		
Patient Condition	ZPB1	Y
Chronic Indicator	ZPB1	N
Reported By	ZPB1	N
Date Reported	ZPB1	N
Comment Text	ZPB1	N
Practitioner Id Reference	ZPB1	N
Practitioner Id	ZPB1	N
Date entered	ZPB1	N

INFORMATION RETURNED BY PharmaNet	Output	Mandatory for Medication Reconciliation
<b>Adverse Reaction Information:</b>		
DIN/GP#/PIN	ZPB2	N
Generic Name/Manuf <sup>9</sup>	ZPB2	Y
Reported By	ZPB2	N
Date Reported	ZPB2	N
Comment Text	ZPB2	N
Practitioner Id Reference	ZPB2	N
Practitioner Id	ZPB2	N
Date Entered	ZPB2	N
<b>Medhist Information:</b>		
DIN/GP#/PIN	ZPB3	N
Generic Name/Manuf <sup>1</sup>	ZPB3	Y
Same Store Indicator	ZPB3	N
Quantity	ZPB3	Y
Maximum Daily Dose	ZPB3	Y
Prescription Status	ZPB3	Y
Local Prescription Number	ZPB3	N
Date Dispensed	ZPB3	Y
Intervention Codes	ZPB3	N
Practitioner Id Reference	ZPB3	N
Practitioner Id	ZPB3	N
Practitioner Family Name	ZPB3	N
Drug Discontinue Date	ZPB3	N
Drug Discontinue Source	ZPB3	N
Directions	ZPB3	Y
Comment Text	ZPB3	N
Practitioner Id Reference	ZPB3	N
Practitioner Id	ZPB3	N
Date Entered	ZPB3	N
Mandatory Display of Response Message Status.	ZZZ	N

### 3.9 Medication Update – TMU

This transaction is used by a *healthnetBC* participant to update a patient’s medication profile. This transaction was ‘cloned’ from the DUE Update transaction – TDU. Unlike TDU Update which must be sent to PharmaNet as a TAC / TDU combination, the TMU must be sent as a single transaction (i.e., no combinations of transactions).

#### 3.9.1 Processing Rules

1. The prescription record on the local system should contain the following:
  - a) PHN of the patient
  - b) Name, initials and address of the patient
  - c) Prescription dispensing date

<sup>9</sup> Generic name/manufacturer can not be truncated; and is mandatory for display (can not substitute brand name).

- d) Prescription number (as assigned by the local software)
  - e) Generic name, strength and dosage form of the drug
  - f) DIN (as assigned by the local software)
  - g) Quantity of the drug dispensed
  - h) Intended duration of therapy, specified in days
  - i) Directions to the patient (without SIG or shorthand codes)
  - j) ID of prescribing or authorizing practitioner; and,
  - k) ID of the Physician who requested the PharmaNet medication profile.
2. DUE messages may be stored on the local system after review or printing by the Provider. The messages returned must be reviewed or printed first before storage.
  3. The days supply field on the ZCD segment is mandatory with each medication update. This may be achieved on the local software by either:
    - a) The Provider directly entering the days supply; or
    - b) The local software calculating the days supply when the instructions for use are entered as a code (SIG). The Provider must have the ability to review the value calculated and correct it, if necessary, prior to sending to PharmaNet.
  4. Days supply must not default to a value.
  5. The local software must not use a default intervention code.
  6. Drug information must be entered for valid DINs only, not PINs.

7. The prescriber name edit applies to all TMU transactions sent to PharmaNet. The 10 byte Prescriber ID in the ZCD segment in a TMU transaction will contain the 5 byte Prescriber License Number followed by the first 5 bytes of the Prescriber’s last name. The edit matches the prescriber name on the ZCD segment with PharmaNet’s prescriber name. If the match is not successful the prescription is rejected with a response code of ‘PB no match to Prescriber ID and name found’. The prescriber ID must be the prescriber’s license number, not the MSP number. A TIP transaction request will display the spelling that PharmaNet expects.
8. The Practitioner ID used in the ZZZ segment will be the ID of the physician working in the Hospital ED that is responsible for the patient. The College registration number of the responsible physician working in the Hospital ED must be included with every message sent to PharmaNet. This is accomplished by inserting ‘91 (CPSBC) in the Practitioner ID Reference field of the ZZZ segment and the physician’s five digit ID number (not the MSP Billing number) in the Practitioner ID field of the ZZZ segment.
9. If a TMU transaction fails on PharmaNet (or a response is not received), the original TMU may be re-submitted. Although there is no requirement for the local software to perform a re-transmit of a TMU, either a re-submit or a re-transmit must be available to keep the local profile synchronized with the PharmaNet profile.
10. Prescription details for DUE responses are returned in reverse chronological order by expiry date. PharmaNet calculates the expiry date by adding the days supply to the Dispensing Date.
11. The DUE messages must be displayed in the order returned by PharmaNet. The order is:

