

MTF Refill Mail Service Initiative Pilot: Fiscal Year 2003 Report

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A handwritten signature in black ink that reads "Laurie J May". The signature is written in a cursive, flowing style.

Laurie J. May, Director
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This document represents the best opinion of CNA at the time of issue.
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1.0 EXECUTIVE SUMMARY

1.1 Overview and scope

The TRICARE Management Activity (TMA) requested that CNA evaluate an ongoing joint Department of Defense (DoD)/Department of Veterans Affairs (VA) pilot study for mailed refill services. The DoD/VA Consolidated Mail Outpatient Pharmacy (CMOP) pilot initiative addressed the ability of Military Treatment Facilities (MTFs) to interface with the VA's CMOP system to process refills, also known as the MTF Refill Mail Service (MRMS) initiative. DoD and VA have informally discussed jointly processing prescription refills for over ten years. In congressional testimony in May 2000 and in subsequent reports, the General Accounting Office (GAO) recommended that DoD and VA formally explore jointly processing prescription refills. In August 2000, a TriService working group recommended processing refills in a centralized refill center. The MRMS pilot is of interest for Congress, GAO, and the Presidential Task Force, and at high levels of both DoD and VA.

The MTF Refill Mail Service initiative was designed to offer a cost-effective, value-added service to DoD beneficiaries by providing the option of receiving refills through the mail as an extension of their MTF services at no copay. Beneficiaries could save time and avoid aggravation (e.g., traffic and parking problems). Additional benefits expected from implementing the MRMS include freeing up MTF staff to concentrate on clinical and cognitive duties, patient safety, and customer service for patients with new prescriptions and those requiring counseling and case management.

The VA CMOP program was established to improve pharmacy services, capacity, and access by creating a refill mailing service for veterans. Since 1994, VA has established seven regional CMOP centers, using an integrated automated dispensing system in combination with pharmacists and pharmacy technicians. The CMOPs expected to fill roughly 82 million VA prescriptions for FY03. CNA recently completed a VA-sponsored study of the CMOP system, conducting an economic assessment of its ability to meet anticipated demand. VA-generated demand will soon exceed CMOP system capacity, so the two oldest low-capacity CMOPs are being replaced. If the MRMS pilot program were to expand throughout DoD, however, another CMOP might be needed to meet anticipated DoD demand. Setting up a new CMOP takes 18 to 24 months.

1.2 Specific tasking and approach

Based on the goals articulated by DoD, we performed the following tasks:

- Evaluate the feasibility of moving a share of the DoD MTF refill workload to the VA CMOP system
- Assess beneficiary acceptance of moving a share of DoD MTF refill workload to the VA CMOP for processing and having prescriptions mailed to their homes
- Assess MTF staff acceptance of, and response to, moving a share of DoD MTF refill workload to the VA CMOP for processing

- Evaluate the potential for maximizing pharmacy resources by expanding the joint pilot study to additional MTFs
- Investigate the potential cost implications of offering the MRMS system-wide
 - ✓ Probable cost of offering the mailed-refill benefit
 - ✓ Possible cost savings that may be obtained
 - ✓ Potential for recapture of DoD prescriptions from the costly retail venue.

We evaluated the progress of the implementation of the 1-year MRMS pilot program, which started in September 2002. The pilot sites included Darnall Army Community Hospital, Fort Hood, Texas; 377th Medical Group, Kirtland AFB, New Mexico; and Naval Medical Center, San Diego, California, in partnership with CMOP Leavenworth, Kansas. We visited the pilot sites to interview MTF staff, obtained data on fills and other information for each site, and acquired baseline trend information for FY 2001. Given the short turnaround of the project, we relied on TMA, the pilot sites, and CMOP Leavenworth to help us obtain the relevant data for our evaluation.

1.3 Conclusions and recommendations

Use of the MTF mail order option has increased steadily since its introduction at each of the three pilot sites. As of September 2003, CMOP Leavenworth was processing 60.5 percent of all pilot site refills. NMC San Diego experienced the greatest mail order penetration at roughly 75 percent, whereas mail order penetration was lower at Fort Hood (48 percent) and Kirtland AFB (36 percent). The availability of drugs to be processed through the mail order program was also high, especially at NMC San Diego. Finally, patient acceptance, measured as the percentage of patients who are willing to have prescriptions mailed to their homes, steadily increased at all sites (reaching about 77 percent in San Diego). Overall, these numbers indicate that the MRMS initiative was a success in terms of patient participation and acceptance.

The on-site pharmacy workload processed by the three MTFs and their satellite pharmacies has decreased since the introduction of the MRMS initiative. By the summer of 2003, the combined on-site refill workload at the three sites was down by 53 percent, compared with numbers from the same period in 2002.¹ At the same time, the combined on-site total pharmacy workload at the three sites was down by 17 percent.²

We examined the beneficiary distribution pattern by site and evaluated the relative use of CMOP-processed refills by beneficiary category. Those in the Medicare-eligible group typically make up a small share of the total beneficiary population but are the most intensive users of the MRMS initiative. Those in the general retiree-age group are also a relatively small segment of the beneficiary population but are heavy users of the CMOP. The age group associated with active duty personnel and dependents makes up the largest beneficiary category but counts for a relatively small share of CMOP utilization.

¹ Workload is measured as the number of prescriptions handled by a facility.

² During the baseline period, 35 percent of total fills at the three sites were refills.

In general, beneficiary satisfaction with the MRMS initiative is high, and the same can be said for satisfaction reported by pharmacy staff and base leaders at the pilot sites. Several initial problems encountered in the pilot study have generated lessons:

- Startup efforts should focus on requiring participants to provide updated addresses, complete with city and ZIP codes
- Updating beneficiary social security number information in DEERS is essential
- MTFs and CMOPs need to establish common units of measure for all prepackaged pharmaceutical products
- MTFs and CMOPs must keep in close communication regarding the specific pharmaceutical products supported by the CMOP and any issues related to temporary shortages or backlogs
- Frequent CMOP and MTF communications in general are key to keeping a smooth process in place and resolving or preventing problems.

These are typical of “learning curve” lessons; MTF and CMOP personnel have found ways to address these issues. The consensus of staff at all sites was to recommend that DoD continue the pilot programs beyond the initial 1-year period. In addition, they recommended moving to a system-wide adoption of the MRMS initiative.

Finally, DoD must consider the cost implications of a system-wide program. Although CMOP processing costs are usually less than DoD processing costs, the CMOP adds a mailing fee of \$1.01. Using \$2.23 as the current CMOP cost of processing *and* mailing a refill, we calculate the potential cost of a full MRMS (assuming that a voluntary program results in 9.35 million DoD refills sent to the CMOP annually) to be approximately \$20.9 million, or \$19.5 million after considering DoD savings in direct variable costs (e.g., bottles, vials, labels). About \$8.6 million would be the share for Medicare-eligible beneficiaries (and could be covered by Accrual Fund cost-avoidance or recapture), leaving \$10.9 million to be covered by the Defense Health Program (DHP).

DoD might recover some DHP costs by cutting pharmacy staffing, but it may prefer to allow staff to provide improved beneficiary services. Significant benefits can accrue from the MRMS initiative, and their value (although difficult to quantify) should be weighed against the CMOP costs. Potential benefits include (a) freeing up staff to concentrate on clinical and cognitive duties, patient safety, and customer services, (b) direct beneficiary benefits (such as reduced waiting time), and (c) less travel for the beneficiaries most likely to use mailed refills—the Medicare-eligible and retiree-age groups.

Potential recapture of beneficiaries using retail pharmacy benefits provides another way to recover the cost of the MRMS initiative. We estimate that the recapture necessary to cover the DHP share of costs of a nationwide application of the MRMS would be about 8.8 percent of the non-Medicare-eligible retail pharmacy workload within catchment.

