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## Report on Client Safety

Health Canada's Non-Insured Health Benefits Program

AUGUST 2009



Canada



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Health Canada's Non-Insured Health Benefits Program

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*Health Canada is the federal department responsible for helping Canadians maintain and improve their health. We assess the safety of drugs and many consumer products, help improve the safety of food, and provide information to Canadians to help them make healthy decisions. We provide health services to First Nations people and to Inuit. We work with the provinces and territories to ensure our health care system serves the needs of Canadians.*

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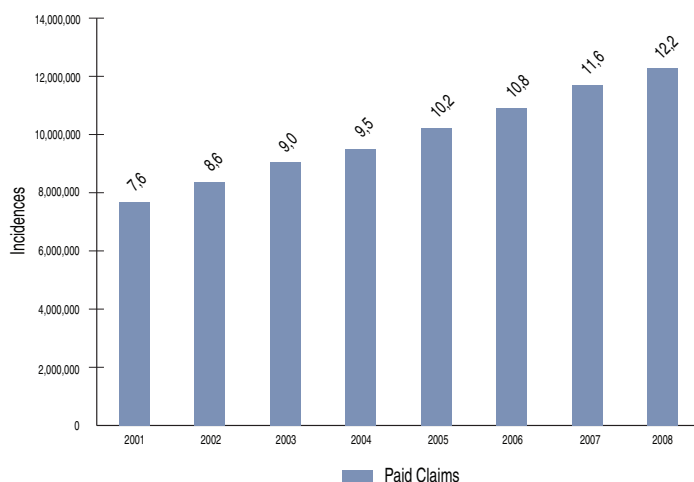
## Introduction

Health Canada's Non-Insured Health Benefits (NIHB) Program provides a limited range of medically necessary goods and services to eligible First Nations and Inuit clients. The Program is part of Health Canada's First Nations and Inuit Health Branch (FNIHB). The overarching goal of this Branch is to address the gap in health status that exists between First Nations and Inuit and other Canadians. NIHB does not provide prescription medications directly to clients. The Program, like other public and private drug plans, relies on physicians and other authorized prescribers to issue prescriptions and on pharmacists to dispense medications based on professional judgement. NIHB, with the assistance of a third party claims processing contractor, reimburses pharmacists for the cost of drugs as well as a fee for professional dispensing services. Eligible drug benefits are 100% covered for clients.

In 2008, the NIHB Program processed 14.5 million pharmacy claim lines<sup>1</sup>. Figure 1 demonstrates a steady increase in demand for prescription medications. This increase is in line with the population growth among First Nations and Inuit in Canada, which is approximately double the national rate. Of these requests, 12.3 million were approved, 706,000 were approved but reversed because they were never received by clients (i.e. not picked up) and 1.6 million were rejected either because the request was outside the mandate of the Program or because of client safety concerns.

This report provides an update on the Non-Insured Health Benefits Program's efforts in the area of client safety since the publication of NIHB's 2008 Report on Client Safety.

**Figure 1 – NIHB approved lines by calendar year<sup>1</sup>**



<sup>1</sup>A claim line represents a transaction request on the Program's electronic claims processing system. For example, a single prescription with a refill order will count as multiple claim lines.

## NIHB's Four Pillars of Client Safety

Prescription drugs have the capacity to heal but also the capacity to do harm if not used correctly. Public drug plans, like the Non-Insured Health Benefits Program, bear a responsibility to those they serve. Timely information to health professionals and analysis of individual situations and broader trend observations are crucial in ensuring that clients are well served. NIHB has invested considerable time and effort in designing and modernizing its prescription drug benefit program with these responsibilities in mind.

The NIHB Program continues to place a high priority on addressing cases of concern and on enhancing and encouraging the safe use of prescription medications.

Our approach consists of 4 Pillars of Client Safety:

1. **Warning messages** to pharmacists regarding drug interactions and repeat prescriptions;
2. **Rejection messages** to pharmacists regarding client drug therapy history, and the requirement to contact NIHB's Drug Exception Centre;
3. **Client and Program level trend analysis** of prescription drug use;
4. An **independent expert advisory committee** provides input, evaluations and recommendations for client safety improvements to the Program.

As described throughout this report, the NIHB Program is beginning to see positive impacts as a result of key interventions under these pillars.

