DRUG INFORMATION SYSTEM REFERENCE GUIDE

Department of Health and Wellness

Province of Nova Scotia

NOVA SCOTIA

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Education and Training

Dispensary staff (pharmacists, pharmacy technicians and pharmacy assistants) will be provided with both education and training about the Drug Information System. The educational materials provided the foundation for the training by providing information about:

- the timelines of implementation of the Drug Information System.
- the users of the Drug Information System.
- the benefits and functions of the Drug Information System.
- the Client and Provider Registries.
- the *Personal Health Information Act (PHIA)*.

> **Dispensary staff will access the Drug Information System through their pharmacy software system.**

This information is critical for understanding the "what" and "why" of the Drug Information System.

The hands-on training (or "how to") component will be provided by pharmacy software vendors. It is recommended that dispensary staff complete the educational component prior to commencing the training. Completion of both education and training will lead to more successful and efficient utilization of the Drug Information System.

Education

The main education component is provided in a series of four online e-learning modules that are housed on the Department of Health and Wellness website at www.novascotia.ca/dhw/dis. The purpose of this reference guide is to highlight and summarize information that is provided in the online e-learning educational modules in an easily accessible format. The guide is meant to supplement the information in the e-learning modules, not replace it.

Resource documents

In addition to this document there are other resource documents that you can easily access online at www.novascotia.ca/dhw/dis:

1. "**Drug Information System Reference Guide**", which highlights much of the information provided in the e-learning modules that you will need to know for every day usage of the Drug Information System

2. "**Drug Information System Support: Getting Help**", which outlines the process for accessing support services

3. "**Transition Guidelines**", which includes information to be aware of when first connecting to the Drug Information System and during the 18 month timeframe when other pharmacies are being connected

4. "**Client and Provider Registries: Hints and Tips**", which provides practical day to day advice on using the Client and Provider Registries

5. "**Privacy and Consent: What You Need to Know**", which summaries important information about consent, masking and patient requests regarding information in the Drug Information System

6. "**Prescription Monitoring Program Fact Sheet**", which outlines process changes resulting from being connected to the Drug Information System

The Drug Information System

The Drug Information System is a component of Nova Scotia's electronic health record. It is intended to provide a comprehensive record of all patients' prescriptions that are dispensed by community pharmacies in Nova Scotia, as well as medication related information such as allergies, immunizations and medical conditions. The Drug Information System will provide a comprehensive medication profile for each patient in Nova Scotia; which will assist health care professionals when making clinical decisions about their patients' care.

Patient medication profiles will include information about:

- prescription orders
- dispenses
- other medications (e.g. Over the Counter drugs or natural health products)
- pharmacy professional services (e.g. diabetic education)
- drug allergies/intolerances
- adverse reactions
- medical conditions
- patient observations (e.g. blood pressure)
- immunization records
- patient notes

Information will be entered into the Drug Information System on a "go-forward" basis. There will not be an initial load of patient files currently found in your pharmacy's software system.

The Drug Information System does not automatically collect certain types of information about medications or devices. However, Drug Information System users are encouraged to add any information they feel is relevant to share with the patient's other healthcare providers.

Examples of medication information not automatically collected

- hospital in-patient medications
- prescriptions for long term care facilities not serviced by a community pharmacy
- medical supplies / devices provided by stand-alone Home Health Care retailers
- prescriptions dispensed by Canadian Forces base pharmacies (e.g. CFB Halifax)
- prescriptions dispensed to correctional centres / penitentiaries not serviced by a community pharmacy
- over-the-counter medications
- devices not dispensed by a community pharmacy
- natural health products
- drug samples
- prescriptions dispensed by out-of-province pharmacies
- prescriptions dispensed through hospital pharmacies to out-patients or through hospital-based clinics

Implementation of Drug Information System

The Drug Information System will be implemented in three phases or streams:

Stream 1	Stream 2	Stream 3
Community pharmacies	Hospital and community prescribers	Electronic medical records
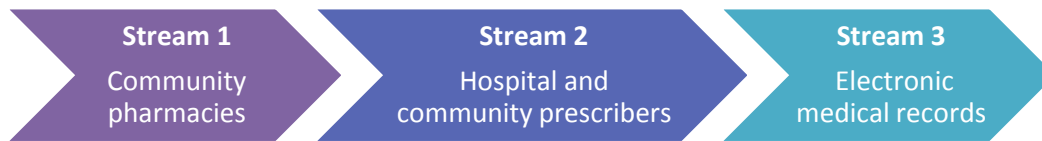
Stream 1: Community Pharmacies:
Community pharmacies will access the Drug Information System through their pharmacy software. Dispensary staff will have access to patient medication profiles and be able to transmit prescription orders, dispenses and other medication related data to the Drug Information System.

