

AUDIT REPORT



CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
BUREAU OF MANAGEMENT AUDIT
WILLIAM C. THOMPSON, JR., COMPTROLLER

Audit Report on the Inventory Controls of the Department of Health and Mental Hygiene over Nicotine Replacement Therapy Aids

MD09-071A

June 30, 2009



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER
1 CENTRE STREET
NEW YORK, N.Y. 10007-2341

WILLIAM C. THOMPSON, JR.
COMPTROLLER

To the Citizens of the City of New York

Ladies and Gentlemen:

In accordance with the Comptroller's responsibilities contained in Chapter 5, §93, of the New York City Charter, my office has assessed whether the Bureau of Tobacco Control (BTC) of the Department of Health and Mental Hygiene (DOHMH) had adequate inventory controls over nicotine replacement therapy (NRT) aids.

As part of its comprehensive plan to reduce tobacco use in New York City, the BTC distributes NRT aids, such as gum, lozenges, and patches, to help smokers who are trying to quit smoking. Audits of programs such as this provide a means of ensuring that City agencies properly account for public resources and manage them in the best interest of those they serve.

The results of our audit, which are presented in this report, have been discussed with DOHMH officials, and their comments have been considered in the preparation of this report.

I trust that this report contains information that is of interest to you. If you have any questions concerning this report, please e-mail my audit bureau at audit@comptroller.nyc.gov or telephone my office at 212-669-3747.

Very truly yours,

A handwritten signature in black ink, appearing to read "William C. Thompson, Jr.", written over a horizontal line.

William C. Thompson, Jr.

WCT/ec

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*The City of New York
Office of the Comptroller
Bureau of Management Audit*

**Audit Report on the Inventory Controls of the
Department of Health and Mental Hygiene over
Nicotine Replacement Therapy Aids**

MD09-071A

AUDIT REPORT IN BRIEF

The mission of the Department of Health and Mental Hygiene (DOHMH) is to protect and promote the health and mental well being of New York residents. DOHMH has programs to prevent and control chronic diseases such as heart disease, diabetes, asthma, and cancer. It has also made reducing tobacco-related illnesses a priority.

In 2002, DOHMH launched a five-point comprehensive tobacco control program comprising taxation, legislation, cessation, education, and evaluation. As part of its comprehensive plan to reduce tobacco use in New York City, DOHMH's Bureau of Tobacco Control (BTC) distributes nicotine replacement therapy (NRT) aids such as gum, lozenges, and patches, to help smokers who are trying to quit smoking. NRT aids deliver nicotine of varying strength and help to relieve some of the withdrawal symptoms people experience when they quit smoking. This audit determined whether BTC had adequate inventory controls over nicotine replacement therapy aids.

Audit Findings and Conclusions

BTC does not have adequate inventory controls over NRT aids. BTC relies solely on a third-party vendor, Vanguard, for the monitoring and supervision of NRT inventory. BTC does not reconcile NRT inventory balances, but instead relies on Vanguard to ensure that inventory records are accurate. In addition, BTC does not monitor the physical inventory counts of NRT aids conducted by Vanguard and has never performed its own inventory count. Moreover, DOHMH has not conducted any independent audits of Vanguard's inventory operations.

There was no evidence that inventory discrepancies identified by Vanguard were shared with BTC officials or that these discrepancies were adequately investigated. Also, we identified some discrepancies in the Employee Smoking Cessation Assistance Program (ESCAPE) inventory records maintained by BTC. Moreover, BTC officials were unaware of the process of accounting for 311 kits returned undelivered that are reshipped by Vanguard and incorrectly

included them as additional kits in BTC's calculation of the total number of NRT aids distributed during Fiscal Year 2008. Lastly, BTC lacked written policies and procedures for all the aspects of the NRT program.

Audit Recommendations

Based on our findings, we make 11 recommendations, 5 of which are listed below.

BTC officials should:

- Perform regular reconciliations of NRT inventory balances it receives from Vanguard with its own records to ensure that the inventory is being correctly accounted for.
- Assign individuals to attend and observe Vanguard's physical inventory count of NRT aids or periodically conduct its own unannounced physical inventory counts.
- Request that DOHMH conduct independent audits of Vanguard's operational controls and of its inventory operations.
- Ensure that Vanguard provides them with the inventory variances that are identified by physical inventory counts.
- Ensure that inventory variances are adequately investigated and that the outcomes of the investigations are adequately documented.

Agency Response

DOHMH officials generally agreed with the audit's recommendations.

INTRODUCTION

Background

The mission of the Department of Health and Mental Hygiene (DOHMH) is to protect and promote the health and mental well being of New York residents. DOHMH has programs to prevent and control chronic diseases such as heart disease, diabetes, asthma, and cancer. It has also made reducing tobacco-related illnesses a priority.

In 2002, DOHMH launched a five-point comprehensive tobacco control program comprising taxation, legislation, cessation, education, and evaluation. As part of its comprehensive plan to reduce tobacco use in New York City, DOHMH's Bureau of Tobacco Control (BTC) distributes nicotine replacement therapy (NRT) aids such as gum, lozenges, and patches, to help smokers who are trying to quit smoking. NRT aids deliver nicotine of varying strength and help to relieve some of the withdrawal symptoms people experience when they quit smoking.¹

BTC acquires NRT aids through purchases or with donations from external entities, and from the New York State Department of Health. BTC uses the services of a third-party vendor, Vanguard Direct (Vanguard), to receive, store, and distribute NRT aids. Vanguard's services were procured via a New York City Department of Citywide Administrative Services (DCAS) requirements contract for commercial printing and direct mail services.

Requirements contracts are contracts for goods or services that are bid out on a Citywide basis. Therefore, the price per item awarded under a requirements contract is usually significantly lower than if it were procured by each agency soliciting bids individually for smaller amounts. In addition, agencies can save staff time by using this streamlined method of purchasing.

BTC distributes NRT aids to the public through annual large-scale distribution campaigns held in conjunction with the New York City 311 government information and non-emergency service telephone number, as well as through small, targeted, time-limited NRT distribution campaigns. BTC also distributes NRT through collaboration with partners and to City employees and their households directly.

Seventy-five City agencies and non-City partners assist BTC in NRT aids distribution. Major partners include the 11 City hospitals of the Health and Hospital Corporation (HHC) as well as non-City hospitals, community colleges, community-based organizations, and the Police Department. The partners are responsible for screening and determining user eligibility for courses of NRT and for recording data on NRT distribution. In July 2008, DOHMH established an NRT distribution schedule for these partners by creating NRT distribution goals based on the

¹ NRT is a method of weaning a smoker away from nicotine by giving the smoker smaller and smaller doses of nicotine.

historic response to NRT by each partner's constituents. Vanguard ships NRT aids to the partners in kits or as loose² items in cartons every six weeks.

City smokers are alerted to the annual large-scale distribution campaign by an extensive media campaign. During the campaign, operators at 311 are responsible for screening smokers who call 311 and for recording the callers' contact information. Anyone deemed eligible as a result of the 311 screening process is provided with NRT aids. BTC uses the information obtained from the 311-screening process to provide appropriate fulfillment instructions to Vanguard. Vanguard assembles NRT kits using aids packed in cartons. The kits are typically 4-week, 6-week, or 8-week courses of NRT medications. BTC classifies smokers into the following three categories:

- light smoker: smokes one to nine cigarettes a day.
- moderate smoker: smokes 10 to 20 cigarettes a day.
- heavy smoker: smokes 21 or more cigarettes a day.