If DoD and VA jointly decide in the future that sharing the CMOP system is appropriate, they must consider several issues. DoD and VA must agree on how to share the costs, and what inputs each should provide, with regard to potentially setting up an additional

CMOP to meet DoD anticipated demand. Another factor to consider is the appropriate timing for expanding the MRMS. The lead-time to set up an additional CMOP would be close to 2 years. Finally, the experience of the pilot sites with CMOP Leavenworth has provided lessons that DoD and VA could build on to smooth the transition process.

2.0 INTRODUCTION

2.1 Background of DoD/VA CMOP initiative

The TRICARE Management Activity (TMA) requested that CNA evaluate an ongoing joint Department of Defense (DoD)/Department of Veterans Affairs (VA) pilot study for mailed refill services. The DoD/VA CMOP pilot initiative addressed the ability of Military Treatment Facilities (MTFs) to interface with the VA's Consolidated Mail Outpatient Pharmacy (CMOP) system to process refills, and is also known as the MTF Refill Mail Service (MRMS) initiative. The MRMS initiative was a joint pilot project between three MTFs and the VA's CMOP. The TMA Pharmacy Benefits Division and Resource Management Division sponsored the evaluation of the MRMS initiative. Because TMA required a quick-turnaround analysis, with initial results due by the end of July 2003, it was agreed that CNA would work closely with TMA officials and would rely on TMA to arrange for access to DoD facilities and to provide CNA with DoD and CMOP data and existing analyses pertinent to the tasking.

DoD and VA have informally discussed jointly processing prescription refills for over ten years. The General Accounting Office (GAO) recommended that DoD and VA formally explore jointly processing prescription refills in congressional testimony in May 2000. The recommendation was repeated in the May 2001 Final Report (GAO-01-588), "DoD and VA Pharmacy: Progress and Remaining Challenges in Jointly Buying and Mailing Out Drugs." In August 2000, a TriService working group recommended processing refills in a centralized refill center. These recommendations prompted further discussions by the DoD Pharmacy Board of Directors and the Federal Pharmacy Executive Steering Committee (FPESC), which is made up of both DoD and VA personnel. The MRMS pilot is a current item of interest for Congress, GAO, and the Presidential Task Force, and at the highest levels of both DoD and VA.

DoD has over 8 million beneficiaries around the world who are eligible to receive healthcare services through TRICARE. Beneficiaries currently receive their medications via three venues: MTFs, the TRICARE Mail Order Pharmacy (TMOP),³ and retail pharmacies. Due to the implementation of new programs, such as TRICARE Senior Pharmacy, prescription volume has increased at TMOP/NMOP and retail pharmacies. Beneficiaries who elect to obtain their refills at the MTF have no copay; those who choose to use the NMOP/TMOP or a retail pharmacy pay a copay.

The MTF Refill Mail Service initiative was designed to offer a cost-effective, value-added service to DoD beneficiaries by giving them an option to receive their refills through the mail at no expense as an extension of MTF services. This gave beneficiaries the convenience of calling in refills and receiving them by mail, thereby saving time (e.g., waiting in line, travel time) and avoiding aggravation (e.g., traffic and parking problems). Other benefits expected from implementing the MRMS included freeing up MTF staff to concentrate on clinical and cognitive duties, patient safety, and customer service for patients with new prescriptions and those requiring counseling and case management.

³ The National Mail Order Pharmacy (NMOP) program migrated to the TMOP in March 2003.

The VA CMOP program was established to improve pharmacy services, capacity, and access through creating centralized refill mailing services for veterans.⁴ Since 1994, VA has established seven regional CMOP centers:

- Leavenworth, Kansas
- West Los Angeles, California
- Bedford (Boston), Massachusetts
- Dallas, Texas
- Murfreesboro (Nashville), Tennessee
- Hines (Chicago), Illinois
- Charleston, South Carolina.

The CMOPs use an integrated automated dispensing system in combination with pharmacists and pharmacy technicians. Although veterans can still elect to refill their prescriptions in person at VA pharmacies, by FY02 about 73 percent of total VA fills were provided through CMOP centers. The demand on the system has grown steadily since the CMOPs were introduced. In FY98, about 30 million prescriptions were filled by the CMOPs, whereas VA projections indicated that the CMOPs would fill roughly 82 million prescriptions for FY03. Before the implementation of the MRMS, the CMOPs processed new and refill prescriptions only from VA providers.

CNA recently completed a study of the CMOP system sponsored by the VA. In this effort, we conducted an economic assessment of the ability of the CMOP system to meet current and expected future demand. VA projections indicate that the number of drug refills demanded by its enrollees will soon exceed the capacity of the CMOP system. Two of the oldest CMOPs, West Los Angeles and Bedford, are in the process of being replaced with new high-capacity CMOPs. However, if the MRMS pilot program were to be expanded system-wide, it is probable that neither current nor planned CMOP capacity would be sufficient to meet DoD demand.

If the pilot program were judged to be successful, it could be expanded to serve the 400 DoD MTF pharmacies, which could add over 18 million refill prescriptions to the CMOP workload. A more realistic estimate would be that some proportion of DoD refills would be provided through the CMOP system, based on beneficiary acceptance patterns. To support the anticipated increase in workload from DoD, the CMOP Business Plan might require the addition of an eighth CMOP. The required lead-time to acquire, install, activate, and implement a new CMOP facility is about 18 to 24 months.

2.2 Study approach

This document details and evaluates the progress of the implementation of the MRMS pilot program, which started in September 2002 and concluded in September 2003. The pilot sites included Darnall Army Community Hospital, Fort Hood, Texas; 377th Medical

⁴ Some individual VA medical centers were already mailing refills to beneficiaries. In early VA cost-effectiveness analysis, centralized mailed refills could be compared to medical center mailed refills.

Group, Kirtland AFB, New Mexico; and Naval Medical Center, San Diego, California. We made site visits to Fort Hood and Kirtland AFB in May 2003, and to NMC San Diego in June 2003. Before visiting each site, we sent a list of questions to the primary point of contact, asking them to address the questions with other members of the staff and think about their answers before we arrived. We went over these questions at each site (two CNA analysts were accompanied by a TMA representative), and also asked the staff to tell us about any concerns they might have, or issues that we had failed to ask about.

To conduct the study, we first established and evaluated a baseline set of data for fills and other background information. We used September 2001 as the anchor for our baseline because this gives a full year of data before the start of the pilot study. For comparisons with the pilot study period, we use the analogous months of data from the baseline. CMOP Leavenworth processed the MTF refills during the pilot study, so we established contact with their staff to obtain data and information regarding CMOP-processed DoD refills.

The current evaluation focuses on data from the pilot sites and CMOP Leavenworth from September 2002 through September 2003, which we compare with the baseline months of September 2001 through September 2002.⁵ Given the short turnaround of the project, we relied on TMA, the pilot sites, and CMOP Leavenworth to help us obtain the relevant data to serve as the basis for our evaluation.⁶ This evaluation updates our August report, which focused on data from September 2002 through June 2003.

2.3 Project scope

With respect to the MRMS initiative, the goals of DoD are to:

- Assess feasibility and beneficiary acceptance of moving DoD MTF refill workload to VA CMOP
- Maximize pharmacy resources of both departments
- Enhance delivery of pharmacy services for DoD beneficiaries
- Provide opportunity for DoD to “recapture” prescriptions from the more costly venue of retail pharmacy.

Based on these DoD goals, CNA performed the following tasks:

- Evaluate the feasibility of moving a share of the DoD MTF refill workload to the VA CMOP system
- Assess beneficiary acceptance of moving a share of DoD MTF refill workload to the VA CMOP for processing and having prescriptions mailed to their homes
- Assess MTF staff acceptance of, and response to, moving a share of DoD MTF refill workload to the VA CMOP for processing

⁵ Kirtland AFB had a delayed start in December, so we adjusted the baseline comparison accordingly.

⁶ The National CMOP Director, Timothy Stroup, and the National CMOP Chief Financial Officer, William Bentley, have been very helpful in providing relevant data and information on CMOP and VA operations.