Drug to Drug Interactions	up to 10 encounters
Drug to Prior Adverse Reactions	up to 5 encounters
Min/Max Dosages	up to 1 encounter
Duplicate Ingredient/Therapy	up to 10 encounters
Duration of Therapy	up to 1 encounter

12. The local software for MP Access to PharmaNet must fully expand and SIG codes (directions for use) to text prior to transmission to PharmaNet.
13. No abbreviations or special characters are permitted in the directions for use on the local system or PharmaNet. CPBC

14. DUE messages returned by PharmaNet must be reviewed by a Provider responsible for the patient. The local software must have the ability to print the messages to be reviewed by a Provider.
15. A 'prescription' number is required and may be assigned by the local software.
16. Leaving the display of warning messages will be done by a deliberate keystroke that indicates the Provider has acknowledged receipt of the DUE messages only after the last message has been displayed (i.e., all messages must be displayed and acknowledged without allowing escape).
17. Updating a medication profile may occur when the medication is administered or given as a sample. This is permitted for a hospital ED using either integrated or stand-alone systems, with the following conditions:
  - a) There must be no opportunity to claim for payment to PharmaCare or other insurers (i.e., the drug cost and dispensing fee must always be zero with no opportunity to override); and,
  - b) The Prescriber ID and Practitioner ID submitted to PharmaNet must both correspond to the attending Provider College ID.
18. The local software must not provide functionality to permit changes to previously transmitted transactions. Corrections may be made by reversing medication entries on the profile. Where reversals are not possible (i.e., medication entry was made by a different hospital ED, hospital or by a community pharmacy), contact the PharmaNet Coordinator at the CPBC.
19. Some patients may have assigned Patient Keywords to their medication profiles. The patient must supply the keyword for medication profile access to occur, otherwise no profile access will be permitted.
20. The local software may print a label reflecting details of the medication administered in the hospital ED.
21. The Provider ID in the ZCD segment will be 'EROOM' for hospital EDs use of the TMU transaction.
22. A medication update will not be accepted unless the patient, the prescribing practitioner, the drug or product, quantity, days supply, directions and the Provider are identified.

### 3.9.2 Mandatory Screen Display Standards

The following table defines the minimum mandatory TMU display standards.

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
PHN	ZCC	N	N
Interaction Advisory Source Reference	ZPE	Y	Y
Interaction Advisory Code	ZPE	Y	Y
Interaction Advisory Severity Level	ZPE	Y	Y
Interaction Advisory Text	ZPE	Y	Y
DUE Response Status	ZPE	Y	Y
DIN/GP#/PIN <sup>10</sup>	ZPB3 Block 1	Y	N
Generic Name/Manufacturer <sup>1</sup>	ZPB3 Block 1	Y	Y
Same Store Indicator <sup>1</sup>	ZPB3 Block 1	N	N
Quantity <sup>1</sup>	ZPB3 Block 1	Y	N
Maximum Daily Dose <sup>1</sup>	ZPB3 Block 1	Y	N
Prescription Status <sup>1</sup>	ZPB3 Block 1	Y	N
Date Dispensed <sup>1</sup>	ZPB3 Block 1	Y	N
Intervention Codes <sup>1</sup>	ZPB3 Block 1	Y	Y
Practitioner Id Reference <sup>1</sup>	ZPB3 Block 1	Y	Y
Practitioner Id <sup>1</sup>	ZPB3 Block 1	Y	Y
Directions <sup>1</sup>	ZPB3 Block 1	Y	Y
DIN/GP#/PIN <sup>11</sup>	ZPB3 Block 2	Y	N
Generic Name/Manufacturer <sup>2</sup>	ZPB3 Block 2	Y	Y
Same Store Indicator <sup>2</sup>	ZPB3 Block 2	Y	N
Quantity <sup>2</sup>	ZPB3 Block 2	Y	Y
Maximum Daily Dose <sup>2</sup>	ZPB3 Block 2	Y	N
Prescription Status <sup>2</sup>	ZPB3 Block 2	Y	N
Date Dispensed <sup>2</sup>	ZPB3 Block 2	Y	Y
Intervention Code <sup>2</sup>	ZPB3 Block 2	Y	N
Practitioner Id Reference <sup>2</sup>	ZPB3 Block 2	Y	N
Practitioner Id <sup>2</sup>	ZPB3 Block 2	Y	N
Drug Discontinuation Date <sup>2</sup>	ZPB3 Block 2	Y	N
Drug Discontinuation Source <sup>2</sup>	ZPB3 Block 2	Y	N
<i>healthnetBC</i> Participant Message	ZPI	Y	N
Mandatory Display of Response Message Status.	ZZZ	Y	Y