The severity of the smoker's addiction determines the amount of medication the smoker may need to quit. Kit contents vary according to whether the individual is a light, moderate, or heavy smoker. The contents of a kit can differ in the number of weeks of patches, the strength of patches, and in the combinations of NRT aids—patches, gum, and lozenges. For example, BTC may provide light smokers with gum, moderate smokers with six weeks of patches, and heavy smokers with six weeks of patches and gum.

BTC also provides NRT directly to City employees and their households free of charge through its Employee Smoking Cessation Assistance Program (ESCAPE), a comprehensive smoking cessation program with individualized client treatment plans, including counseling and medication. In addition to patches, lozenges, and gum, the ESCAPE office distributes prescription medications of Zyban and Chantix³ to clients. The prescription medication provided to City employees is ordered directly from the City Health Department Pharmacy, is stored in a locked cabinet in the Medical Director's office, and is dispensed to clients in person by the Medical Director.⁴

Lastly, BTC distributes NRT aids through small, targeted, time-limited distribution campaigns. These distributions enable BTC to target NRT to specific communities and at specific events and to give out excess NRT aids or aids that are nearing their expiration dates. BTC also conducts targeted give-aways to coincide with national and international cessation events such as World No Tobacco Day on May 31 and the Great American Smoke Out each November. These one-time events may involve the distribution of either kits or individual NRT aids items.

In Fiscal Year 2008, BTC made purchases and received donations of NRT aids totaling \$1,063,047. In addition, BTC distributed \$4,122,590 in NRT aids to its partners and through the

² BTC defines loose NRT as aids as those that have not been packaged into individual kits.

³ Zyban and Chantix are the two main prescription drugs that are prescribed to help people to quit smoking.

⁴ Vanguard is not involved with the receiving, storage, or shipping of these prescription medications.

311 annual, large-scale campaign giveaway⁵ and \$37,144 in prescription medications. Vanguard was paid \$428,285 in Fiscal Year 2008 for the services it provided to BTC specifically related to the NRT program.

Objective

The objective of this audit was to determine whether BTC has adequate inventory controls over nicotine replacement therapy aids.

Scope and Methodology

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. This audit was conducted in accordance with the audit responsibilities of the City Comptroller as set forth in Chapter 5, §93, of the New York City Charter.

The scope of the audit was Fiscal Year 2008. However, we conducted a physical count of inventory at Vanguard's warehouse in October 2008 and at the ESCAPE office in April 2009.

To gain an understanding of the BTC NRT program, we interviewed BTC officials, including the Assistant Commissioner, Deputy Director, Medical Director, and the Director of Partnerships and Community Outreach.

To gain an understanding of Vanguard's receiving, storage, and shipment of NRT aids, we met with Vanguard officials, including the Chief Financial Officer, the Vice President of Logistics, the Warehouse Receiving Supervisor, and the Project Manager. We also visited Vanguard's warehouse and had a walkthrough of Vanguard NRT operations. On October 27, 2008, we made an unannounced visit to Vanguard's warehouse and conducted a physical count of the NRT aids inventory on hand. We compared the amounts of aids on hand with the amounts listed in Vanguard's computerized inventory system.

In addition, we reviewed a copy of the DCAS requirements contract with Vanguard to determine the services to be provided. We also reviewed the Department of Investigation (DOI) *Standards for Inventory Control and Management*.

To ensure that NRT purchases made by BTC were received by Vanguard, we obtained all Fiscal Year 2008 purchase orders from BTC and compared the quantity and description of items ordered with Vanguard's receiving tickets.

⁵ This distribution included NRT aids obtained prior to Fiscal Year 2008.

We judgmentally selected the fourth quarter of Fiscal Year 2008 (April, May, and June 2008) as the period of review of BTC and Vanguard distribution and inventory records because this was the period during which BTC's annual 311 distribution campaign took place. Choosing this period allowed us to review inventory practices involving both loose aids items and kitted aids for shipments to partners and through the 311 distribution campaign.

We reviewed the following BTC records: e-mails to Vanguard requesting NRT shipments to partners, the Fiscal Year 2008 fourth quarter HHC distribution spreadsheet, the Fiscal Year 2008 fourth quarter non-HHC distribution spreadsheet, the 2008 NRT Campaign Assembly Grid,⁶ BTC's inventory balances as of April 11, 2008, and information on kits shipped to eligible 311 callers. In addition, we reviewed the following Vanguard records: delivery tickets, NRT inventory spreadsheets, and a file on the kits shipped to eligible 311 callers.

We reviewed the documents received from BTC and Vanguard and attempted to reconcile BTC's records of distributed NRT aids with Vanguard's inventory spreadsheets for the fourth quarter of Fiscal Year 2008. For shipments of loose NRT aids items sent to partners, we compared BTC's e-mail requests to Vanguard requesting shipments with the 2008 fourth quarter HHC and non-HHC distribution spreadsheets to determine whether the lot numbers and quantities matched.

To determine whether 311 shipments were delivered, we randomly selected 100 participants who received an NRT kit and checked the deliveries using the United Parcel Service tracking numbers. In addition, we reviewed the Vanguard delivery tickets for all NRT aids shipments made to partners and compared them with BTC's e-mail requests for shipments to partners to see whether the quantities and lot numbers matched.

We visited the ESCAPE office on April 6, 2009, and conducted an unannounced physical count of the NRT aids on hand. To determine the accuracy of the inventory records maintained by the ESCAPE office, we compared the amount of inventory counted with the amount of inventory reflected in the ESCAPE records.

The results of the above tests, while not projected to their respective populations, provided a reasonable basis to assess DOHMH's inventory controls over nicotine replacement therapy aids.

⁶ The Campaign Assembly Grid shows the number of light, moderate, and heavy kits created as well as the specific lot numbers of items that are included in each type of kit.

Discussion of Audit Results

The matters covered in this report were discussed with DOHMH officials during and at the conclusion of this audit. A preliminary draft report was sent to DOHMH officials and discussed at an exit conference held on May 15, 2008. On May 28, 2009, we submitted a draft report to DOHMH officials with a request for comments. We received a written response from DOHMH officials on June 15, 2009. In their response, DOHMH officials generally agreed with the audit's findings and recommendations, stating:

The audit findings state that "BTC does not reconcile inventory balances, but instead relies on Vanguard to ensure that inventory records are accurate." During FY08, BTC routinely tracked and compared remaining inventory levels with the numbers reported by Vanguard, but the process of tracking inventory lacked sufficient detail and reconciliations were not performed. Recognizing these issues, BTC made extensive improvements in inventory management during fiscal year 2009, including the development of a semi-quarterly distribution system for ordering and delivering NRT for the partner program, the adoption of Vanguard's online Easy Order system, which allows for real-time updates of remaining inventory, and the performance of routine inventory reconciliations which will take place between semi-quarterly distributions.

At no point during the audit did BTC officials provide evidence to show that they compared remaining inventory levels with the numbers reported by Vanguard. However, we are pleased that DOHMH has recognized that the inventory controls over NRT aids need to be strengthened and that it is making extensive improvements in inventory management.