### Pillar 1

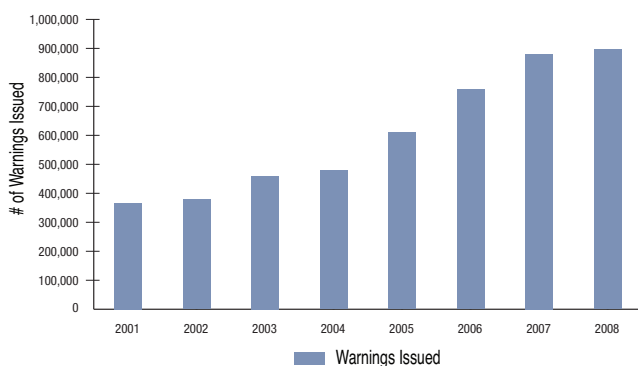
#### *Warning messages to pharmacists*

Communication between the NIHB program and front-line pharmacists is essential in protecting client safety. NIHB has implemented a number of significant changes to enhance the important relationship between the Program and pharmacists. NIHB has been part of an industry-wide system since the early 1990s that allows the Program to send messages electronically in real-time at the point-of-sale to warn pharmacists about potential client safety issues including drug interactions and repeat prescriptions. The full list of NIHB warning codes is set out in Appendix 1. Certain warning messages also require the pharmacist to report back with specific codes that give the Program information about the actions they have taken related to the warning code received. A list of these response codes is included as Appendix 2.

Warning messages are important tools that supplement pharmacists' professional judgement at the point-of-sale. The NIHB Program actively monitors the number of pharmacy claims that are flagged with warning messages or rejected by this system.

Figure 2 shows the number of warning messages sent by the NIHB Program to pharmacies across the country since 2001. Over the past number of years the Program has increased its interventions with pharmacists significantly. The information provided via these warning messages greatly improves the range of information available to pharmacists and, as a result, enhances their ability to exercise their professional judgement.

**Figure 2 – NIHB warning messages over time**



When pharmacies are found to be overriding warnings frequently, concerns will be raised by the Program. If the pattern continues, the pharmacy may be audited to ensure that client safety and the Program's financial integrity are not being compromised.

**Action:** 896,285 warning messages to pharmacists in 2008.

**Result:** Pharmacists armed with important information to enhance client safety.

NIHB able to actively monitor pharmacists' overrides of these messages.

531,064 of these prescriptions (59%) were not filled.

### Warning message for opioids, benzodiazepines and methadone

In April 2006, the NIHB Program created a special warning message in response to clinical evidence with respect to the health risks associated with the misuse of specific drugs of concern. These drugs include opioids (such as morphine, codeine, and oxycodone which are used to relieve pain), benzodiazepines (so-called "minor" tranquilizers, sleep aids and anti-anxiety medications) and methadone (a long-acting synthetic opioid used to treat opioid addiction or pain).

In designing this warning message, it was important to recognize that all of these drugs have clinically valid

applications. For example, opioid treatments are crucial in pain management for patients suffering from terminal cancer and palliative conditions.

Therefore, the warning message was designed to focus attention on cases where there were concerns about potential misuse, and where continued utilization was difficult to justify.

The warning message, called the "NE" code, addresses situations where clients access:

- 3 or more active prescriptions for benzodiazepines
- 3 or more opioids
- 3 or more benzodiazepines and 3 or more opioids
- a prescription for methadone in association with opioid-based drugs

The warning provides a message to pharmacists indicating that potential misuse of prescription drugs should be explored. It is one more tool to supplement their professional judgement and to protect client safety.

**Action:** Point-of-sale warning code to alert pharmacists of potential misuse of opioids/benzodiazepines and/or methadone that must be responded to for billings to be processed.

**Result:** Reduction in the number of clients claiming multiple opioids, benzodiazepines and methadone in association with another opioid-based drug.

In June 2007, the NIHB Program changed the NE code from a simple warning message to a warning that requires pharmacists to reply back to the Program with a response code. This added feature ensures that, if pharmacists override the NE code, they must document the rationale for doing so by sending a response code back to the NIHB Program. Pharmacists are expected to retain the supporting information justifying the response in case of a clinical or administrative audit. An assessment of the impact of the NE code is provided in the Evaluating Outcomes section of this report (Figure 9).

**Action:** A requirement for pharmacists to respond back to the Program on actions taken in the face of possible misuse of opioids/benzodiazepines and methadone.

**Result:** Reduction in the number of claims for three (3) or more benzodiazepine drugs, three (3) or more opioid drugs and opioids in addition to methadone treatment.