- Evaluate the potential for maximizing pharmacy resources by expanding the joint pilot study to additional MTFs
- Investigate the potential cost implications of offering the MRMS system-wide
 - ✓ Probable cost of offering the mailed-refill benefit
 - ✓ Possible cost savings that may be obtained
 - ✓ Potential for recapture of DoD prescriptions from the costly retail venue.

The MRMS pilot provided a production environment to test interfaces, review operational processes, and allow DoD to conduct a substantive evaluation of the acceptance and use of the MTF Refill Mail Service initiative by beneficiaries and pharmacy personnel. In the next section, we turn to an evaluation of utilization observed at the pilot sites.

3.0 UTILIZATION PATTERNS

3.1 Overview

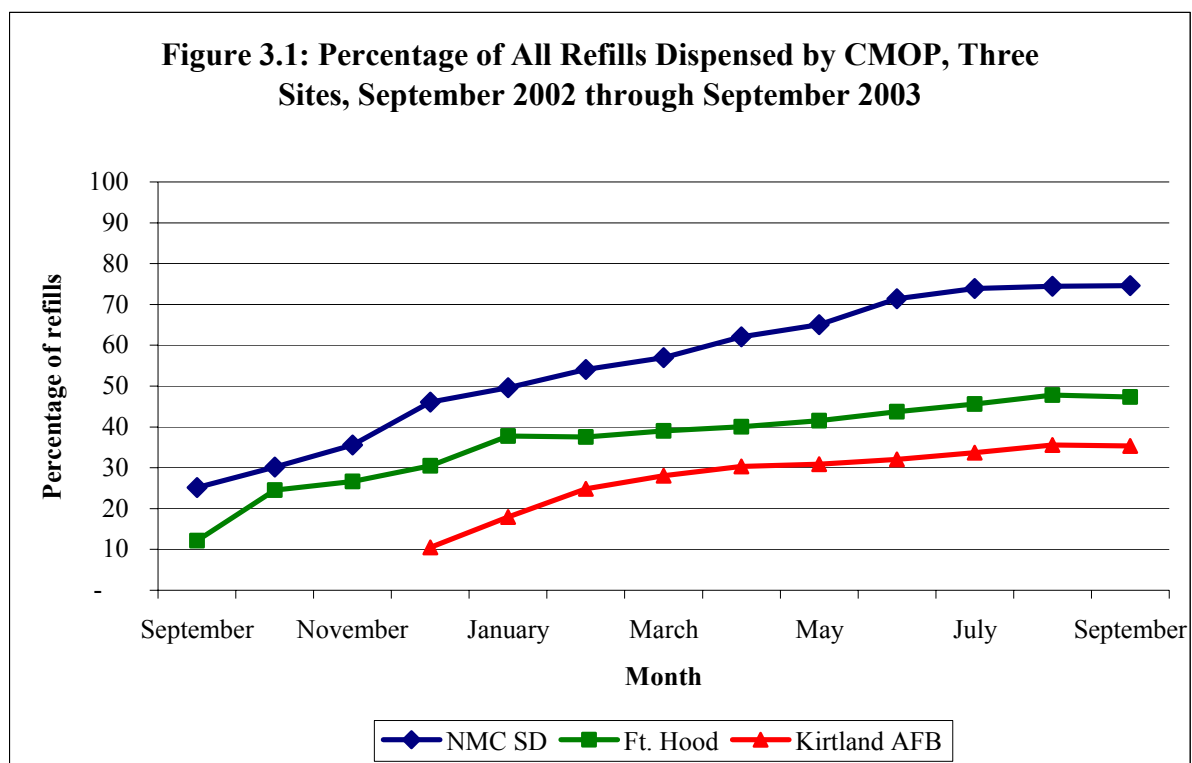
In this section, we describe utilization of the various DoD-financed prescription drug sources at the three pilot sites. We first look at how utilization of the CMOP option grew at each site as well as the availability of drugs under the CMOP program and patient acceptance. Then we focus on each pilot site individually to describe how both refill and total workload changed compared with workload in the period before the implementation of the pilot. We also provide information on both pre- and post-pilot utilization of TRICARE pharmacy network and the NMOP/TMOP options. Overall, we find that CMOP Leavenworth processed a significant portion of each site's refill workload over the duration of the pilot, which led to significant decreases in total workload processed at each MTF. At the same time, utilization of the network pharmacies and NMOP/TMOP continued to grow during the post-pilot period, though at slower rates than during the year preceding the implementation of the pilot. We discuss this more fully in sections 3.4 and 3.5.

3.2 CMOP utilization rates at the three pilot sites

We obtained data on the program progress throughout fiscal year 2003 from three sources: tracking data, the pharmacy data transaction service (PDTs), and directly from CMOP reports. In reporting on CMOP utilization at the pilot sites, we rely primarily on the tracking reports received through TMA. However, we also use data from the CMOP and PDTs to fill in additional information. We note that data from these three sources do not always agree, although the numbers tend to be close.

Figure 3.1 illustrates the growth in the use of the MRMS, as a percentage of total refills (which we will refer to as mail order penetration), for the three pilot sites since September 2002. As noted earlier, the MRMS program was introduced at Kirtland AFB a few months after being introduced at Fort Hood and NMC San Diego. All three sites have seen substantial growth in the use of mail order.

In September 2002, the mail order penetration rates were roughly 25 and 12 percent at NMC San Diego and Fort Hood, respectively. As of June 2003, the penetration rate had grown to 71 percent at NMC San Diego, and it appeared to still be increasing by 3 to 5 percentage points every month. By the end of the pilot program, the penetration rate at San Diego leveled off at about 75 percent of refills. At the same time, the penetration rate rose to 44 percent at Fort Hood by June and continued to trend upward as it reached roughly 48 percent by August and September of 2003. At Kirtland AFB, the penetration rate rose from 10 percent in December to 32 percent in June, and continued to increase, reaching 36 percent over the last 2 months of the pilot. The results from the pilot sites, coupled with the experience of the CMOP program within the VA health system, indicated that utilization of the MTF mail order option might have grown significantly over a longer time horizon if the MRMS initiative had been fully implemented. Currently, CMOP processes about 75 percent of all VA prescriptions, including first fills.

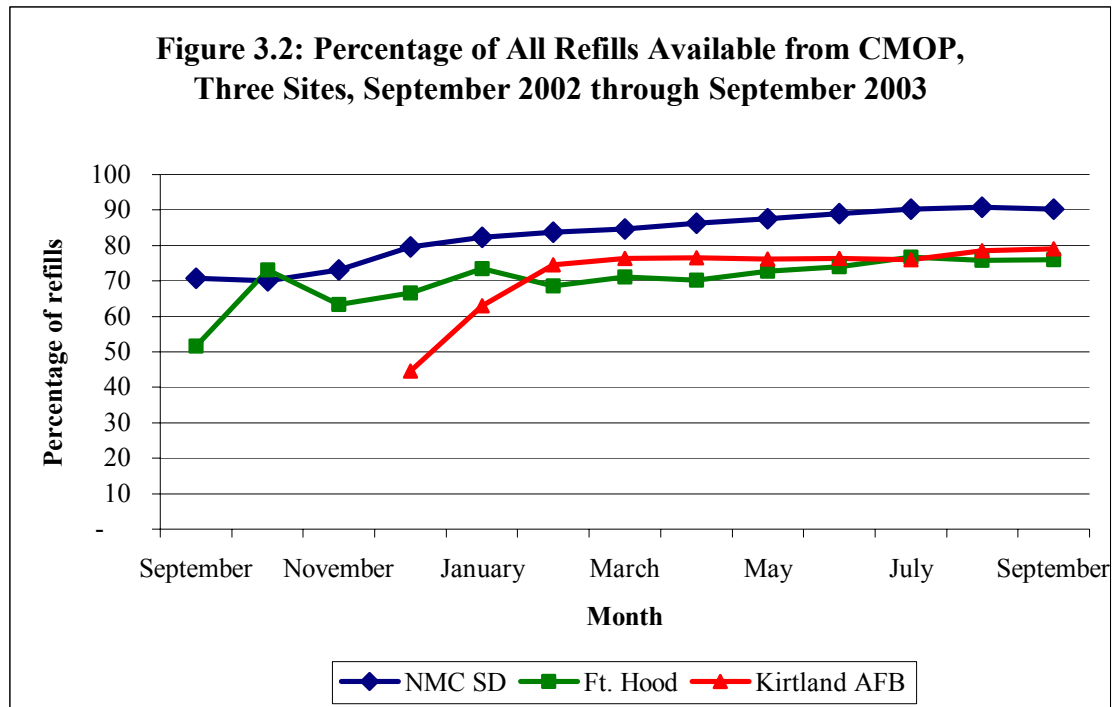


Overall, utilization of the MTF mail order service was significant at all three sites. Combining data from the three sites, we find that 57.1 percent of all refills were processed through mail order in June 2003; by September, this rate rose to 60.5 percent.