The full text of the DOHMH response is included as an addendum to this report.

FINDINGS AND RECOMMENDATIONS

BTC does not have adequate inventory controls over NRT aids. BTC relies solely on Vanguard for the monitoring and supervision of NRT inventory and does not reconcile NRT inventory balances. Instead, it relies on Vanguard to ensure that inventory records are accurate. In addition, BTC does not monitor the physical inventory counts of NRT aids conducted by Vanguard and has never performed its own inventory count. Moreover, DOHMH has not conducted any independent audits of Vanguard's inventory operations.

In addition, there was no evidence that inventory discrepancies identified by Vanguard were shared with BTC officials or that these discrepancies were adequately investigated. Also, we identified some discrepancies in the ESCAPE inventory records maintained by BTC. Moreover, BTC officials were unaware of the process of accounting for 311 kits returned undelivered that are reshipped and incorrectly include them as additional kits in BTC's total calculation of NRT aids distributed during Fiscal Year 2008. Lastly, BTC lacked written policies and procedures for some aspects of the NRT program.

The following sections of this report discuss our findings in more detail.

BTC Did Not Reconcile Inventory Balances

BTC did not reconcile NRT inventory balances, but rather relied on Vanguard to supply them with inventory balances for the various NRT items in stock. BTC officials initially stated that they monitor NRT inventory using reports sent to them by Vanguard. They stated that they reconcile the information in these spreadsheets against their internal e-mails and spreadsheets, which list the amount of NRT inventory Vanguard was supposed to dispense, based on BTC instructions. The BTC officials later stated that they do not regularly reconcile the inventory data and instead rely on Vanguard officials to ensure that inventory records are accurate.

Vanguard created inventory spreadsheets using the inventory levels listed in its computerized system and forwarded the spreadsheets to BTC officials.⁷ According to a Vanguard official, the inventory spreadsheet is sent once a month or at least on a quarterly basis; according to BTC officials, they receive a spreadsheet every four to six weeks, on average. BTC used the balances on the Vanguard spreadsheet as its starting point and reduced the inventory balances based on the quantities it instructed Vanguard to ship. However, BTC officials stated that Vanguard is responsible for monitoring the actual NRT inventory data.

BTC officials stated that during Fiscal Year 2009, BTC implemented a regular six-week partner NRT distribution system using Vanguard's on-line Easy Order system and that BTC staff now regularly reconcile BTC's inventory balance records with Vanguard's records.

⁷ The inventory reports provided for the fourth quarter of Fiscal Year 2008, listed only the inventory levels for loose NRT aids. They did not include information on the inventory levels for 311 or partner kits.

BTC officials also stated that they reconcile inventory records on an annual basis, usually during the month of September, while Vanguard officials conduct a complete inventory count. However, we were not provided any evidence of BTC's reconciliation.

Using information provided by both BTC and Vanguard, we attempted to reconcile the NRT inventory balances for the fourth quarter of Fiscal Year 2008 and identified some variances with the inventory balances, which are shown in Tables I and II below.

Table I
Fourth Quarter Variances Identified for Partner and 311 Kits

Kit Number	Kit Type	Unit Quantity According to Vanguard Records	Unit Quantity According to Auditors' Calculation	Overage or Shortage
PTRKIT08-A	Light Kits	25	26	-1
PTRKIT08-B	Medium Kits	363	364	-1
PTRKIT08-C	Heavy Kits	76	70	6

As shown in Table I, we identified variances in the inventory balances for the light, medium, and heavy kits that were distributed to partners. In addition, the fact that the inventory records for partner and 311 kits that we received for the fourth quarter were created by Vanguard, not by BTC, prompts us to question whether BTC attempted to track inventory balances for kits during this period.

Table II
Fourth Quarter Variances Identified for Loose NRT Items

Item #	Lot Number	Item Description	Case Quantity According to BTC's Records	Case Quantity According to Auditors' Calculation	Overage or Shortage	Units Per Case	Unit Overage or Shortage
1	22090301	21mg Patches	0	11	11	12	132
2	22035801	21mg Patches	35	50	-15	12	-180
3	22090503	14mg Patches	124	131	-7	12	-84
4	22090102	21mg Patches	0	6	-6	12	-72
5	22144901	14mg Patches	0	1	-1	12	-12
6	22090101	21mg Patches	0	1	-1	12	-12
7	2MGLOT7F11	2mg Lozenge	51	52	-1	12	-12

As can be seen in Table II, we identified variances for seven lot numbers. BTC officials informed us that there have never been any large NRT inventory data variances between BTC's orders and Vanguard's records. Since we were able to identify the discrepancies, we question how BTC officials came to this conclusion, especially since they do not perform reconciliations. We later asked BTC officials what they consider to be a "large" variance and were informed that during Fiscal Year 2008, BTC had no threshold that triggered the monitoring of variances. BTC

officials simply use the inventory balances on Vanguard's updated reports as the correct values of the remaining inventory.

We met with BTC officials on April 6, 2009, and informed them of the variances we identified. BTC officials were unaware of the specific variances identified and said that they needed to review their records in order to address our inquiries. On April 22, 2009, and April 30, 2009, we received responses from BTC officials addressing these discrepancies. BTC officials stated that the differences we identified for item #1 in Table II occurred because there had been a lag in updating one of Vanguard's inventory reports and because on July 3, 2008, one order had been placed for seven cases of this lot when the lot actually had a zero balance. Similarly, BTC stated that orders were placed on July 3, 2008, for 6 cases of #4 and one case of #6 (Table II) when both lots had zero balances. BTC officials stated that the zero balances for these lot numbers were confirmed by the fact that no corresponding balances for #1, #4, and #6 appeared on Vanguard's next inventory update spreadsheet. BTC officials further stated that a math error was made with regard to the balance for item #2 and that their balance of 216 for item #3 was incorrect due to math errors in tracking orders made by a BTC employee. BTC officials were not certain how the discrepancy for item #5 occurred and stated that missing entries and errors in recording accounted for the discrepancy for item #7. As of April 30, 2009, BTC officials did not provide explanations for the discrepancies listed in Table I.

To determine to what extent the variances we identified were due to poor recordkeeping by BTC, we reconciled BTC's requests for shipments of loose NRT with Vanguard's inventory spreadsheets to see whether this comparison also resulted in variances. We used Vanguard's inventory balances for the loose NRT as reported on the March 3, 2008 inventory spreadsheet as the starting point and deducted BTC's requests for NRT shipments after that date. We compared the inventory balances we calculated to the inventory balances reported by Vanguard on the July 17, 2008 spreadsheet. The variances identified are listed in Table III, below.

Table III
Variances with Vanguard's Inventory Balances for Loose NRT Aids

Lot Number	Item Description	Vanguard's Balance 3/3/08	BTC's Requests for Shipments 3/3-7/17/08	Auditors' Balance 7/17/08	Vanguard's Balance 7/17/08	Variance
22090301	21mg Patches	756	767	-11	0	-11
22090503	14mg Patches	790	659	131	180	49
22090102	21mg Patches	171	165	6	0	-6
22090101	21mg Patches	1	0	1	0	-1
2MGLOT7F11	2mg Lozenge	273	221	52	58	6

As can be seen in Table III, variances for some lot numbers were identified between the balances we calculated and those reported by Vanguard. Although the variances were not as large as those we identified using BTC's records, they indicate that some type of errors or irregularities exist with the inventory records.