## Pillar 2

### Rejection messages regarding drug therapy history

#### Special approvals required for patterns of concern

The NIHB Program also provides rejection messages to pharmacists when a client's claims history indicates potential misuse or overuse of a range of prescription medications. These rejection messages are different from the warning messages described in Pillar 1. It is not possible to override these messages or to provide an electronic response code. Instead when a rejection message is received, a pharmacist must contact NIHB's Drug Exception Centre, a national toll-free call centre. The Drug Exception Centre will provide more information to the pharmacist about the situation and follow up with the prescribing physician before the Program will authorize payment for the drug in question. The NIHB Program reserves the right to refuse payment for medications that cannot be justified when there is evidence that suggests client safety may be negatively affected.

**Action:** Development of rejection messages to reflect client claims history.

**Result:** A more rigorous approval process for patterns of concern in exceptional cases.

#### Maximum allowable quantities for acetaminophen and acetaminophen-based opioids

Over the past number of years, the Program has improved its ability to monitor situations where clients may be accessing prescriptions to the same drug via multiple sources. As a result of new sensitivities built into the electronic processing system, client claim requests will generate warning messages to alert pharmacists about potential duplicate therapies. When maximums are exceeded, a pharmacist will receive a message from the Program requiring them to consult with NIHB's Drug Exception Centre to verify the claim.

Prior to January 2005, NIHB applied maximum allowable rules to acetaminophen products that contained codeine, such as Tylenol 2 and 3. In January 2005, NIHB expanded system sensitivities to detect when maximum allowable dose limits were exceeded for all acetaminophen-based opioid products (e.g. Percocet and Tylenol 4). These measures are intended to place safeguards around medications most often subject to misuse.

On January 1, 2007, the Program expanded the NIHB system's maximum allowable sensitivities to apply to all acetaminophen-based products. Clients are often unaware of the long-term consequences of commonly available acetaminophen-based

products. Negative health effects can result from prolonged use, including serious liver damage if recommended dosages are exceeded. This further enhancement protects the safety of clients beyond the focus of the initial intervention.

In 2004, NIHB rejected 480 claims when maximum allowable quantities were exceeded. In 2006, with the expansion of the maximum allowable rules to all acetaminophen containing opioids, 1,563 claims were rejected. The Program rejected a total of 1,704 claims for acetaminophen or acetaminophen based opioids in 2007, and 1,605 claims in 2008.

**Action:** Closer monitoring of acetaminophen and/or acetaminophen-based opioid drugs and special approvals required when maximums are exceeded.

**Result:** Rejected claims increased from 480 in 2004 to 1,605 in 2008.

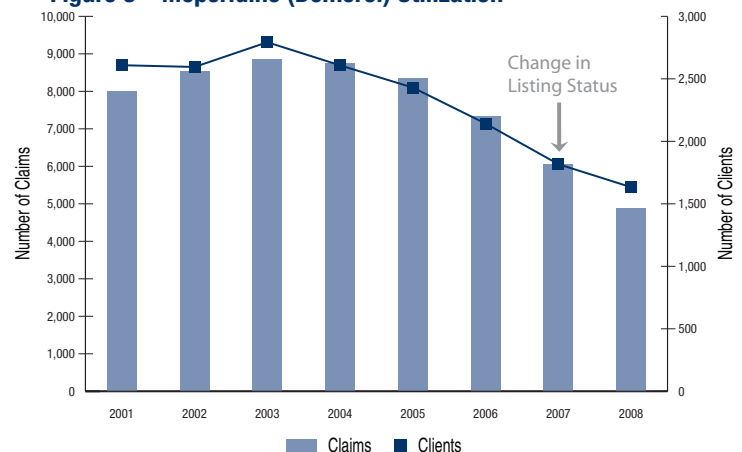
#### Maximum allowable quantities for meperidine (Demerol)

Based on the impact of the maximum allowables initiative, the NIHB Program also changed the benefit status of a prescription medication called meperidine (Demerol). This product is an opioid and should only be used for a short period of time. Long-term use may lead to toxic effects, as well as addiction. To ensure the appropriate use of meperidine (Demerol), the Program established a maximum allowable quantity in December 2007. Utilization rates of meperidine (Demerol) as a result of this restriction have decreased by 33% over 2006 numbers (from 7,340 to 4,886 claims), and nearly 50% since peaking in 2003 (see Figure 3).