Stream 2: Hospitals and Community Prescribers:
Hospital and community prescribers will access the Drug Information System through the SHARE clinical portal or the Drug Information System portal. Prescribers such as physicians, nurse practitioners, dentists, optometrists and dental hygienists will have access to patient medication profiles and e-Prescribing.

Stream 3: Electronic Medical Records:
Physicians and clinic health care providers will be able to access the Drug Information System through the provincial electronic medical record.

Importance of ensuring accuracy of data

Unlike the current situation where only dispensary staff in a particular pharmacy can view information in their pharmacy system, once the Drug Information System is implemented, all information will be accessible to other users. Dispensary staff from other pharmacies, other health care professionals (e.g. physicians, dentists, optometrists, nurse practitioners), as well as authorized hospital users will rely upon the information in the Drug Information System when making clinical decisions about patients' care.

In addition, once a pharmacy is connected to the Drug Information System, Drug Utilization Reviews (DURs) for drug-to-drug interactions, drug contraindications, and allergy contraindications will run against the patient's comprehensive drug profile rather than just the information in a local pharmacy.

Therefore, to help ensure safe and effective drug therapy for patients and to get the most benefit for patients, it is vital that information entered into the Drug Information System is accurate, complete and for the correct patient.

Registries

The provincial Client Registry and the Provider Registry both contain important demographic information that is required to be retrieved when using the Drug Information System. Both registries are easily accessed through the Drug Information System via pharmacy software systems.

| Patient | Pharmacy
Pharmacy Software | Drug Information
System |
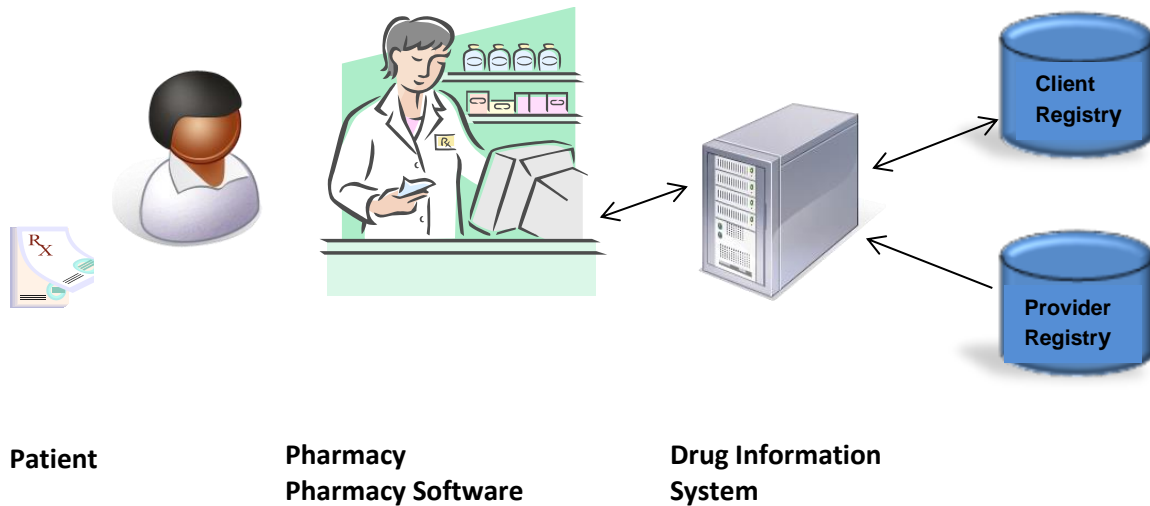
Client Registry

The provincial Client Registry is a consolidated source of demographic information for identification of recipients of health care in Nova Scotia and contains the following information:

- name
- Nova Scotia Health Card Number
- alternate identification number (if applicable, e.g. Canadian Forces number)
- address
- gender
- telephone number
- date of birth

The Drug Information System uses the Client Registry as its source for patient demographic information. In order for a dispenser to process a prescription, dispense a medication and/or record information in the Drug Information System, a record must exist in the Client Registry. Therefore, the first step for any patient interaction in the Drug Information System is to search for the patient's record in the Client Registry.