We offer two explanations for why NMC San Diego experienced a greater growth in mail order penetration than either Fort Hood or Kirtland AFB. First, as shown in figure 3.2, more of the refills requested at San Diego were available through the NMC-CMOP mail order linkage. As of December, roughly 80 percent of all refills requested at the San Diego site could be processed through the mail order service, and this rate increased to 90 percent by the fourth quarter of FY 2003. In contrast, this mail order availability rate grew to only 76 percent at Fort Hood and, despite some fluctuation, remained fairly flat from January onward. At Kirtland AFB, the mail order availability rate was only 45 percent in December, but it increased significantly to 76 percent by April. However, it did not change much over the most recent months. These figures may in part reflect the relative size of the formulary at the three sites, with regard to maintenance medications.

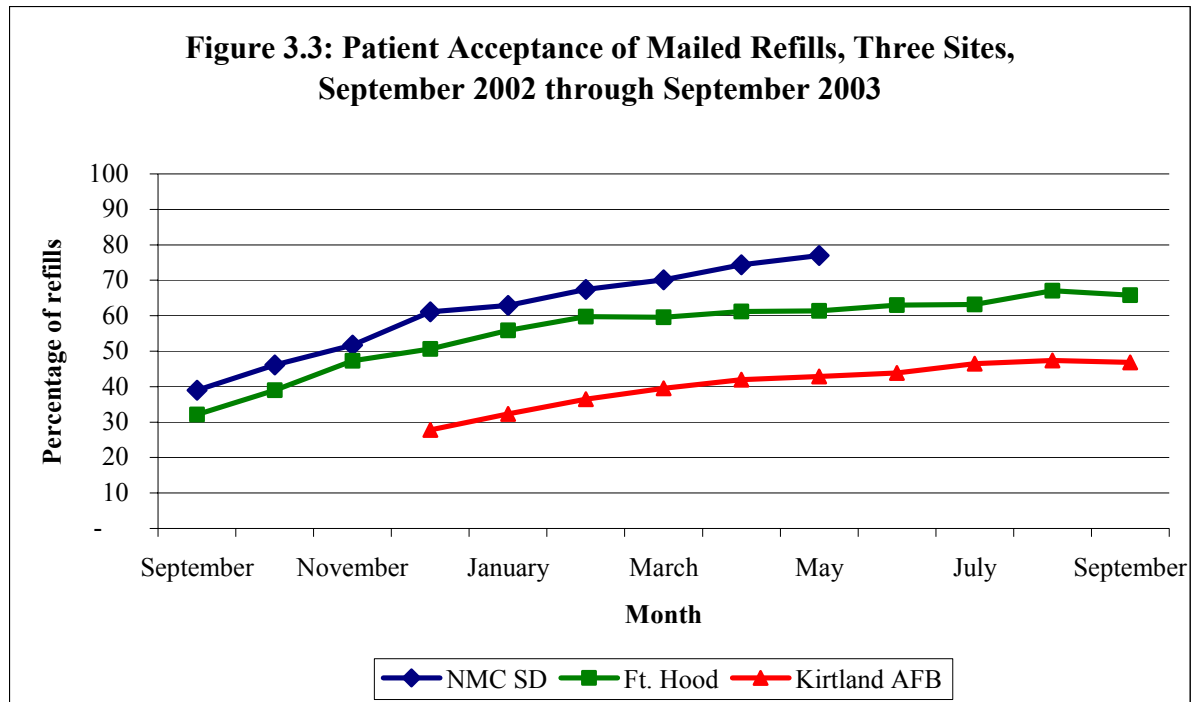
The differences in mail order availability cannot explain the entire difference in mail order penetration, however. Not only were refills more likely to be available for mail order at NMC San Diego, but NMC San Diego patients were also more likely to request that such refills be processed through the mail order service. We illustrate this in figure 3.3, which presents the patient acceptance rates (measured as the percentage of patients who are willing to have prescriptions mailed to their homes) for each of the pilot sites. These acceptance rates track very closely with the probability that a patient will request

mail order service when it is available. Here we see that patient acceptance was significantly higher at NMC San Diego and much lower at Kirtland AFB.⁷



What were the reasons for this variation in patient acceptance across sites? They included, but were not limited to, differences in geographic location, the surrounding civilian populations, and the mix of beneficiaries being served across the sites. For example, NMC San Diego had a high utilization rate of mail order pharmacy refills. This may have been partly because of the congested urban environment of San Diego, which encouraged beneficiaries to avoid traffic and parking problems by receiving refills through the mail. In contrast, Fort Hood is in an isolated environment, and the pharmacy is on base behind a security perimeter. These factors may have encouraged use of mail service for refills for beneficiaries who would otherwise have traveled a significant distance each month, or would have found it arduous to go through base security to obtain refills. At Kirtland AFB, the pharmacy is easily accessible to vehicles without security checks, and parking is readily available, which may mean that beneficiaries were reasonably satisfied with physical access to the pharmacy.

⁷ NMC San Diego changed the process for collecting data on patient acceptance in the middle of June 2003, by asking all beneficiaries if they would want their refills mailed. This was because NMC San Diego started their own mail service to supplement the refills available by mail from the CMOP system.



a. Patient acceptance data were calculated by a different measurement metric for NMC San Diego from June through September 2003, so these months are not included in the figure. Because NMC San Diego started their own mail service to supplement refills available from the CMOP system, they began asking all beneficiaries if they would want their refills mailed, rather than only asking beneficiaries able to receive refills from the CMOP.

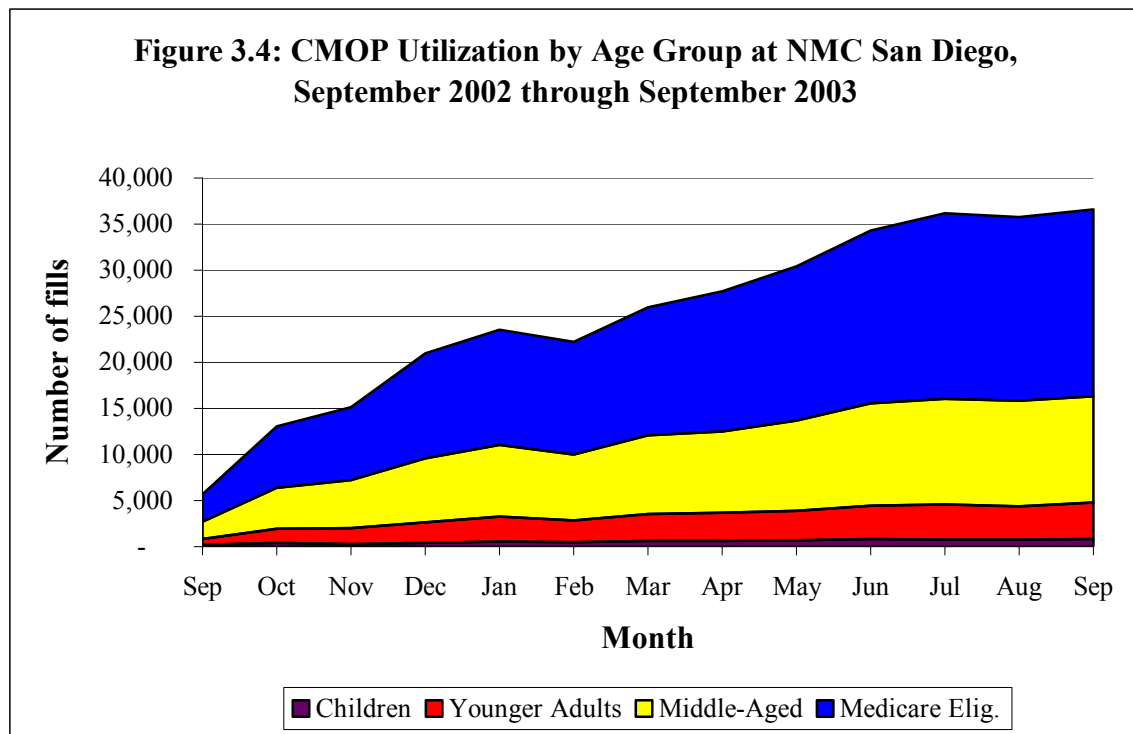
3.3 CMOP workload and its effects on MTF workload