**Action:** Closer monitoring of meperidine (Demerol) and special approvals required when maximums are exceeded.

**Result:** Increases in rejected claims and early identification of inappropriate use of meperidine (Demerol).

Figure 3 – Meperidine (Demerol) Utilization



## **Maximum allowable quantities for Proton Pump Inhibitors (PPIs)**

Based on clinical evidence, the NIHB Program changed the status of drugs called Proton Pump Inhibitors (PPIs). These drugs are used to treat serious stomach disorders; however, overuse has been associated with osteoporosis, pneumonia and serious infectious diarrhea. To ensure the appropriate use of these drugs the Program established a maximum allowable quantity in April 2009. Changes in utilization rates of PPIs as a result of this initiative will be reported in the next Report on Client Safety.

## **Pillar 3**

### ***Drug use trend analysis***

#### **Program analysis, identification of issues and adjusting program requirements**

NIHB actively analyses broad patterns of utilization, prescribing, and dispensing on an on-going basis. This work is conducted by a team of licensed pharmacists and experts in data analysis. Once patterns are identified, the Program intervenes to prevent the recurrence of inappropriate prescription drug use.

In 2008, the NIHB Program took steps in a number of cases to intervene with professional colleges, such as Colleges of Physicians and Surgeons and Pharmacy Colleges. These bodies deal with all issues related to professional practice. Specific concerns were raised around the prescribing of methadone in Ontario and the prescribing of Ritalin SR in Saskatchewan. The NIHB Program will continue to fulfill its commitment to client safety by following up on these and other issues with professional colleges when data suggest such an action is warranted.

NIHB staff are also in regular contact with their federal, provincial and territorial counterparts who operate similar drug benefit plans to share best practice knowledge across jurisdictions.

**Action:** Ongoing Program analysis and improvements.

**Result:** Ongoing review of drug utilization data, identification of patterns and proactive identification of issues for follow-up.

In 2008–2009, the NIHB Program commissioned a benchmarking study to look at client safety initiatives in other public drug plans. The purpose of the study was to facilitate comparisons between the Program and similar programs in other jurisdictions. A summary of the study results as well as areas identified for further action will be provided in the next Report on Client Safety.

## **Client Level Analysis and Prescription Monitoring Program (PMP)**

The Program has developed a methodology that allows NIHB staff to identify clients at highest potential risk for misuse of benzodiazepines and/or opioid-based products.

To improve communication with health professionals and to add an extra element to its approach to client safety, NIHB has developed the NIHB Prescription Monitoring Program (PMP) which focuses on the questionable use of benzodiazepines and opioids.

The NIHB PMP complements existing activities and promotes the optimal use of medications by allowing the Program to enhance its interventions when drug use patterns of concern are observed. Variables like the number of physicians visited (“doctor shopping”) and the number of NE warning codes generated flag clients for enrolment into the PMP. Enrolment may restrict clients to a specific physician or require clients to have future claims verified and authorized by a pharmacist at NIHB’s Drug Exception Centre. If clients or their health care providers cannot provide evidence to support the continuation of the drug therapy in question, the Program reserves the right to refuse payment for the medications requested.

The first phase of the NIHB PMP was launched in Alberta in January of 2007. Since that time, the NIHB PMP has also been expanded to Nova Scotia.

**Action:** Establishment of the NIHB Prescription Monitoring Program for clients with drug use patterns of concern in Alberta and Nova Scotia. Plans are underway to establish the NIHB PMP in New Brunswick.

**Result:** Improved monitoring and tighter approval process for clients with the highest risk of drug misuse.

## Pillar 4

### NIHB's Drug Use Evaluation Advisory Committee (DUEAC)

To further strengthen client safety initiatives, the Program established the NIHB Drug Use Evaluation Advisory Committee (DUEAC) in 2003. This committee provides independent expert advice to promote improvements in health outcomes of First Nations and Inuit clients through effective use of medications. This Advisory Committee is composed of various health care professionals, including a number of First Nations physicians. It meets 3–4 times per year to review drug-use trends, to make recommendations for program interventions, and to follow-up on specific issues. For example, before NIHB changes the listing status of drugs subject to overuse/misuse, NIHB consults with this expert body to confirm the clinical validity of restrictions or removals of medications from the approved drug benefit list.

The Advisory Committee has undertaken specific reviews on a wide range of drugs (37 studies complete/ongoing) with a view to improving client safety. The result of these analyses are sent periodically to health professionals across the country through the Drug Use Evaluation (DUE) Bulletin. These bulletins are available on-line at the following address:

<http://www.hc-sc.gc.ca/fniah-spnia/pubs/nihb-ssna/index-eng.php#drug-med>

In previous years, on the advice of this Committee, the Program has sent letters raising concerns to top prescribers of benzodiazepines. Other contributions of the Committee include an active role in the development of the NE code for opioids, benzodiazepines and methadone, as well as completed studies on asthma drugs, statin drugs for cholesterol and chronic obstructive pulmonary disorder. A full list of ongoing and complete studies is set out in Appendix 3. The Program will continue to look to the Committee to provide valuable advice on further enhancements to client safety.