In addition, only one inventory spreadsheet, dated April 11, 2008, was sent to BTC by Vanguard during the fourth quarter of Fiscal Year 2008. The subsequent spreadsheet sent by Vanguard was dated July 17, 2008—more than three months later. According to the requirements contract, Vanguard is responsible for providing BTC with written reports, including material inventories. It also states that Vanguard is responsible for submitting detailed monthly and periodic summary reports for all fulfillment orders. Vanguard is not sending the inventory spreadsheets frequently enough for BTC to be able to perform meaningful reconciliations, even if it chose to perform them.

Since BTC is not reconciling its information with Vanguard's records, it cannot identify instances of errors or irregularities. Moreover, BTC is not ensuring that the NRT inventory is adequately safeguarded. There is a greater risk that misappropriation of NRT inventory could occur and go undetected.

BTC officials stated that they currently reconcile the NRT inventory balances. They stated that they now use an on-line ordering system that provides real-time inventory balance updates. At the exit conference, BTC officials provided us with a copy of their new manual that includes information and screen shots (depictions of information as displayed on computer screen) to assist employees in entering orders into the on-line ordering system. In addition, BTC officials stated that over the last six months they have met with Vanguard regarding inventory control practices and procedures, including two meetings that focused on improvements to the on-line ordering system.

DOHMH Response: “BTC did not rely solely on Vanguard for monitoring and supervision of NRT inventory during Fiscal Year 2008 (FY08). During FY08, BTC kept its own records to track remaining NRT inventory, and NRT orders and distributions to partners, as demonstrated in over 20 separate documents that were presented to the Office of the Comptroller during the course of this audit. These documents included details regarding updated inventory amounts, including BTC's own tracking of inventory levels, and BTC's records of distribution of NRT to partners. The auditors used these records which demonstrate BTC's oversight of NRT orders, tracking of inventory, and distribution of NRT, to gather data for their analyses.”

Auditor Comment: BTC officials were unable to provide any evidence that NRT inventory balances were reconciled. The documents provided by BTC that included details regarding updated inventory levels were created by Vanguard, not BTC. In addition, BTC simply accepted these updated inventory levels without identifying and investigating whether any differences existed between the inventory BTC believed to be on hand and that actually available according to Vanguard's records. Further, although BTC maintained copies of e-mails to Vanguard requesting NRT shipments, BTC did not request from Vanguard the delivery tickets to verify the quantities of NRT aids actually shipped. BTC placed too much reliance on the inventory balances reported by Vanguard in view of the fact that BTC did not perform its own independent reconciliation or verification of the balances. We attempted to reconcile the fourth quarter inventory balances using information provided by both BTC and Vanguard since BTC received

only one inventory spreadsheet from Vanguard during the fourth quarter of Fiscal Year 2008 for us to review.

Recommendations

BTC officials should:

1. Perform regular reconciliations of NRT inventory balances it receives from Vanguard with its own records to ensure that the inventory is being correctly accounted for.
2. Request that Vanguard send monthly inventory spreadsheets more frequently so meaningful reconciliations can be conducted.

DOHMH Response: “During fiscal year 2009, including the time during which the audit was in process, BTC made extensive improvements to the inventory management, including the development of a semi-quarterly distribution system for ordering and delivering NRT to partners, the adoption of the online Easy Order System, which allows for real-time updates of remaining inventory, and the performance of routine inventory reconciliations which will take place between semi-quarterly distributions. BTC can now access real-time inventory at any time using the online Easy Order System, BTC no longer relies on Vanguard sending inventory spreadsheets for updated inventory information.”

DOHMH Did Not Monitor or Independently Conduct Physical Inventory Counts

BTC does not monitor the physical inventory counts of NRT aids conducted by Vanguard and has never performed its own inventory count. In addition, DOHMH has not conducted any independent audits of Vanguard’s inventory operations.

According to the DOI *Standards for Inventory Control and Management*, “Independent audits are essential to identifying internal control deficiencies that create opportunities for dishonest activity. Audits . . . supplement . . . ongoing management and supervisory monitoring to detect errors and irregularities that require correction.”

Vanguard conducted a physical count of the inventory⁸ in its warehouse in March 2008. The NRT items that Vanguard stores for DOHMH were counted at this time and the quantities were recorded on count sheets, which were then compared to the quantities listed in Vanguard’s computerized inventory system. According to Vanguard officials, they notify DOHMH when inventory counts are going to be conducted. However, according to Vanguard and BTC officials, DOHMH did not send any employees to the Vanguard warehouse to monitor the count of the NRT inventory.

⁸ Vanguard maintains inventory in its warehouse for other City agencies, as well as non-NRT- related items for DOHMH.

In addition, when we met with DOHMH officials in September 2008, they informed us that Vanguard was currently in the process of conducting its 2008 annual count of NRT inventory. We asked the officials whether they intended to be present for the count, and they stated that it was not their intention. The officials stated that they did not feel it was necessary to attend the inventory count because there have never been any large NRT inventory data variances between DOHMH's records and Vanguard's records. In fact, they said that BTC staff had never visited the Vanguard warehouse and at that time, they could not say whether the warehouse was in Brooklyn, New York, or New Jersey.⁹

According to the DOI *Standards for Inventory Control and Management*, a count of all stored goods should be conducted at least once a year to ensure the accuracy of the perpetual inventory records, and the physical inventory count totals should be compared with the perpetual inventory records. It also states that auditors or individuals independent of the inventory operations should investigate discrepancies before submitting reconciliation adjustments to management for approval.

BTC is placing too much reliance on Vanguard's reported inventory figures. BTC should assign independent individuals to observe the inventory counts to ensure that they are adequately performed and to determine whether the inventory counts identify any variances in NRT inventory. BTC officials would then be able to ensure that any identified discrepancies are adequately investigated. In addition, BTC should request that DOHMH conduct an independent audit of Vanguard's operations to determine whether Vanguard has adequate internal controls in place to safeguard the NRT inventory. Further, in light of the variances we identified with the fourth quarter NRT inventory balances, DOHMH should conduct an independent audit of the NRT inventory as well. An audit could help determine whether the variances identified are possible errors in recordkeeping or irregularities.

During the end of the audit fieldwork, BTC officials stated, "Beginning with the September 2009 Count, BTC plans to visit Vanguard during each spring and fall count in order to observe the count process."

Inventory Variances Are Not Shared with BTC or Adequately Investigated

BTC was unable to provide us with any documentation relating to the March 2008 inventory count conducted by Vanguard. Specifically, BTC was unable to provide us any evidence that it was aware of the inventory variances identified by Vanguard's physical count, that it knew whether the variances were adequately investigated and the outcomes, or that it approved the inventory adjustments that may have been made by Vanguard due to the identified variances.

⁹ Vanguard originally operated its warehouse in Brooklyn but relocated it to Maplewood, New Jersey, in November 2007.