Searching the Client Registry

When commencing a search in the Client Registry for a patient record, use a **Nova Scotia Health Card Number** or other valid unique identifier. Examples of other unique identifiers are:

- alternate health identification numbers (such Canadian Forces number); or
- health card numbers from other provinces.

All Nova Scotians who have a Health Card Number will have a demographic record in the Client Registry. For those people who do not have a Nova Scotia Health Card number, use their alternative Health Identification Number. Using a unique identifier is the best way to find a person in the Client Registry as it is fast and dramatically improves the accuracy of finding the correct person.

If the individual does not have a unique identifier or the person cannot be located in the Client Registry, try searching using one of the following:

- The patient's last name <u>and</u> first name; or
- The patient's last name <u>and</u> date of birth.

It is very important to conduct a complete search of the Client Registry using all the search options before determining that the individual does not already have a record.

If all efforts to locate a person in the Client Registry fail, a record will have to be added to the Registry. Pharmacy software vendors will provide details on how to add a patient.

Quality and the use of the Client Registry

It is essential that diligence is used when selecting a patient or adding a new patient record to the Client Registry. There are potential negative impacts to patient care if the wrong record is selected or if there are multiples records for one patient in the Client Registry.

- If a record is added for a patient who already exists in the Client Registry, the resulting two profiles will each only contain a portion of the patient's medication information. This may result in incomplete DUR checks or

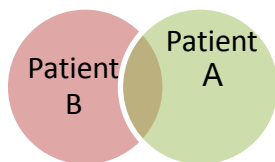missing significant drug contraindications that lead to negative patient outcomes.

▶ If the wrong patient is selected from the Client Registry and clinical information is added to the wrong patient's medication profile, records for both patients will be inaccurate.

Multiple records

▶ If there are two or more patient files for the same person, the Drug Information System service desk can investigate. If the two files are deemed to be the same person, the Drug Information System support team can merge the two files so all the clinical records are attached to one patient.

▶ After two patient records have been merged in the Drug Information System, the system may send a message indicating that the patient's records have been merged and directing the user to re-sync the patient with the Client Registry. Pharmacy vendor training will provide details of how this is achieved.

Overlays

Another issue that can occur in the Client Registry, but is a rare occurrence, is an 'overlay'. Overlays can occur as a result of dispensary staff overwriting a patient's demographic information into another patient's record, for example: adding Patient A's information in Patient B's profile. The Client Registry will detect when this has occurred. In these instances, the Drug Information System team will work collaboratively with the pharmacy and the Client Registry team to ensure the profile is restored in the pharmacy system, the Drug Information System and the Client Registry.

Guidelines when using Client Registry

▶ Search using the Nova Scotia Health Card Number for <u>ALL</u> Nova Scotia residents.

▶ Search using an alternative Health Identification Number for persons who do not have a Nova Scotia Health Card Number.

▶ Record the full legal name for patients (avoid using nicknames in the first and last name fields).

   o The limit for name fields in the Client Registry is 30 characters. It will accept longer names, but will truncate to 30 characters.

▶ Ensure the date of birth is accurate.

- ▶ Record home and alternative phone numbers, when possible.
- ▶ Provide complete civic address information. Delivery information such as "go to the back door" should NOT be stored in the address fields.
  - o For civic address: the address line only supports 75 characters and the city line only supports 30 characters.

Note - The Client Registry is a registry for human patients – not animals. Contact the HITS-NS Service Desk if a record appears to be for an animal / pet.

Provider Registry

The Provider Registry provides a consolidated source of demographic and credential information about the following health care professionals registered in Nova Scotia:

- physicians
- nurse practitioners
- midwives
- nurses
- pharmacists and regulated pharmacy technicians (upon accreditation)
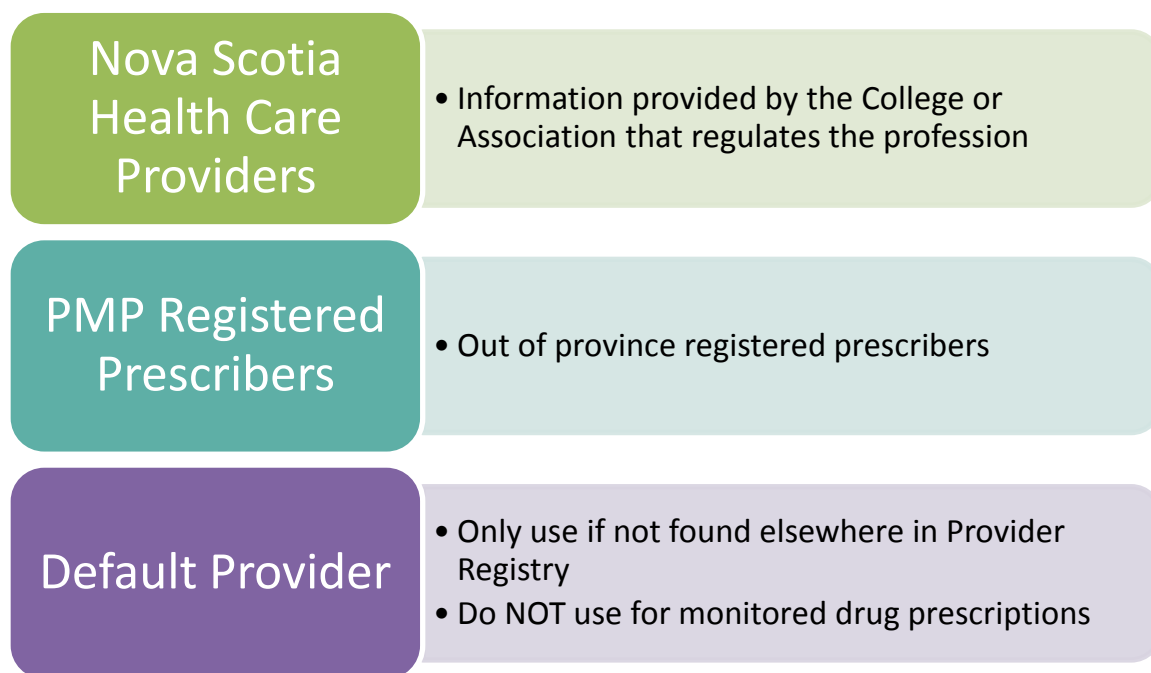- dentists and dental hygienists
- optometrists

The Provider Registry also contains demographic and credential information for out-of-province prescribers who are registered with the Nova Scotia Prescription Monitoring Program.

The Drug Information System uses the provincial Provider Registry as a source of provider information and a means of validating providers referenced in Drug Information System clinical transactions. When entering a prescription order, the Provider Registry can be used to select the correct provider and verify the prescriber information on the prescription order.

The Provider Registry will validate that <u>both</u> the prescriber who wrote the prescription order and the pharmacist who is dispensing the prescription are registered with their respective licensing body and that the prescriber is eligible to prescribe that medication.

Therefore, ensuring the accuracy of the provider licence number is very important!

There are 3 types of provider data found in the Provider Registry.

Nova Scotia Health Care Providers	• Information provided by the College or Association that regulates the profession
PMP Registered Prescribers	• Out of province registered prescribers
Default Provider	• Only use if not found elsewhere in Provider Registry • Do NOT use for monitored drug prescriptions

NOTE: The use of the default provider will be monitored by the Drug Information System Program. The Drug Information System Program will request pharmacies to update their records to the correct provider licence number if the default provider used has been identified as a provider available in the provincial Provider Registry.

Specific Drug Information Functions

Quantity Displayed in The DIS

The DIS uses a standardized unit of measure when displaying weights. The standardized unit used is milligrams. This means that when you send a quantity to the DIS in grams, the DIS will convert it to milligrams and display it in milligrams.

For example, a 15 gram tube of hydrocortisone cream 0.05 percent may display in your local pharmacy system as 15 g, however, it will display in the DIS as 15,000 mg.

Prescription Orders and Dispenses

Electronic prescriptions

In Stream 2 of the implementation of the Drug Information System, prescribers (i.e. pharmacists, physicians, nurse practitioners, optometrists, dentists etc.) will be able to create e-Prescriptions 'authoritatively'.

E-Prescriptions are prescription orders that are electronically created and transmitted to the Drug Information System by the prescriber. Dispensary staff will locate and retrieve the electronic prescription order in the Drug Information System, save the order locally and proceed with the dispense process.

Note that until Stream 2 begins, pharmacists can e-Prescribe but all e-Prescriptions are 'non-authoritative', which means a paper copy of the prescription is required before being dispensed.