**Action:** Regular meetings of an external expert advisory body to assist NIHB in evaluating emerging drug use issues.

**Result:** 37 studies of specific drugs related to client safety.

Enhanced information on client safety issues distributed to health care professionals serving First Nations and Inuit.

Enhanced transparency and clinically-based decision-making.

## Evaluating Outcomes

The NIHB Program is committed to measuring and demonstrating the impact of interventions to promote client safety. The advice of the Drug Use Evaluation Advisory Committee has been invaluable in helping NIHB develop a measurement methodology to produce useful data over the long term. In this regard, evaluations to measure the influence of three interventions are detailed below.

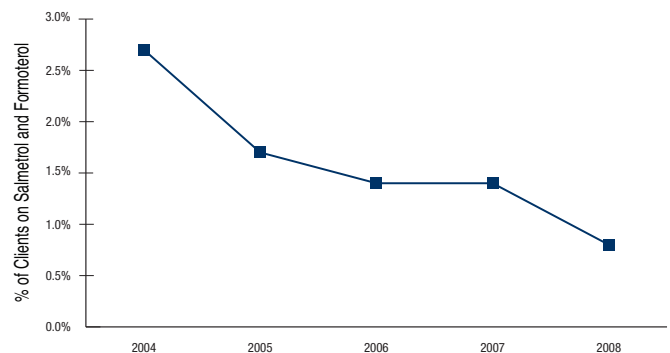
### Changes in benefit status to certain asthma medications: salmeterol (Serevent) and formoterol (Foradil)

In March 2008, the NIHB Program changed the benefit status of two asthma inhalers, salmeterol and formoterol. Health Canada had issued a safety alert recommending these asthma inhalers be used together with steroid inhalers. There were reports of deaths when these inhalers were used without a steroid inhaler for the treatment of asthma. Claims data showed that several clients with asthma were using these inhalers without steroid inhalers. The Program sent letters to clients' pharmacies and physicians informing them of the inappropriate use of these asthma inhalers by their patients, changed the benefit status of salmeterol and formoterol from "Open Benefit" to "Limited Use" and issued a DUE bulletin.

**Action:** Provide information to physicians and pharmacists on the inappropriate use of asthma inhalers by their patients. Changes to the benefit status of salmeterol and formoterol. Issued DUE bulletin.

**Result:** Reduction in the number of asthma clients using salmeterol or formoterol without a steroid inhaler.

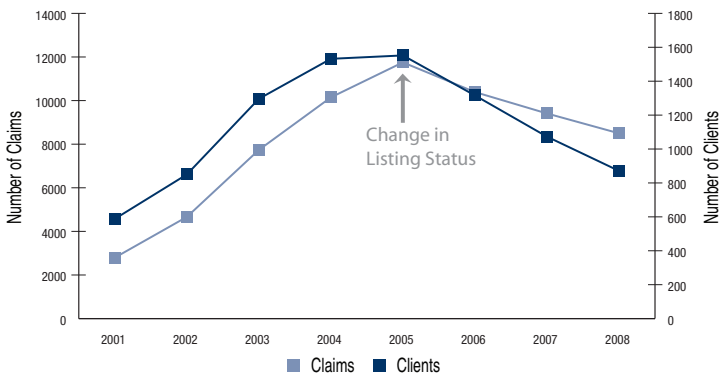
Figure 4 – Utilization of Salmeterol and Formoterol Without Steroid Inhalers



**Changes in benefit status: fentanyl (Duragesic)**

In October 2005, the NIHB Program changed the benefit status of a prescription pain patch called fentanyl (or Duragesic). This product is a potent long-acting opioid product that was being requested in increasing amounts for a number of years. Evaluations concluding that this particular drug was subject to overuse prompted the Program to change fentanyl’s benefit status from “Open Benefit” to “Limited Use”. This change requires special authorization from NIHB’s Drug Exception Centre before approvals can be granted. Claims data indicate that, since these restrictions were put in place, the Program has effectively reversed the inappropriate utilization trend for this particular drug (see Figure 5).

**Figure 5 – Impact of changing the listing status of Fentanyl (Duragesic)**



The Program is continuing to monitor use patterns of fentanyl (Duragesic) to ensure that clients with a legitimate need for this drug (chronic and cancer pain) continue to have appropriate access.