Vanguard officials provided us with Physical Count Sheets and a Physical Count Variance Analysis. The count sheets included balances only for loose NRT items, not kits, because the inventory information for kits is not maintained in the computerized inventory system. Vanguard creates kits using cartons of loose NRT aids, and the cartons are removed from Vanguard’s computerized inventory system as needed. We reviewed the count sheets and variance analysis and determined that the physical count identified variances between the existing physical quantity and the quantity in the computer for certain NRT aid lot numbers, as can be seen in Table IV below.

Table IV
Inventory Discrepancies Identified by Vanguard’s March 2008 Physical Count

Lot Number	Description	Physical Count Quantity	Vanguard Computer Quantity	Unit Discrepancy	Unit Price	Gross Dollar Value of Discrepancy	Net Dollar Value of Discrepancy
22090101	21mg Patches	0	12	-12	\$21.00	\$252.00	(\$252.00)
22090503	14mg Patches	9,900	9,480	420	\$21.00	\$8,820.00	\$8,820.00
22090601	14mg Patches	2,904	2,700	204	\$21.00	\$4,284.00	\$4,284.00
22090602	14mg Patches	10,164	10,584	-420	\$21.00	\$8,820.00	(\$8,820.00)
22144901	14mg Patches	17,736	17,748	-12	\$21.00	\$252.00	(\$252.00)
2M22752804	2Mg Gum	5,412	4,488	924	\$16.94	\$15,652.56	\$15,652.56
4MGLOT7D18	4mg Lozenge	4,608	4,620	-12	\$33.00	\$396.00	(\$396.00)
					Total	\$38,476.56	\$19,036.56

As can be seen in Table IV, gross variances totaling \$38,477 were identified for seven lot numbers when Vanguard conducted its physical count. The dollar value of the overages totaled \$28,757, and the dollar value of the shortages totaled \$9,720, resulting in a net overage of \$19,037.

BTC officials stated, “We believe that discussion of the March count took place by telephone and that inventory spreadsheets post-count simply reflected any inventory adjustments made as a result of the count.” However, BTC officials were unable to confirm these details because the staff who worked directly with Vanguard during that period no longer worked at DOHMH.

At the request of BTC, Vanguard also conducted a physical count of the NRT items in September 2008. BTC provided us with an e-mail they received from Vanguard that included an updated inventory spread sheets as of October 1, 2008. Inventory count variances that may have been identified during the physical count were not recorded on the spreadsheets. Based on the spreadsheet information, we could not determine, nor could BTC officials, whether inventory variances were identified. If any variances were identified, there was no information about whether they were investigated or about the outcome of such investigations, if any.

According to Comptroller’s Directive #1, “Principles of Internal Controls,” the periodic counting of inventories and the comparisons to inventory control records are important elements of control of these assets. In addition, the DOI *Standards for Inventory Control and*

Management states that auditors or individuals independent from the inventory operations should investigate discrepancies before submitting reconciliation adjustments to management for approval. We are not certain that the variances identified during the March 2008 count were adequately investigated by Vanguard or BTC, or that reconciliation adjustments were submitted to BTC for approval prior to being made. In addition, we could not determine whether the September 2008 count identified any inventory variances.

If BTC officials are not made aware of inventory variances, it is possible that errors or irregularities are occurring and that they are not being adequately investigated. Internal controls should be designed to provide reasonable assurance with respect to the prevention or prompt detection of unauthorized use or disposition of an agency's assets.

At the end of the audit fieldwork, BTC officials stated that "protocols will be put in place with Vanguard to ensure that all discrepancies between the physical inventory and electronic records are communicated to BTC, that BTC is made aware of Vanguard's internal reconciliation process, and that the reconciled counts are shared with BTC for comparison purposes."

Recommendations

BTC officials should:

3. Assign individuals to attend and observe Vanguard's physical inventory count of NRT aids or periodically conduct its own unannounced physical inventory counts.
4. Request that DOHMH conduct independent audits of Vanguard's operational controls and of its inventory operations.
5. Ensure that Vanguard provides them with the inventory variances that are identified by physical inventory counts.
6. Ensure that inventory variances are adequately investigated and that the outcomes of the investigations are adequately documented.
7. Approve in writing inventory adjustments that need to be made as a result of identified inventory variances.

DOHMH Response: "Under BTC's recently issued *Nicotine Replacement Therapy (NRT) Acquisition, Distribution, and Inventory Control Manual*, BTC will adhere to the following protocol in regard to the annual physical count performed by Vanguard:

- a. In March of each year, Vanguard Direct and BTC conduct an annual NRT inventory physical count and reconciliation
- b. BTC staff observe this physical count in conjunction with a staff member from DOHMH's Bureau of Audit Services
- c. BTC staff spot check a sample lot number during this physical count

- d. The physical count results are forwarded to BTC. BTC then reconciles Vanguard Direct’s physical count results with the current balances on its BTC Inventory Balance Spreadsheet.
- e. Any discrepancies identified by BTC or Vanguard Direct are discussed during a post-manual count meeting and investigated further, as needed.
- f. BTC reviews documentation prepared by Vanguard Direct detailing the investigation and actions taken regarding all discrepancies. Documentation will be signed by representatives from both BTC and Vanguard Direct.
- g. Once the status of the inventory has been mutually agreed upon by both BTC and Vanguard Direct, records for both BTC and Vanguard Direct are updated to reflect this adjusted inventory count.

“DOHMH will request that Vanguard submit an independent audit report indicating the adequacy of their internal controls over inventory. Based on that report, DOHMH will determine if it is cost beneficial for DOHMH to audit the NRT inventory at Vanguard’s warehouse.”

Inaccurate ESCAPE Inventory Records

We conducted a physical count of the NRT inventory at the ESCAPE office on April 6, 2009, and determined that the manual inventory records did not match the inventory on hand for all NRT aids.

Accurate inventory records are necessary to account for the receipt, storage, and disposition of NRT inventory. Accurate records are especially important since seven employees have access to inventory items that are maintained in the file cabinet in the ESCAPE office. Table V, below, shows the inventory variances between the quantity according to BTC’s records, the quantities according to the auditors’ calculations, and the revised variance based on additional information received from BTC officials after we informed them of the discrepancies.

Table V
Variances between Inventory Records and Inventory on Hand

Item Description	Quantity According to Inventory Records	Quantity Calculated by Auditors	Variance
21mg patches	142	54	-88
Chantix Starter Pack	110	131	21
Chantix 1.0 mg	101	107	6
Zyban	79	82	3

Out of a total of nine NRT product types, discrepancies were found with four. As can be seen in Table V, the largest variance identified between the inventory on hand and the inventory records was for the 21mg patches. We informed BTC officials of the variances identified on

April 7, 2009, and received a response from them regarding the variances on April 17, 2009. Their response pointed out data-entry errors made by BTC staff as well as miscounts made by the auditors, both of which they asserted had contributed to the discrepancies. The officials responded that two data-entry errors were made on the NRT spreadsheet for the 21 mg patches that accounted for the 88-unit variance. In addition, they stated that the variances for the Chantix Starter Kit and the Chantix 1.0 mg resulted from the fact that the Medication Log sheets provided to us by BTC officials were not current at the time of the count. After adjusting the inventory records, BTC officials provided us with the following revised variances: a zero unit variance for the 21 mg patches, a shortage of three units for the Chantix Starter Kit, and an overage of two units for the Chantix 1.0 mg.