Dispense pick ups

Whenever a prescription dispense is picked up, the date and time of the pickup should be recorded in the Drug Information System.

This will result in more precise and up to date patient medication profiles.

Device prescriptions

In the Drug Information System, all devices (e.g. blood glucose monitoring strips, aerochambers, compression stockings, etc.) must be entered using an OPINIONS PIN as assigned by Atlantic Pharmaceutical Services Inc. (APSI). The list of OPINIONS PINs is available from APSI and administered through the Pharmacy Association of Nova Scotia (PANS).

Compounded prescriptions

Compounded prescriptions must be entered in the Drug Information System as either:

▶ A free text description of the compound; or

▶ A free text description of the compound plus a list of ingredients.

For example:

Free Text: HC1% powder in Betaderm Cream

Monitored drug prescriptions must be entered with a free text description PLUS a list of the monitored ingredient(s).

Free text with list of ingredients:

Drug name:
Methadone 1 mg/mL*

Ingredients:
100 mg Methadone Powder (99099993) *

OPINIONS PIN
100 mL Tang (09999997) * any pseudo DIN

Ingredients can be entered using their applicable DIN, NPN, OPINIONS PIN, or a Pseudo DIN, (a number assigned by a pharmacy or insurer for certain ingredients). In the example above, a pseudo DIN was used for Tang.

<u>Monitored</u> drug ingredients can be represented by a DIN or an OPINIONS PIN. (For example, use the DIN for Metadol liquid or the OPINIONS PIN for Methadone Powder.)

Allergies, Intolerances and Adverse Reactions

Nova Scotia's Drug Information System will be used by a variety of health care professionals. Different health care professionals have different understandings regarding the following terms: allergies, intolerances and adverse reactions. These terms are widely debated and so, for the purposes of consistency the following definitions are offered:

Allergy	Intolerance	Adverse Reaction
• hypersensitivity caused by an exposure to a substance • results in an adverse immunologic reaction on subsequent exposures • Examples- rash, hives, swelling and anaphylaxis	• an identified reaction to a substance • caused by a mechanism other than an immunologic over-response. • little risk of more severe reaction on subsequent exposures • Examples- nausea, constipation dry mouth, hair loss	• a noxious and unintended response to a drug • occurs at doses normally used or tested • resulting in an unintended effect • Examples- abuse, overdose, interaction (drug to drug or drug to food), unusual lack of therapeutic effect

Recording allergies / intolerances

Allergies or intolerances to drugs that have a DIN or NPN can be recorded in the allergy/intolerance section of the patient's Drug Information System profile.
To make it easier to record an allergy/intolerance, the DIN does not have to exactly match the DIN of the product the patient is taking as long as it is within the same drug class. For example, if the patient is taking a generic brand of a drug but the DIN for the brand name is entered, it will be considered the same for drug utilization review.

Allergies or intolerances to anything that does not have a DIN or NPN cannot be recorded in the allergy/intolerance section of the patient's Drug Information System profile (e.g. an allergy to latex or to a food, such as eggs). However, as this is important information to include in the patient's profile, you can record it as a patient note in the patient's Drug Information System profile.

Other Medications

The "Other Medications" section of a patient's profile provides the opportunity to record information about medications and devices that are not automatically collected in the Drug Information System. Recording this information will help create a comprehensive medication profile for patients.

> ### NOTE:
>
> **The Drug Information System <u>will</u> do a drug utilization review on allergies or**
>
> **intolerances for drugs that have a DIN, but NOT for drugs that have an NPN.**
>
> **Also, anything recorded as a patient note is NOT included in the drug utilization**

A drug that is entered in the Other Medication section of a patient's Drug Information System profile must have either a DIN or NPN.

- ▶ If the drug has a DIN, it will be included in Drug Utilization Reviews.
- ▶ If it has an NPN, it will NOT be included in the drug utilization process.

The DIN does not have to exactly match the DIN of the product the patient is taking as long as it is within the same drug class. For example, if the patient is taking a generic brand of a drug but the DIN for the brand name is entered, it will be considered the same for drug utilization review.

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TIPS for recording Over- the-Counter Drugs

Long- term medications

Record long-term over-the-counter therapy (such as low dose ASA) which can interact with prescription drugs to include them in the drug utilization review against the patient's profile.

Enter long-term therapies with an end date far in the future (such as 2099) to ensure it remains active on the profile indefinitely.