**Action:** Changes to access to the benefit status of the opioid-based drug fentanyl or Duragesic.

**Result:** Declining trends for the use of fentanyl / Duragesic since 2005

**Impacts of Program interventions on benzodiazepine use**

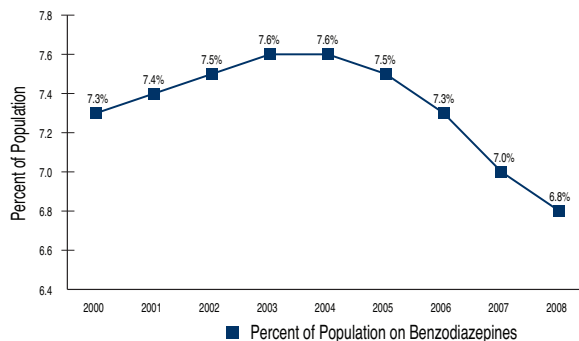
The range of interventions highlighted in this document are aimed at reducing problematic drug use. One of the main areas of concern has been benzodiazepine use. This class of drug is meant to be a short-term remedy for individuals coping with anxiety or sleep problems. There is little clinical evidence to support long-term use of benzodiazepines.

Physical addiction can often result from long-term use and can produce adverse health and social effects. Based on well-documented concerns, NIHB removed a number of long-acting benzodiazepines from its approved Drug Benefit List in September 2007. The use of long-acting benzodiazepines in the elderly is of grave concern because of the link to cognitive impairment and serious injuries as a result of falling accidents.

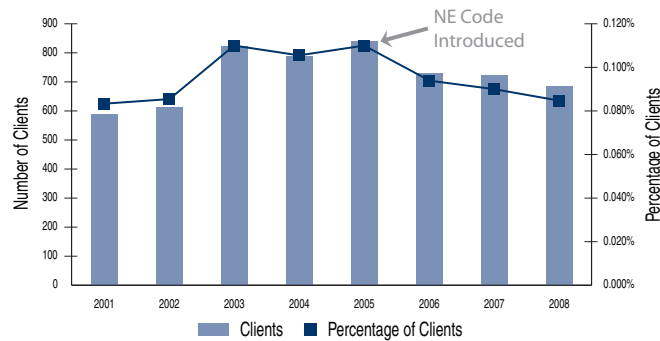
The NIHB Program has undertaken specific evaluations of trends in benzodiazepine use to measure the effectiveness of recent interventions. The number of clients accessing benzodiazepines, the number of claims approved and the number of clients exceeding the maximum recommended daily dose (equivalent to 40 mg per day of diazepam) all declined in 2008 (see Figures 6 and 7).

In 2003, the percentage of eligible First Nations and Inuit receiving a benzodiazepine peaked at 7.6% and began to decline afterward. By 2008 the share of eligible clients receiving a benzodiazepine had decreased by 10.5% to 6.8%. In absolute numbers, there were nearly 6,900 fewer clients receiving benzodiazepines in 2008 than there would have been had the percentage of eligible clients receiving benzodiazepine remained at its 2003 value of 7.6%.

**Figure 6 – Number of clients claiming benzodiazepines**



**Figure 7 – Number of Clients exceeding the maximum recommended dose of benzodiazepines (equivalent to 40 mg of diazepam)**



**Action:** Removal of a number of long-acting benzodiazepines from the NIHB approved Drug Benefit List.

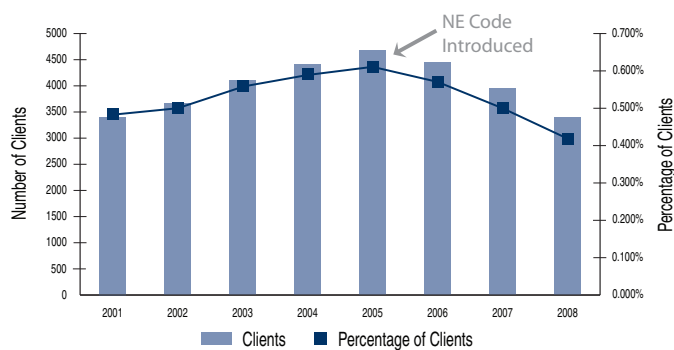
**Result:** Reductions in the number of clients exceeding the maximum recommended daily dose of drugs in the benzodiazepine class.