Inaccurate inventory records can allow for theft or misappropriation of goods to go unnoticed. In addition, inaccurate inventory records can result in carrying excessive or insufficient amounts of inventory.

Recommendation

8. BTC officials should ensure that accurate inventory records are maintained for the NRT aids distributed by and stored at the ESCAPE office.

DOHMH Response: “As outlined in the 4/13/09 update of the ESCAPE Medication Policy provided to the auditors, inventory records are kept for NRT aids as follows:

- A medication inventory will be kept at all times using the Medication Log sheet and ESCAPE’s electronic Inventory Table.
- When Certified Tobacco Treatment Specialists (CTTS) remove NRT from the NRT drawer, the CTTS is required to document . . . information on the Medication Log sheet next to the name of the NRT being dispensed
- The on-duty CTTS is required to count inventory located in the NRT drawer on a daily basis.
- If any discrepancy is found between the expected inventory count and the actual inventory count, the CTTS is responsible for determining the source of the discrepancy and resolving it that same day.
- When the ESCAPE physician removes prescription medication from the medication drawer, the physician is required to document . . . information on the Medication Log sheet next to the name of the medication being dispensed
- The ESCAPE physician is required to count inventory located in the medication drawer every 2 weeks.”

BTC Was Unclear about the Process Involved in Handling Returned NRT Aids

BTC officials were unaware of how returned NRT aids are accounted for. 311 kits that are returned undelivered are then shipped by Vanguard to other recipients but are counted by

BTC as additional kits. Therefore, BTC's original calculations of the number and dollar amounts of 311 kits shipped were overstated.

Vanguard ships 311 kits to individuals using United Parcel Service (UPS). UPS makes three delivery attempts, and if the attempts are unsuccessful, UPS returns the kit to Vanguard's warehouse. It appears that when Vanguard receives the returned kit, it ships this kit to a new individual and counts the kit as an additional kit.

We compared the total number of kits shipped, according to Vanguard's records, to the NRT Campaign Assembly Grid and determined that Vanguard's records showed more kits shipped than were actually created. This would be impossible because we determined that all inventory on hand for certain lot numbers was used to create the initial kits. Therefore, there was no remaining inventory to create additional kits. We met with BTC officials on April 6, 2009, and questioned how Vanguard's records could reflect that more kits were shipped than created. For example, according to Vanguard's records, 3,157 of NYCKIT08-D were shipped. However, according to the assembly grid, 3,096 were created. BTC officials were unable to provide an explanation.

We concluded that the additional kits indicated as shipped may have been returned kits being reshipped to new individuals. However, on more than one occasion, including the meeting held on April 6, 2009, we asked BTC officials how Vanguard and BTC account for returned kits, but BTC officials were unable to provide any information on how returns are handled. It was not until April 22, 2009, that BTC officials provided us with a detailed written response about how returns are processed.

After informing BTC officials of our concerns about the actual number of kits shipped, we reviewed Vanguard's September 15, 2008 kit inventory spreadsheet. This was the first spreadsheet we received from BTC that indicated inventory information for 311 and partner kits. This spreadsheet had a column that listed the number of returns of each kit type and confirmed our conjecture that returned kits accounted for the additional kits shipped. As a result, the information that BTC originally provided regarding the dollar value of NRT aids shipped during Fiscal Year 2008 was incorrect. BTC reported to us that kits with a unit price totaling \$2,073,543 were distributed. In the April 22, 2009 statement, BTC officials also confirmed that returned NRT aids may be shipped out again, resulting in some kits being double-counted. In addition, on April 28, 2009, BTC officials provided us with revised figures for the total unit price of kits shipped, after removing kits that were double counted, which totaled \$2,007,988 for a difference of \$65,555.

Recommendations

BTC officials should:

9. Meet with Vanguard officials to determine how they are accounting for returned NRT inventory and request that information on the number of returns be shared with BTC.

DOHMH Response: “BTC is aware of how Vanguard is accounting for returned NRT inventory and has access to the number of returns that occur. The process for returns of undelivered kits . . . [was] transmitted by BTC to the Office of the Comptroller on 4/22/09.

“Data on the number of kits returned during FY08 was recorded on the spreadsheet titled: *9-3-08 inventory-kits*, which was created by Vanguard Direct to track returns and reallocations of 2008 NPGP kits.”

Auditor Comment: On two separate occasions, the BTC officials with whom we met were unable to explain how returns were being processed by Vanguard. We received a written response from BTC officials regarding the processing of returns on April 22, 2009, more than two weeks after our second inquiry about returns. In addition, the 9-3-08 inventory spreadsheet to which DOHMH refers was also not provided to us until April 22, 2009. We concluded that BTC was unclear about the process involved in handling returns simply because BTC officials, when asked, could not explain how returns were handled and BTC’s original calculations of the number and dollar amount of kits shipped included kits that were returned and then reshipped.

10. Ensure that the total number of units and total dollar amount of 311 kits is correctly calculated using the actual number of kits distributed and received by clients.

DOHMH Response: “BTC will ensure that any future calculations of the total number of units and dollar amount of 311 kits shipped accurately accounts for kits returned.”

BTC Does Not Have Written Policies and Procedures for All Aspects of the NRT Program

BTC lacked written policies or procedures that address how orders for the NRT program should be communicated to Vanguard, what type of documents should be maintained, where the documents should be maintained and for how long, the supervisory reviews or approvals required for NRT purchases and requests for delivery, and the performance and frequency of inventory reconciliations.

According to Comptroller’s Directive #1, “Agency Evaluation of Internal Control Checklist,” agency programs should be conducted in accordance with clearly defined management policies. These policies should be reflected in formal, written operating procedures and should be properly communicated to the appropriate agency staff.

In the absence of written policies and procedures, BTC management had no assurance that policies and procedures were effectively communicated and consistently followed. Also, there was no assurance that new personnel had adequate guidance in carrying out their assigned duties.

At the exit conference BTC officials provided us with a copy of the *Nicotine Replacement Therapy (NRT) Acquisition, Distribution, and Inventory Control Manual*, which they began creating in January 2009. BTC officials stated that the manual has been continually updated to reflect revisions and improvements to NRT-related protocols and systems and is actively used in the training of new BTC staff.

Recommendation

11. BTC officials should distribute the newly created manual to all appropriate BTC staff and ensure that it is used to train new employees.

DOHMH Response: “*The NRT Acquisition, Distribution, and Inventory Control Manual* was distributed to appropriate BTC staff in April, 2009 and will be used to train new employees.”



NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
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Re: Audit Report on the
Inventory Controls of the
Department of Health
and Mental Hygiene over
Nicotine Replacement
Therapy Aids, MD09-071A

Dear Mr. Graham:

We are pleased to have the opportunity to respond to this draft report concerning inventory controls over Nicotine Replacement Therapy (NRT) aids.

We believe that the report fails to provide any context regarding BTC's programs, which have been very successful in achieving the bureau's overall mission of significantly decreasing smoking prevalence among New Yorkers and saving over 150,000 lives.