Short-term medications

Record end dates for short term therapies to ensure they are not included in the drug utilization review after they are completed. If the end date is left blank, the Drug Information System will assign an end date of 365 days from the start date.

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Immunizations

The Drug Information System provides the option of recording dispenses and the administration of immunizations by pharmacists.

A practical tip to consider when preparing to give an immunization is to enter information about the immunization in the local pharmacy system prior to doing the actual administration. This permits the viewing of the patient's Drug Information System profile and allows the Drug Information System to perform allergy and duplicate drug checks prior to administering the immunization. If for some reason the immunization is not given, you can make an entry in the patient note indicating that it was not administered and the reason why.

Please note - for immunization administration, the Drug Information System only checks for duplicate drugs. It does not check for drug interactions.

Patient Notes

The 'Patient Notes' section of a patient's Drug Information System profile can be used to record notes about a patient that are important to communicate to the patient's other health care providers.

It can also be used to record non-clinical information such as having medications dispensed in containers with snap-cap vials. Depending on the content, a Patient Note can be added to the local pharmacy software system only, or to both the local system and the Drug Information System. Patient notes can also be queried or removed from the patient's Drug Information System profile.

It is recommended that any clinically important notes be added to both the local system and the Drug Information System to ensure the comprehensiveness of the patient profile.

Use discretion when entering patient notes in the Drug Information System because this information will be shared with all of the patient's healthcare providers who have access to the Drug Information System. This information is also available to the patient because the *Personal Health Information Act* gives patients the right to receive a copy of their information in the Drug Information System.

Processes

Drug Utilization Reviews

Currently, pharmacy software systems run Drug Utilization Reviews (DURs) within their own pharmacy system to indicate drug-drug interactions, drug contraindications, and allergy contraindications etc. In the Drug Information System, the DUR will run against the patient's comprehensive drug profile, which will include information from other pharmacies and eventually different healthcare providers.

> Note: The Drug Information System will not send a duplicate drug interaction message to a pharmacy when the interaction involves two or more drugs that were ONLY dispensed by that particular pharmacy.

Prescription transfers

The Drug Information System facilitates the transfer of prescription orders between pharmacies when both pharmacies are connected to the system. The pharmacy that is transferring the prescription (the current custodian) simply enters the "transfer to" location information on the prescription into their pharmacy system and transmits this to the Drug Information System. The pharmacy accepting the prescription can then retrieve the information from the Drug Information System, save the prescription locally, and proceed with the dispense process.

Things to be aware of:

▶ Having access to the Drug Information System does not mean that the pharmacy can dispense any prescription desired. Once a dispense is created at a particular pharmacy location, that pharmacy becomes the custodian/owner of the prescription and must authorize a transfer of the prescription in the same manner that exists prior to the Drug Information System.

▶ If the location where the prescription is to be transferred is selected in error, you will need to do one of the following:

   ▶ If the pharmacy that received the transfer has access to the Drug Information System, the prescription can be transferred back to the originating pharmacy. The originating pharmacy can then re-transfer the prescription to the correct pharmacy.

> If the pharmacy that received the transfer is not open or not connected to the Drug Information System, the originating pharmacy will need to verbally transfer the prescription or print appropriate reports and fax them to the pharmacy that should receive the transfer.

Location information about Nova Scotia Community Pharmacies will be maintained in the Drug Information System in a "Location Index" which can be easily accessed through pharmacy software systems.

Office supplies

The Drug Information System provides a function to record office supplies and ward stock. This function is to be used ONLY when a pharmacy is supplying a prescriber's office with medication for patient use within a clinic or ward stock for a long term care facility and is NOT to be used when selling/transferring stock to another community pharmacy or hospital pharmacy. Pharmacy software vendors will provide specific "how to" information about office supplies and ward stock.

Any office supply transactions that involve a monitored drug will be sent to the Prescription Monitoring Program.

Drug Information System Downtime

The Drug Information System is designed to be available 24 hours a day, 7 days a week, and 365 days a year with scheduled maintenance windows. If an unscheduled outage occurs, notification of the outage will be provided to each pharmacy. While the Drug Information System is down, the local pharmacy system will continue to operate and will queue all appropriate transactions to the Drug Information System. Once the connection is restored, all appropriate transactions must be sent to the Drug Information System and any issues requiring management must be dealt with using your pharmacy's process. Pharmacy software vendors will provide specific "how to" details.