So far, we have considered CMOP utilization as a percentage of all refills handled by a particular MTF and its satellite pharmacies. In this section, we look at each pilot site individually to describe how the size of the CMOP workload evolved over time, the distribution of CMOP utilization across different groups of beneficiaries, and how MTF workload changed compared with the pre-pilot period. Note that various external factors, such as deployments, can affect pharmacy workload. We begin with NMC San Diego.

3.3.1 Naval Medical Center San Diego

In figure 3.4, we show how CMOP workload grew at NMC San Diego after its introduction in September 2002—from a total of roughly 5,700 fills to over 34,000 in June 2003. Over the summer of 2003, CMOP workload grew more slowly but still reached a new peak of over 36,000 in September 2003. We can also observe which beneficiaries used the CMOP option. During the third and fourth quarters of FY 2003 (April through September), beneficiaries age 65 and older (Medicare eligibles) accounted for 14 percent of the total catchment area population but accounted for 55 percent of all CMOP fills and made up about half (roughly 51 percent) of those who used CMOP. At the same time, middle-aged beneficiaries (age 45 to 64) accounted for only 18 percent of the total population but nearly one-third of all CMOP fills and of all CMOP users.

Finally, beneficiaries under the age of 44 accounted for roughly two-thirds of the catchment area population but for only one-eighth (roughly 13 percent) of total CMOP fills and roughly 17 percent of all CMOP users.



Obviously, NMC San Diego experienced large increases in the amount of workload that was processed by CMOP Leavenworth. In table 3.1, we examine the effect that this had on refill workload processed by NMC San Diego and its satellite pharmacies. We see that the number of refills processed by the NMC San Diego pharmacies decreased significantly. For the first quarter of FY 2003, this workload was 27 percent lower than it had been in the first quarter of FY 2002. For the second quarter of FY 2003, it was 43 percent lower than it had been in the second quarter of FY 2002. By the third quarter of 2003, the NMC San Diego pharmacies' refill workload was less than one-half of what it had been in the previous year; by the fourth quarter, it was only a little more than one-third of what it had been the previous year. Note that, if we add in the CMOP workload, total MTF-controlled refill workload for NMC San Diego was higher in FY 2003 than in FY 2002.

In table 3.2, we examine the effect that the MRMS initiative had on total workload processed by the NMC San Diego pharmacies. A similar story emerged in the case of total fills at NMC San Diego, although the impact on total workload was much smaller than on refill workload. In most months, total workload—including both pharmacy and CMOP fills—either increased slightly or stayed essentially unchanged. Total workload processed at the San Diego site pharmacies, however, fell significantly in the first two quarters of FY 2003 compared with the first two quarters of FY 2002, but the reduction was not as pronounced as the reduction in refill workload. For the first quarter of FY

2003, total workload processed by NMC San Diego pharmacies was 9 percent lower than it had been in the first quarter of FY 2002. For the second quarter of FY 2003, it was 14 percent lower than in the second quarter of FY 2002. For the third quarter of FY 2003, total workload was 17 percent lower than it had been in the previous year. By the fourth quarter, it was about 21 percent lower than it had been the previous year.

Table 3.1. NMC San Diego Refill Workload Changes from Baseline

	Baseline ^a	Study Period ^b	Change in MTF Workload
September	44,560	45,317	1.7%
October	49,986	39,143	-21.7%
November	47,064	32,860	-30.2%
December	41,766	30,022	-28.1%
January	50,520	29,763	-41.1%
February	43,924	25,135	-42.8%
March	46,339	25,442	-45.1%
April	47,680	24,234	-49.2%
May	47,378	22,051	-53.5%
June	48,330	19,564	-59.5%
July	50,154	18,165	-63.8%
August	49,742	17,711	-64.4%
September	N/A	18,590	

a. Baseline period runs from September 2001 through August 2002.
b. Study period runs from September 2002 through September 2003.

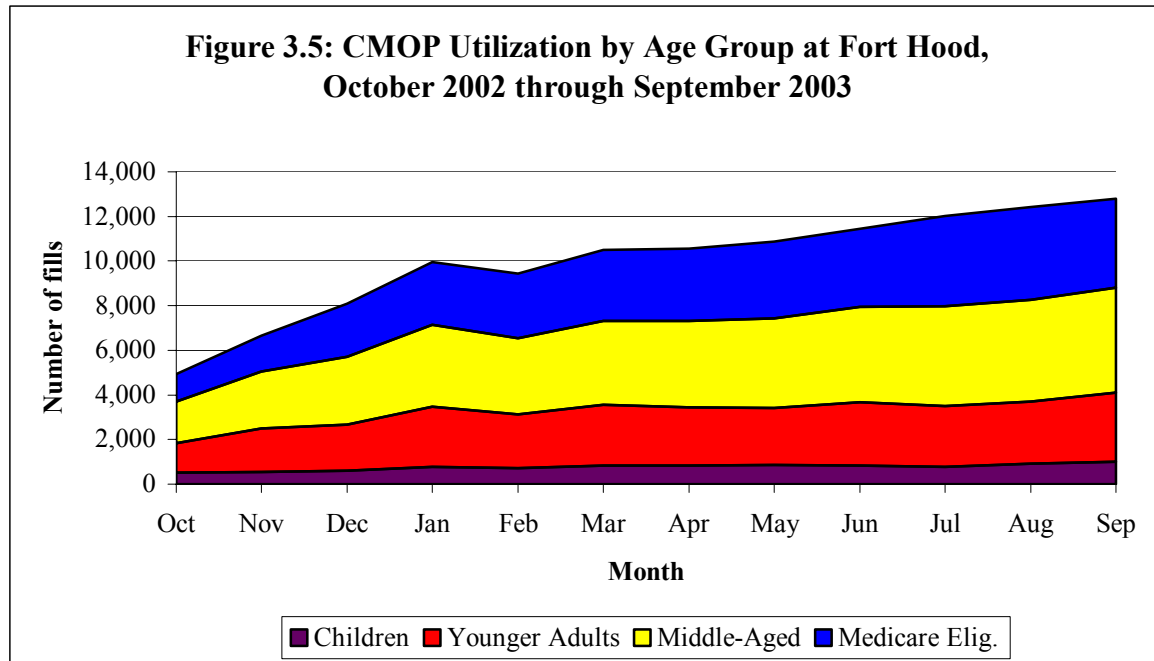
Table 3.2. NMC San Diego Total Workload Changes from Baseline

	Baseline ^a	Study Period ^b	Change in MTF Workload
September	132,190	138,551	4.8%
October	155,718	142,876	-8.2%
November	147,568	130,240	-11.7%
December	137,668	129,705	-5.8%
January	163,318	138,460	-15.2%
February	150,313	130,286	-13.3%
March	153,259	133,099	-13.2%
April	154,628	127,915	-17.3%
May	152,455	121,322	-20.4%
June	141,092	121,139	-14.1%
July	147,050	119,532	-18.7%
August	146,410	113,163	-22.7%
September	N/A	121,475	N/A

a. Baseline period runs from September 2001 through August 2002.
b. Study period runs from September 2002 through September 2003.