We disagree with the report's conclusion that the Bureau of Tobacco Control (BTC) "*relies solely*" on Vanguard to manage the Nicotine Replacement Therapy (NRT) inventory for the following reasons:

- During FY08, BTC kept its own records to track remaining NRT inventory and distributions of NRT to partners. These records include spreadsheets detailing NRT type, lot number, and updates of remaining inventory for each type of NRT on specific dates.
- The auditors used these records, which demonstrate BTC's oversight of NRT inventory, to gather data for their analyses.

Management of BTC's NRT inventory includes purchasing, warehousing, packaging, and shipping of NRT to community partners or directly to NYC residents. During fiscal year 2008, BTC ordered \$4,122,590.00 in NRT inventory for distribution through Vanguard, which was responsible for warehousing, packaging, and shipping. The auditors found that Vanguard's March 2008 physical inventory count identified \$19,036.56 more

NRT in inventory than was represented in Vanguard's computerized records.

A net inventory record-keeping discrepancy of \$19,036.56 out of \$4,122,590.00 in inventory processed during the year amounts to an overall net discrepancy of approximately 0.46%. This discrepancy indicates that more inventory was available in Vanguard's warehouse for distribution than was reflected in Vanguard's computerized records. The auditor's review of the NRT inventory did not disclose any net losses of NRT inventory.

We agree that Vanguard's reported inventory and the physical inventory count should be reconciled and differences resolved, and that BTC's inventory records should be reconciled to Vanguard's records. BTC recognizes the importance of keeping track of inventory, and has taken steps during fiscal year 2009 to improve controls over inventory, which was brought to the attention of the auditors. For example, BTC implemented a regular six-week partner NRT distribution system using Vanguard's online Easy Order system, and provided the auditors with a copy of the recently-developed Nicotine Replacement Therapy (NRT) Acquisition, Distribution, and Inventory Control Manual.

The report incorrectly states (on page 2) that "BTC lacks written policies and procedures for all aspects of the NRT program." In addition to the NRT Acquisition, Distribution, and Inventory Control Manual, the "ESCAPE" program has written policies and procedures for determining who is eligible and can participate in the program, and there are set medical criteria for determining whether medications can be dispensed based on a participant's health history. There are also written guidelines and procedures that must be followed under the 311 NRT program before a single kit can be released. The auditors were told that the program uses a specialized protocol to determine the type of smoker and the quantity of NRT that will be provided to that caller, if the caller is deemed qualified based on questions presented in the 311 interview. This procedure is required to ensure that the level of NRT provided is appropriate to the individual and that the medical history does not contain any factors that would disqualify the caller. To state that "all aspects" of the NRT program lack written policies and procedures is grossly misleading.

More detailed comments on the report and the recommendations are attached.

We appreciate the courtesy and professionalism of your staff in the performance of this audit. If you have any questions or need further information, please contact Thomas Hardiman, Director, Internal and External Audits, at (212) 219-5285

Sincerely,



Andrew Goodman, MD, MPH
Acting Deputy Commissioner

CC: Thomas Farley
Andrew Rein
Sara Packman
Elizabeth Kilgore
Bruce Gutelius
Thomas Hardiman

**Response to Audit Report on
the Inventory Controls of the Department of Health and Mental Hygiene over
Nicotine Replacement Therapy Aids
by the Department of Health and Mental Hygiene
MD09-071A
June 11, 2009**

This response to findings and recommendations, along with the attached cover letter constitute DOHMH's formal response to the Office of the Comptroller's draft audit report titled *Audit Report on the Inventory Controls of the Department of Health and Mental Hygiene over Nicotine Replacement Therapy Aids* ("Report") dated May 28, 2009.

Audit Report Findings and Conclusions

"BTC does not have adequate inventory controls over NRT aids. BTC relies solely on a third-party vendor, Vanguard, for the monitoring and supervision of NRT inventory. BTC does not reconcile NRT inventory balances, but instead relies on Vanguard to ensure that inventory records are accurate. In addition, BTC does not monitor the physical inventory counts of NRT aids conducted by Vanguard and has never performed its own inventory count. Moreover, DOHMH has not conducted any independent audits of Vanguard's inventory operations.

There was no evidence that inventory discrepancies identified by Vanguard were shared with BTC officials or that these discrepancies were adequately investigated. Also, we identified some discrepancies in the Employee Smoking Cessation Assistance Program (ESCAPE) inventory records maintained by BTC. Moreover, BTC officials are unaware of the process of accounting for 311 kits returned undelivered that are reshipped by Vanguard and incorrectly include them as additional kits in BTC's calculation of the total number of NRT aids distributed during Fiscal Year 2008. Lastly, BTC lacks written policies and procedures for all the aspects of the NRT program."

DOHMH Response:

The audit report does not provide a fair or accurate presentation of BTC's oversight of the NRT distribution program for the following reasons:

- a. BTC did not rely solely on Vanguard for monitoring and supervision of NRT inventory during Fiscal Year 2008 (FY08). During FY08, BTC kept its own records to track remaining NRT inventory, and NRT orders and distributions to partners, as demonstrated in over 20 separate documents that were presented to the Office of the Comptroller during the course of this audit. These documents included details regarding updated inventory amounts, including BTC's own tracking of inventory levels, and BTC's records of distribution of NRT to partners. The auditors used these records, which demonstrate BTC's oversight of NRT orders, tracking of inventory, and distribution of NRT, to gather data for their analyses.

- b. The audit findings state that "BTC does not reconcile inventory balances, but instead relies on Vanguard to ensure that inventory records are accurate." During FY08, BTC routinely tracked and compared remaining inventory levels with the numbers reported by Vanguard, but the process of tracking inventory lacked sufficient detail and reconciliations were not performed. Recognizing these issues, BTC made extensive improvements in inventory management during fiscal year 2009, including the development of a semi-quarterly distribution system for ordering and delivering NRT for the partner program, the adoption of Vanguard's online Easy Order system, which allows for real-time updates of remaining inventory, and the performance of routine inventory reconciliations which will take place between semi-quarterly distributions. These procedures are outlined in detail in BTC's *Nicotine Replacement Therapy (NRT) Acquisition, Distribution, and Inventory Control Manual*, which were developed during fiscal year 2009, were provided to the Office of the Comptroller at the exit conference on May 15, 2009.
- c. It is inaccurate to say that BTC officials are unaware of the process of accounting for 311 kits returned undelivered. Detailed information about return procedures was provided to the auditors via email on April 22, 2009. Additional information clarifying the total number and total dollar amount of kits provided through 311 during the 2008 Nicotine Patch and Gum Program (NPGP) was provided to the auditors on April 28, 2009.
- d. The report incorrectly states (on page 2) that "BTC lacks written policies and procedures for all aspects of the NRT program." The "ESCAPE" program has policies and procedures for determining who is eligible and can participate in the program, and there are set medical criteria for determining whether medications can be dispensed based on a participant's health history. There are specific guidelines and procedures that must be followed under the 311 NRT program before a single kit can be released. The auditors were told that the program uses a specialized protocol to determine the type of smoker and the quantity of NRT that will be provided to that caller, if the caller is deemed qualified based on questions presented in the 311 interview. This procedure is required to ensure that the level of NRT provided is appropriate to the individual and that the medical history does not contain any factors that would disqualify the caller. BTC's *Nicotine Replacement Therapy (NRT) Acquisition, Distribution, and Inventory Control Manual*, was also provided to the Office of the Comptroller at the exit conference on May 15, 2009. This 34 page manual addresses how orders for the NRT program should be communicated to Vanguard, what type of documents should be maintained, the process for NRT purchases and requests for delivery, and the performance and frequency of inventory reconciliations.