**Measuring the impact of the “NE Code”**

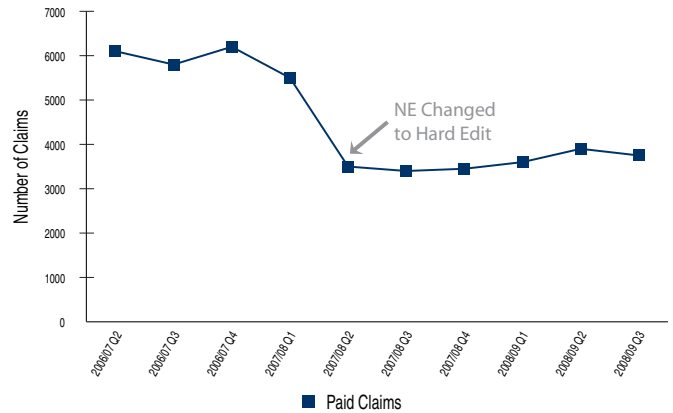
To evaluate the impact of the “NE code”, NIHB has measured the number and percent of clients who accessed three or more benzodiazepines, three or more opioids or opioids in conjunction with methadone treatment. Consistent with the numbers reported in the 2008 Report on Client Safety, utilization of these medications at these thresholds of concern continued to decline in 2008 (see Figure 8).

Of note is the very low percentage of clients who have claimed these drugs of concern at these levels (a fraction of 1%).

**Figure 8 – Measuring the impact of the NE Code Number and percentage of clients claiming 3 or more benzodiazepines, 3 or more opioids, or opioids in association with methadone.**



**Figure 9 – Measuring the impact of changing the NE Code from a soft edit to hard edit**



**Action:** NE code to alert pharmacists of potential prescription drug misuse.

**Result:** Reductions in the number of clients claiming three (3) or more prescription drugs in the benzodiazepine category.

Reductions in the number of clients claiming three (3) or more prescription opioid drugs.

Reductions in the number of clients claiming opioids in addition to methadone treatment.

## Complementary community-level approaches

In addition to the interventions undertaken by the NIHB Program, the First Nations and Inuit Health Branch Community Programs Directorate is actively working at the community level to promote healthy lifestyles and to prevent the misuse and abuse of prescription drugs. The Branch has initiated community-based pilot projects aimed at raising awareness of harm associated with prescription drug abuse and delivering evidence-based prevention strategies that will address prescription drug abuse. Linkages are being established among First Nations and Inuit communities, health care organizations and committees from surrounding communities. Intermediate results will provide a better understanding of how to design, integrate and implement effective intervention strategies that are culturally-specific and knowledge-based. The long-term objective of the community-based pilot projects is to develop culturally-appropriate, evidence-based prevention and promotion strategies that prevent the misuse of prescription drugs, leading to improved health outcomes for First Nations and Inuit people.

**Action:** Demonstration projects in First Nations and Inuit communities to promote healthier use of prescription medications.

**Result:** Improved understanding of the impacts of the use of prescription drugs among First Nations and Inuit people.

An evaluation tool has been developed by NIHB to generate community reports that describe the utilization of certain drugs within First Nations communities. These reports allow the NIHB Program to compare utilization rates across bands, regions and nationally. Results have been shared with First Nations stakeholders.

**Action:** Community level reports generated on a number of communities on an ongoing basis.

**Result:** Closer attention to usage trends for a wide range of medications as well as increased information for First Nation communities.

## Conclusion

The Non-Insured Health Benefits Program is taking an active, evidenced-based and measured approach to further develop client safety activities. This approach stresses the appropriate use of medications with a view to achieving the best possible health outcomes for First Nations and Inuit clients. Significant interventions are now in place. The Program is committed to monitoring and measuring the impact of these interventions and working with expert advisors, stakeholders and other key players to identify further improvements to the NIHB client safety regime.

With a First Nations and Inuit client-base growing two times faster than the Canadian average, the Non-Insured Health Benefits Program has experienced yearly increases in utilization rates, particularly for prescription medications, the Program's most frequently used benefit. The Program has taken steps to confine and reduce the inappropriate use of medications. Consequently, although the utilization numbers for drugs of concern declined only slightly in the last year in sheer numbers, these reductions represent significant improvements to client safety when viewed in the larger context of client population growth.

The Non-Insured Health Benefits Program remains committed to ongoing evaluations of its client safety regime. The Program will continue to report on these issues on an annual basis by way of this report.