3.3.2 Fort Hood

In figure 3.5, we show how CMOP workload grew at Fort Hood, Texas, over the course of the pilot program. This workload grew from a total of roughly 4,900 fills in its first month to over 11,400 in June 2003 and to nearly 13,000 in September. It is also interesting to note which beneficiaries used the CMOP option.



In the third and fourth quarters of FY 2003 (April through September), beneficiaries age 65 and older (Medicare eligibles) accounted for only 6 percent of the total catchment area population but for 32 percent of all CMOP fills and made up roughly one-quarter of those who used CMOP. At the same time, middle-aged beneficiaries (age 45 to 64) accounted for only 14 percent of the total population but for 37 percent of all CMOP fills and roughly one-third (35 percent) of all CMOP users. Finally, beneficiaries under the age of 44 accounted for roughly 80 percent of the catchment area population but only one-third (31 percent) of total CMOP fills and roughly 40 percent of all CMOP users.

As was the case with NMC San Diego, Fort Hood experienced large increases in the amount of workload that was processed by CMOP Leavenworth. In table 3.3, we examine the effect on refill workload processed by Fort Hood and its satellite pharmacies, and see that the number of refills processed by the Fort Hood pharmacies decreased. For the first quarter of FY 2003, this workload was 24 percent lower than it had been in the first quarter of FY 2002. For the second quarter of FY 2003, it was 36 percent lower than it had been in the second quarter of FY 2002. By the third quarter of 2003, the Fort Hood pharmacies' refill workload was more than 40 percent lower than it had been in the

previous year; by the fourth quarter, it was 45 percent lower. If we add in the CMOP workload, however, total MTF-controlled refill workload was slightly higher in FY 2003 than in FY 2002.

Table 3.3. Fort Hood Refill Workload Changes from Baseline

	Baseline ^a	Study Period ^b	Change in MTF Workload
October	26,056	21,579	-17.2%
November	24,569	16,917	-31.1%
December	23,950	18,318	-23.5%
January	27,210	17,615	-35.3%
February	23,056	14,463	-37.3%
March	24,586	15,830	-35.6%
April	26,948	15,344	-43.1%
May	26,476	15,014	-43.3%
June	25,074	14,719	-41.3%
July	26,851	14,591	-45.7%
August	24,530	13,347	-45.6%
September	25,580	13,944	-45.5%

a. Baseline period runs from October 2001 through September 2002.
b. Study period runs from October 2002 through September 2003.

In table 3.4, we examine the effect that the MRMS initiative had on total workload processed by the Fort Hood pharmacies. In the case of total fills at Fort Hood, the impact on total workload was much smaller than on refill workload. For the first quarter of FY 2003, total workload processed by Fort Hood pharmacies was virtually unchanged from the first quarter of FY 2002. For the second quarter of FY 2003, it was roughly 8 percent lower than it was in the second quarter of FY 2002. For the third quarter of FY 2003, total workload was 14 percent lower than it had been in the previous year, but this could have as much to do with deployments related to Operation Iraqi Freedom as with the MRMS initiative. By the final quarter of the fiscal year, total workload was only down 10 percent as compared with the final quarter of fiscal year 2002.

3.3.3 Kirtland AFB

In figure 3.6, we examine how CMOP workload increased at Kirtland AFB after the introduction of the pilot program at this site. CMOP workload grew from a total of roughly 1,900 fills in its first month to nearly 4,100 in June 2003, and to nearly 4,500 in September 2003. As we did with the other sites, we also examine which beneficiaries used the CMOP option. In the second half of FY 2003, beneficiaries age 65 and older (Medicare eligibles) accounted for 25 percent of the total catchment area population but accounted for 40 percent of all CMOP fills and made up 37 percent of CMOP users. At the same time, middle-aged beneficiaries (age 45 to 64) accounted for 27 percent of the total population while accounting for 45 percent of all CMOP fills and 43 percent of all

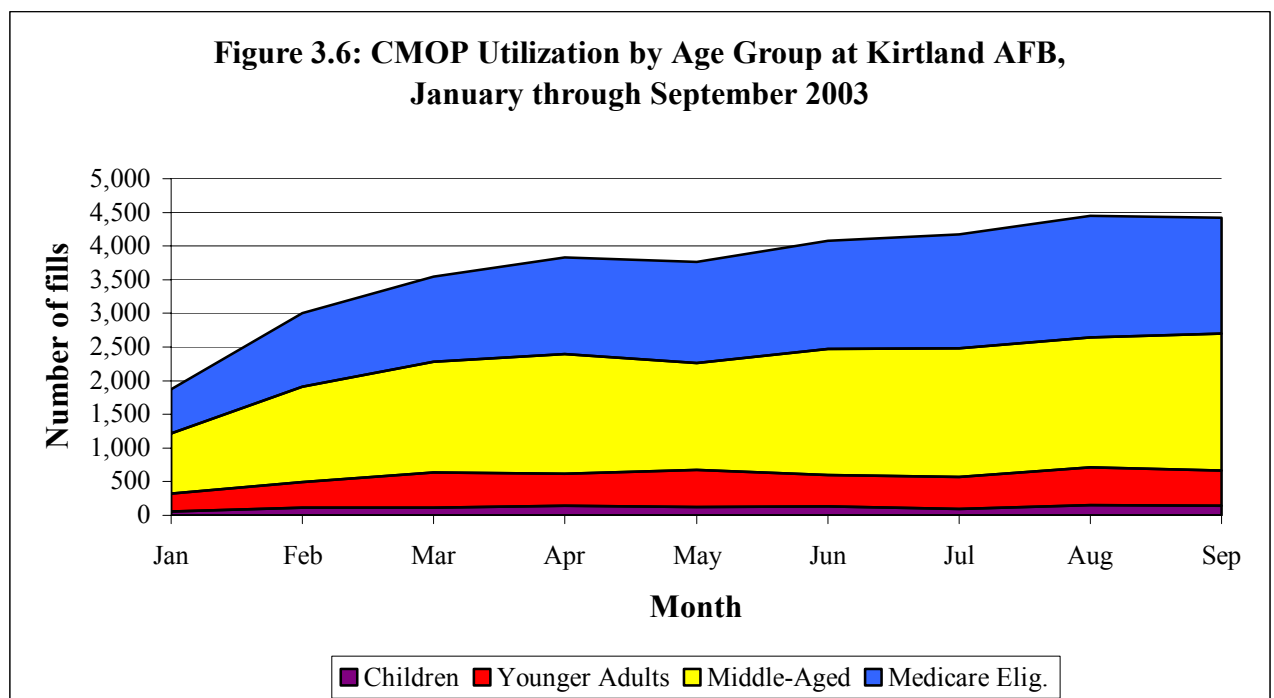
CMOP users. Finally, beneficiaries under the age of 44 accounted for nearly half (48 percent) of the catchment area population but accounted for only 15 percent of total CMOP fills and roughly 20 percent of all CMOP users.

Table 3.4. Fort Hood Total Workload Changes from Baseline

	Baseline ^a	Study Period ^b	Change in MTF Workload
October	95,971	93,125	-3.0%
November	84,380	81,401	-3.5%
December	85,038	91,078	7.1%
January	107,929	97,019	-10.1%
February	89,710	82,610	-7.9%
March	95,374	91,565	-4.0%
April	102,074	87,741	-14.0%
May	96,312	80,508	-16.4%
June	85,711	75,761	-11.6%
July	88,020	74,317	-15.6%
August	88,463	77,397	-12.5%
September	90,791	89,297	-1.7%

a. Baseline period runs from October 2001 through September 2002.

b. Study period runs from October 2002 through September 2003.