Audit Report Recommendations

BTC officials should:

1. Perform regular reconciliations of NRT inventory balances it receives from Vanguard with its own records to ensure that the inventory is being correctly accounted for.
2. Request that Vanguard send monthly inventory spreadsheets more frequently so meaningful reconciliations can be conducted.

DOHMH Response: During fiscal year 2009, including the time during which the audit was in process, BTC made extensive improvements to the inventory management, including the development of a semi-quarterly distribution system for ordering and delivering NRT to partners, the adoption of the online Easy Order system, which allows for real-time updates of remaining inventory, and the performance of routine inventory reconciliations which will take place between semi-quarterly distributions. BTC can now access real-time inventory at any time using the online Easy Order system, BTC no longer relies on Vanguard sending inventory spreadsheets for updated inventory information.

Audit Report Recommendations

3. Assign individuals to attend and observe Vanguard's physical inventory count of NRT aids or periodically conduct its own unannounced physical inventory counts.
4. Request that DOHMH conduct independent audits of Vanguard's operational controls and of its inventory operations.
5. Ensure that Vanguard provides them with the inventory variances that are identified by physical inventory counts.
6. Ensure that inventory variances are adequately investigated and that the outcomes of the investigations are adequately documented.
7. Approve in writing inventory adjustments that need to be made as a result of identified inventory variances.

DOHMH Response: Under BTC's recently issued *Nicotine Replacement Therapy (NRT) Acquisition, Distribution, and Inventory Control Manual*, BTC will adhere to the following protocol in regard to the annual physical count performed by Vanguard:

- a. In March of each year, Vanguard Direct and BTC conduct an annual NRT inventory physical count and reconciliation
- b. BTC staff observe this physical count in conjunction with a staff member from DOHMH's Bureau of Audit Services
- c. BTC staff spot check a sample lot number during this physical count
- d. The physical count results are forwarded to BTC. BTC then reconciles Vanguard Direct's physical count results with the current balances on its BTC Inventory Balance Spreadsheet.

- e. Any discrepancies identified by BTC or Vanguard Direct are discussed during a post-manual count meeting and investigated further, as needed.
- f. BTC reviews documentation prepared by Vanguard Direct detailing the investigation and actions taken regarding all discrepancies. Documentation will be signed by representatives from both BTC and Vanguard Direct.
- g. Once the status of the inventory has been mutually agreed upon by both BTC and Vanguard Direct, records for both BTC and Vanguard Direct are updated to reflect this adjusted inventory count.

DOHMH will request that Vanguard submit an independent audit report indicating the adequacy of their internal controls over inventory. Based on that report, DOHMH will determine if it is cost beneficial for DOHMH to audit the NRT inventory at Vanguard's warehouse.

Audit Report Recommendation

8. BTC officials should ensure that accurate inventory records are maintained for the NRT aids distributed by and stored at the ESCAPE office.

DOHMH Response: As outlined in the 4/13/09 update of the ESCAPE Medication Policy provided to the auditors, inventory records are kept for NRT aids as follows:

- A medication inventory will be kept at all times using the Medication Log sheet and ESCAPE's electronic Inventory Table. The Medication Log sheet will include the following information:
 - a. Date
 - b. Type of medication
 - c. Dose of medication
 - d. Quantity of medication
 - e. Lot # of medication
 - f. Expiration date of medication
- When Certified Tobacco Treatment Specialists (CTTS) remove NRT from the NRT drawer, the CTTS is required to document the following information on the Medication Log sheet next to the name of the NRT being dispensed:
 - a. Date removed
 - b. Staff initials
 - c. Name of client receiving medication
- The on-duty CTTS is required to count inventory located in the NRT drawer on a daily basis. Once NRT is counted, the following information must be documented on each Medication Log:
 - a. Units remaining in NRT drawer
 - b. Discrepancy between actual inventory count and expected inventory count
 - c. Date and time of count
 - d. CTTS initials

- If any discrepancy is found between the expected inventory count and the actual inventory count, the CTTS is responsible for determining the source of the discrepancy and resolving it that same day.
- When the ESCAPE physician removes prescription medication from the medication drawer, the physician is required to document the following information on the Medication Log sheet next to the name of the medication being dispensed:
 - a. Date removed
 - b. Staff initials
 - c. Name of client receiving medication
- The ESCAPE physician is required to count inventory located in the medication drawer every 2 weeks. Once medication is counted, the following information must be documented on each Medication Log:
 - a. Units remaining in drawer
 - b. Discrepancy between actual inventory count and expected inventory count
 - c. Date and time of count
 - d. Physician initials

Audit Report Recommendations

9. Meet with Vanguard officials to determine how they are accounting for returned NRT inventory and request that information on the number of returns be shared with BTC.
10. Ensure that the total number of units and total dollar amount of 311 kits is correctly calculated using the actual number of kits distributed and received by clients.

DOHMH Response: BTC is aware of how Vanguard is accounting for returned NRT inventory and has access to information on the number of returns that occur. The process for returns of undelivered 311 kits is outlined below in the response transmitted by BTC to the Office of the Comptroller on 4/22/09:

Within each kit form code, Vanguard Direct tracks the total number of kits that are shipped out. In certain instances, UPS cannot fulfill delivery for a kit and the kit is then returned to Vanguard, where the kit is quarantined. Depending on program volume, the kit may be shipped out again or it may be placed back into inventory at the end of the program to be sent to partners. Because of this, a single kit may be counted as "shipped" more than once resulting in a total number of kits shipped that is larger than the total number of kits created.

UPS's standard procedure is to make three delivery attempts for every kit. After three delivery attempts, the kit is held by UPS for an additional week in the hopes that the customer will contact UPS regarding his/her kit. If the kit can still not be delivered, it is returned to Vanguard Direct's warehouse in Maplewood, New Jersey. All returned kits are kept in the Receiving Department under quarantine. Returned kits are processed by a returns processor who records

information such as reference number, customer name and address, item number and lot number. At regular intervals the return processor communicates the total amount of quarantined kits to the logistics staff handling the NPGP program. If a particular type of kit is running low, logistics staff send for quarantined kits of that type, entering these kits back into the inventory system. If the overall NPGP supply is steady, kits are not entered back into the inventory system until after the end of the program. They are then reallocated for distribution to partners or through special events.

Data on the number of kits returned during FY08 was recorded on the spreadsheet titled: *9-03-08 inventory-kits*, which was created by Vanguard Direct to track returns and reallocations of 2008 NPGP kits. This spreadsheet includes information about the number of: kits shipped to date; kits in inventory; assembled and returned kits; and original kits assembled. This spreadsheet was provided to the Office of the Comptroller during this audit.

BTC will ensure that any future calculations of the total number of units and total dollar amount of 311 kits shipped accurately accounts for kits returned.

Audit Report Recommendation

11. BTC officials should distribute the newly created manual to all appropriate BTC staff and ensure that it is used to train new employees.

DOHMH Response: *The NRT Acquisition, Distribution, and Inventory Control Manual* was distributed to appropriate BTC staff in April, 2009 and will be used to train new employees.