<sup>10</sup> References new drug filled. The information related to this drug may be displayed once at the top of the screen. If this is done, the information must remain on the screen while scrolling through all DUE messages. The other option is to display this information with each DUE message.

<sup>11</sup> References historical drug previously filled.

### 3.10 Medication Update Reversal – TMU

This function is used to correct a medication update made in error.

#### 3.10.1 Processing Rules

1. The most recent medication entry on the patient’s profile that matches the criteria supplied will be reversed.
2. Within the Provider Transaction Date field of the ZCB segment, the Date of Service of the original medication update must be supplied.
3. The local software must not reverse a medication update from the local system that has not been reversed from PharmaNet.
4. The local software must not use a default intervention code.
5. Modification of the medications on the local software is prohibited if the medications have been added to PharmaNet. If an error related to DIN, drug name, strength, quantity, Practitioner ID or instructions for use is identified, the Provider must reverse the medication on PharmaNet and on the local system; make the necessary corrections then transmit the new medication update.

#### 3.10.2 Mandatory Screen Display Standards

The following defines the minimum mandatory display standards for a successful TMU reversal transaction.

INFORMATION RETURNED BY PharmaNet	OUTPUT	MANDATORY DISPLAY	DISPLAY ON FIRST SCREEN PRESENTED
Mandatory Display of Response Message Status.	ZZZ	Y	Y

## 4 PHN Check Digit Number Routine

The following PHN Check Digit Number Routine should be implemented on the local software. The PHN used by *healthnetBC* is sent as a 13 digit number. There is a common Mod 11 check that can be applied to the last 10 digits of the PHN.

Input to this routine is the last ten digits of the PHN with no leading zeroes. The number is broken down into single digits and each digit is weighted. The weights are as follows:

Digit (by position)	1	2	3	4	5	6	7	8	9	10
Weight		2	4	8	5	10	9	7	3	

The check digit process should ignore the first digit that is always a 9 and any leading zeroes. Each digit (2-9) is multiplied by its weight and divided by 11. The remainder is loaded into an array. The array values are added to obtain a total. Divide the total by 11, and subtract the remainder from 11 to yield a check digit value. Compare this value to the 10<sup>th</sup> digit and if equal then the PHN is valid, otherwise the PHN is invalid.

Example:

The PHN in the example is '0009123947241':

PHN	9	1	2	3	9	4	7	2	4	1
Weights		2	4	8	5	10	9	7	3	
Multiply		1x2	2x4	3x8	9x5	4x10	7x9	2x7	4x3	
Product		2	8	24	45	40	63	14	12	
Divide by 11		2 ÷ 11	8 ÷ 11	24 ÷ 11	45 ÷ 11	49 ÷ 11	63 ÷ 11	14 ÷ 11	12 ÷ 11	
Remainder		2	8	2	1	7	8	3	1	

Sum of remainder values is 32.

Divide 32 by 11. The result is a remainder of 10.

Take the remainder (10) from 11. This should match the check digit (tenth place digit) (11-10=1).

If equal then the PHN is valid, otherwise the PHN is invalid.

If the result is 10 or 11, the PHN is not valid, considering the tenth digit is a single number.