As was the case with the other two sites, Kirtland AFB saw significant increases in the amount of workload that was processed by CMOP Leavenworth. In table 3.5, we examine the effect that this had on refill workload processed by Kirtland AFB and its satellite pharmacies. The number of refills processed by the Kirtland AFB pharmacies decreased. For the second quarter of FY 2003, Kirtland pharmacy refill workload was 25 percent lower than it had been in the second quarter of FY 2002. By the third quarter of 2003, Kirtland pharmacy refill workload was roughly 35 percent lower than it had been in the previous year. By the fourth quarter, it was 38 percent lower than in the year before. Even if we add in the CMOP workload, total MTF-controlled refill workload was slightly lower during the study period than during the baseline period.

Table 3.5. Kirtland AFB Refill Workload Changes from Baseline

	Baseline ^a	Study Period ^b	Change in MTF Workload
January	16,220	13,220	-18.5%
February	14,604	10,818	-25.9%
March	15,098	10,715	-29.0%
April	16,378	10,468	-36.1%
May	16,134	10,561	-34.5%
June	15,188	10,191	-32.9%
July	15,948	9,694	-39.2%
August	15,285	9,370	-38.7%
September	15,076	9,689	-35.7%

a. Baseline period runs from January 2002 through September 2002.
b. Study period runs from January 2003 through September 2003.

In table 3.6, we examine the effect that the MRMS initiative had on total workload processed by the Kirtland AFB pharmacies. Total prescription workload at Kirtland AFB followed a similar pattern, although the impact on total prescription workload was smaller. In most months, total workload—including both pharmacy and CMOP mail order fills—either decreased slightly or stayed essentially unchanged, leading to a combined decrease of about 2 percent over this period. Total workload at the Kirtland AFB site pharmacies fell in the second quarter of FY 2003 compared with the second quarter of FY 2002, but the reduction—11.5 percent—was not as pronounced as the reduction in refill workload. For the third and fourth quarters of FY 2003, total workload was 17 percent lower than it had been in the previous year, again not as pronounced an impact as on refill workload.

Table 3.6. Kirtland AFB Total Workload Changes from Baseline

	Baseline ^a	Study Period ^b	Change in MTF Workload
January	29,511	27,109	-8.1%
February	26,985	23,314	-13.6%
March	28,445	24,801	-12.8%
April	29,615	25,054	-15.4%
May	28,694	23,062	-19.6%
June	25,899	21,777	-15.9%
July	26,549	21,729	-18.2%
August	27,198	21,055	-22.6%
September	26,184	23,045	-12.0%

a. Baseline period runs from January 2002 through September 2002.
b. Study period runs from January 2003 through September 2003.

3.4 TRICARE pharmacy network utilization

In this section, we examine the utilization of TRICARE network pharmacies located in each of the three pilot site catchment areas. One of the benefits of shifting MTF workload to the CMOP mail order service is that it could free up capacity at the MTF pharmacies to recapture TRICARE retail pharmacy workload. This would have significant cost implications because these retail prescriptions tend to be the most costly to DoD despite the fact that beneficiaries help pay the costs through copays. This is the case because the low prices that DoD has negotiated for drugs dispensed through its MTFs and through the NMOP/TMOP program do not, at the present time, apply to the drugs that are processed through the retail pharmacies. These price differences can be quite significant.⁸ Because of this, even a relatively small amount of recaptured retail network pharmacy workload could help the MRMS pay for itself (see section 6.3).

To investigate whether any recapture took place in the three pilot sites during the pilot program, we used data from the PDTS to compare utilization of the retail networks at the pilot sites in the pre- and post-MRMS time periods. We then compared any changes at the three pilot sites to changes that occurred across all sites for any evidence of network pharmacy recapture.

The first thing we noticed for each of the pilot sites is that the number of fills processed by the retail network pharmacies has been trending upward—with the expected seasonal variation—since September 2001. When we broke out this workload by age, we found that almost all of this increase could be attributed to the Medicare-eligible beneficiaries, who became eligible for TRICARE pharmacy benefits in the spring of 2001. For instance, in the San Diego catchment area, network pharmacy workload increased by 80 percent between September 2001 and August 2002 (the period just preceding the MRMS initiative).

⁸ The Pharmacoeconomics Center (PEC) in San Antonio estimates that ingredient costs to MTF pharmacies are about 40 percent lower than at network pharmacies.

During this same period, workload attributed to beneficiaries who were under 65 years of age increased, but at only 15 percent for the year. The workload attributed to beneficiaries age 65 and older more than tripled—an increase of 242 percent. We found similar results for the other two pilot sites and for the system as a whole.

Because of the underlying upward trend, it is not surprising that the network pharmacy workloads at the three sites were greater during FY 2003 (the pilot time period) than in FY 2002 (the pre-pilot time period). We found, however, that the upward trend in network pharmacy workload at each site was less pronounced during FY 2003 than it had been during FY 2002 (see tables 3.7 through 3.9).

For example, in the NMC San Diego catchment area, workload in the network pharmacies grew from 648 fills per day in September 2001 (just before the beginning of FY 2002) to 1,163 fills per day in September 2002, which implies an average growth rate of 5 percent per month. One year later, after implementation of the pilot, this workload grew from 1,163 fills per day in September 2002 to 1,459 fills per day in September 2003—only a 2-percent average monthly growth rate.

We see similar results at the other sites. In the Fort Hood catchment area, workload in the network pharmacies grew from 368 fills per day in September 2001 to 539 fills per day in September 2002, implying an average growth rate of 3 percent per month. One year later, after implementation of the pilot, this workload grew from 539 fills per day in September 2002 to 605 fills per day in September 2003—only a 1-percent growth rate per month.

Table 3.7. Retail Network Pharmacy Total Fills in NMC San Diego Catchment Area, FYs 2002 and 2003

Month	Retail Daily Fills in Catchment Area			
	FY 2002		FY 2003	
	Number	Pct. Change	Number	Pct. Change
September	650		1,163	
October	782	20%	1,208	4%
November	824	6%	1,196	-1%
December	840	2%	1,266	6%
January	996	19%	1,370	8%
February	1,059	6%	1,388	1%
March	1,048	-1%	1,379	-1%
April	1,117	7%	1,398	1%
May	1,111	-1%	1,354	-3%
June	1,070	-4%	1,394	3%
July	1,101	3%	1,393	0%
August	1,131	3%	1,347	-3%
September	1,163	3%	1,459	8%
Ave. Monthly Change		5%		2%

Table 3.8. Retail Network Pharmacy Total Fills in Fort Hood Catchment Area, FYs 2002 and 2003

Month	Retail Daily Fills in Catchment Area			
	FY 2002		FY 2003	
	Number	Pct. Change	Number	Pct. Change
September	368		539	
October	429	17%	521	-3%
November	412	-4%	509	-2%
December	424	3%	459	-10%
January	564	33%	565	23%
February	565	0%	573	1%
March	528	-6%	584	2%
April	527	0%	604	3%
May	477	-9%	574	-5%
June	476	0%	562	-2%
July	496	4%	550	-2%
August	488	-2%	562	2%
September	539	11%	605	8%
Ave. Monthly Change		3%		1%

Table 3.9: Retail Network Pharmacy Total Fills in Kirtland AFB Catchment Area, First Three Quarters of FYs 2002 and 2003

Month	Retail Daily Fills in Catchment Area			
	FY 2002		FY 2003	
	Number	Pct. Change	Number	Pct. Change
December	175		275	
January	201	15%	297	8%
February	210	5%	304	3%
March	214	2%	302	-1%
April	238	11%	317	5%
May	237	0%	306	-3%
June	228	-4%	296	-3%
July	241	6%	309	3%
August	246	2%	297	-3%
September	250	1%	319	7%
Ave. Monthly Change		4%		2%

Finally, in the Kirtland AFB catchment area, workload in the network pharmacies grew from 175 fills per day in December 2001 to 250 fills per day in September 2002,

implying an average growth rate of 4 percent per month. One year later, after implementation of the pilot, this workload grew from 275 fills per day in December 2002 to 319 fills per day in September 2003—a growth rate of slightly under 2 percent. For Kirtland AFB, note that we considered a shorter time frame because the mail order pilot was implemented later there.