## Appendix 1

### NIHB Point-of-Sale Warning and Rejection Messages

Message	Code*	Description
Duplicate Therapy	MX (soft)	Indicates that the client has received a drug from the same therapy class and has used less than 2/3 of the medication based on the days supply.
Duplicate Therapy Multi-Pharmacy	MZ (soft)	Indicates that the client has received a drug from the same therapy class; and has used less than 2/3 of the medication based on the days supply; however the original prescription was filled at another pharmacy.
<b>Drug to drug interaction potential</b>	<b>ME (hard)</b>	<b>Indicates that drug may interact with another current drug, based on an accurate days supply submission.</b>
Duplicate Drug	MW (hard)	Indicates that the client has received the same drug (same chemical entity) and has used less than 2/3 of the medication based on the days supply.
Duplicate Drug Multi-Pharmacy	MY (hard)	Indicates that the client has received the same drug (same chemical entity) and has used less than 2/3 of the medication based on the days supply; however the original prescription was filled at another pharmacy.
Potential Misuse of Prescription Drugs	NE (hard)	Indicates <ul style="list-style-type: none"> <li>• 3 or more benzodiazepines</li> <li>• 3 or more opioids</li> <li>• 3 or more benzodiazepines and 3 or more opioids</li> <li>• methadone in combination with other opioid drugs</li> </ul>

\* NB: the codes noted above are not acronyms; the letter codes are not initials for other terms

The codes and messages described in Appendix 1 in bold font denote “hard” edit rejection codes. Claims submitted through the NIHB Point-of-Sale system which prompt any of these four messages will not be accepted for payment. To submit the claim for payment, pharmacists who receive these rejection

codes must provide an override code back to the NIHB Program to explain the action that they took, based on their professional judgement, in deciding to dispense the claim. In cases where pharmacists choose to override a rejected claim, the prescriptions are paid by NIHB.

## Appendix 2

### Pharmacy codes for overriding\* NIHB rejection messages

Code	Interpretation
UA	Consulted Prescriber and Prescription Filled As Written
UB	Consulted Prescriber and Changed Dose
UC	Consulted Prescriber and Changed Instructions For Use
UD	Consulted Prescriber and Changed Drug
UE	Consulted Prescriber and Changed Quantity
UF	Patient Gave Adequate Explanation, Prescription Filled as Written
UG	Cautioned Patient, Prescription Filled As Written
UI	Consulted Other Sources. Prescription Filled As Written
UJ	Consulted Other Sources. Altered Prescription and Filled
UN	Assessed Patient. Therapy is Appropriate.
MR	Replacement, Item Lost or Broken.

\* To override NIHB warning codes, pharmacists must report on their actions to NIHB by sending an override message that details the specific action taken as a result of the warning message.

## Appendix 3

### Drug Use Evaluation Advisory Committee reviews and ongoing analysis

Reviews Conducted to Date	Ongoing and Planned Analysis
<ul style="list-style-type: none"><li>• Acetaminophen limit</li><li>• Amitriptyline for pain</li><li>• Antidepressants in children and adolescents</li><li>• Asthma</li><li>• Benzodiazepines</li><li>• Biologics for Rheumatoid Arthritis</li><li>• Cancer drugs</li><li>• Chronic obstructive pulmonary disease (COPD)</li><li>• Clients with more than 50 prescriptions in 90 days</li><li>• Clopidogrel (Plavix)</li><li>• Concurrent use of Cox II's and proton pump inhibitors</li><li>• Contraceptive Use</li><li>• Diabetes medications</li><li>• Drug use trends in seniors</li><li>• Emergency dispensing trends in the Program</li><li>• Evaluation of the proton pump inhibitors intervention</li><li>• Fentanyl patch</li><li>• Folic acid and prenatal vitamins</li><li>• HIV/AIDS medications</li><li>• Methadone</li><li>• Methylphenidate for ADHD</li><li>• Opioids</li><li>• Oxycodone</li><li>• Smoking cessation aids</li><li>• Statins (Cholesterol)</li><li>• Thiazolidinediones (diabetes drugs)</li></ul>	<ul style="list-style-type: none"><li>• Anti-psychotic medications</li><li>• Antibiotics</li><li>• Community and physician reports</li><li>• Concurrent use of proton pump inhibitors and clopidogrel</li><li>• Cough and cold medications</li><li>• Diabetes medication update</li><li>• Diabetic test strips</li><li>• Evaluations of various NIHB Program interventions</li><li>• Folic acid and prenatal vitamins update</li><li>• NE audit</li><li>• Updated and standardized reporting on diabetic and antibiotic medication use</li></ul>