As we mentioned before, these results are provocative but not conclusive. Because it was quite possible that this slowdown in the growth of network pharmacy workload was an overall DoD-wide trend rather than an effect of the MRMS initiative, we looked at retail daily fills in all catchment areas combined. We present our results in table 3.10. When looking at DoD trends, we found that there was a slowdown in the growth of retail pharmacy workload across all catchment areas, not just at the pilot sites. This probably reflects the maturation of the TRICARE senior pharmacy program, which stabilized over time. This slowdown in retail pharmacy growth was similar to the slowdown we found at the pilot sites, which indicates that our pilot site results do not likely indicate any real recapture of retail workload during the course of the demonstration. This certainly does not mean that recapture of retail pharmacy workload is impossible or even unlikely.

Table 3.10. Retail Network Pharmacy Total Fills in All CONUS Catchment Areas, First Three Quarters of FYs 2002 and 2003

Month	Retail Daily Fills in Catchment Area			
	FY 2002		FY 2003	
	Number	Pct. Change	Number	Pct. Change
September	21,974		36,154	
October	25,718	17%	37,531	4%
November	26,822	4%	37,552	0%
December	27,041	1%	39,012	4%
January	31,411	16%	41,334	6%
February	32,992	5%	42,423	3%
March	32,308	-2%	42,096	-1%
April	34,832	8%	42,981	2%
May	34,818	0%	42,694	-1%
June	33,188	-5%	42,576	0%
July	34,388	4%	42,767	0%
August	35,232	2%	42,248	-1%
September	36,154	3%	45,303	7%
Ave. Monthly Change		4%		2%

It is quite possible that, if the MRMS program were extended and allowed to mature, MTFs would be able to recapture workload that is currently being processed by network pharmacies in their catchment areas. As we will see in section 6.3, the amount of network pharmacy recapture necessary to pay for the MRMS program is a reasonable

target. However, if DoD moves to federal pricing for TRICARE retail pharmacies, this would substantially lower the per-fill savings available from retail recapture.

3.5 NMOP/TMOP utilization

Another benefit of shifting MTF workload to the CMOP mail order service is that it could free up capacity at the MTF pharmacies to recapture TRICARE Mail Order Pharmacy (TMOP) workload. This would have less significant cost implications than retail pharmacy recapture because the TMOP vendor receives drugs from DoD that have been purchased at the low prices that DoD has negotiated for drugs dispensed through its MTFs. Thus, the cost savings of TMOP recapture would likely be only a few dollars per fill. Because of this, it would take a large amount of recaptured TMOP workload to help the MRMS pay for itself. Still, for the sake of completeness, we will briefly discuss what we found.

First, we found that DoD-wide NMOP/TMOP utilization has grown significantly since September 2001, and that most of that growth can be attributed to increases in utilization among those beneficiaries age 65 and older. From October 2001 through September 2002, total NMOP/TMOP utilization grew by 24 percent, a 2-percent monthly growth rate. The growth rate has slowed somewhat over time. From October 2002 through September 2003, NMOP/TMOP utilization grew at a 0.5-percent monthly rate from 14,061 fills per day to 14,853 fills per day. This slowdown in the growth rate of utilization probably reflects the maturation of the TRICARE senior pharmacy program, which appears to be stabilizing. The reduction in the growth rate from October 2002 through September 2003 may also reflect the change to a new provider (TMOP replacing NMOP).

From October 2001 to September 2002 (December 2001 to June 2002 for Kirtland AFB), the growth rates in NMOP workload at the three pilot sites mirrored the overall DoD growth rates. NMOP workload grew from 89 to 109 fills (1.9 percent per month) at NMC San Diego, from 27 to 33 fills (1.7 percent per month) at Fort Hood, and from 13.4 to 16.5 daily fills (1.9 percent per month) at Kirtland AFB.

After the implementation of the MRMS pilot, however, NMOP/TMOP workload actually stabilized over similar time periods at each pilot site. Between October 2002 and September 2003 (December 2002 to June 2003 for Kirtland AFB), NMOP/TMOP workload fell from 113 to 110 fills (-0.3 percent per month) at NMC San Diego, fell from 38 to 37 fills (-0.3 percent per month) at Fort Hood, and rose from 16.7 to 16.9 fills (+0.1 percent per month) at Kirtland AFB. This could indicate a small recapture of TMOP workload (although a number of other factors might explain the lack of change in TMOP workload at the pilot sites as well). A slight TMOP recapture would not be surprising because beneficiaries may have seen CMOP as more of a direct substitute for TMOP than for TRICARE retail network pharmacies. However, as indicated earlier, retail pharmacy workload would be much more lucrative to capture than TMOP workload, as shown in section 6.3.

3.6 Utilization summary

In summary, we have found that the utilization of the MTF mail order option increased steadily after its introduction at each of the three pilot sites. As of September 2003, CMOP Leavenworth was processing 60.5 percent of all refills requested from the pilot sites. NMC San Diego experienced the greatest mail order penetration at roughly 75 percent, whereas mail order penetration was lower, but still significant, at Fort Hood (48 percent) and Kirtland AFB (36 percent). The availability of drugs to be processed through the mail order program was also high, especially at NMC San Diego. Finally, patient acceptance, which was measured as the percentage of patients who were willing to have prescriptions mailed to their homes, steadily increased at all three sites. The patient acceptance rate was particularly high in San Diego, where it reached 77 percent in May 2003. This rate was lower, but still significant, at Fort Hood (roughly 66 percent) and Kirtland AFB (47 percent). Overall, these numbers indicate that the MRMS initiative was a success in terms of patient participation and acceptance.⁹

We have also found that pharmacy workload that was processed by the three MTFs and their satellite pharmacies decreased after the introduction of the MRMS initiative. Refill workload decreased significantly. By the summer of 2003 (June through August), the combined on-site refill workload at the three sites was down by 53 percent, compared with numbers from the same period in 2002. At the same time, the combined total on-site pharmacy workload (refills and first fills) at the three sites was down by 17 percent.

By examining the beneficiary distribution patterns at the three pilot sites, and comparing this distribution to the relative use of CMOP-processed refills by beneficiary category, we found an interesting pattern. Those in the Medicare-eligible range, even though they typically made up a small share of the total beneficiary population, were most likely to be intensive CMOP users. Those in the general retiree age range were also a relatively small segment of the beneficiary population, but they were heavy users of the CMOP. The age group associated with active duty personnel and their dependents made up the largest beneficiary category but used far less than a proportionate share of the CMOP utilization observed.

It appears that the Medicare-eligible and retiree-age groups of beneficiaries were more likely to use maintenance medications and, therefore, to have a substantial number of regular refills compared with the active duty age group. This is not a surprising result, but the strength of the relationship observed at the pilot sites indicates that it would be important to consider the beneficiary mix when predicting MRMS use for an MTF.

Finally, we looked at how TRICARE network pharmacy and NMOP/TMOP utilization changed at the three sites after the introduction of the MRMS initiative. We found that

⁹ In addition to the other reasons cited, NMC San Diego's high mail order penetration rate may be due in part to an aggressive marketing approach adopted by staff members. NMC San Diego apparently used marketing and advertising methods more aggressively than the other pilot sites (e.g., pharmacy staff encouraged beneficiaries to accept mailed refills, and occasionally arranged to mail refills directly from NMC San Diego to the beneficiary in cases when the prescription could not be filled by the CMOP).

the number of fills processed by the retail network pharmacies at each site has been trending upward—with the expected seasonal variation—since September 2001. However, we found that the rate of growth in network pharmacy utilization at each site slowed after the introduction of the MTF mail order option. Because this mirrored national trends, we cannot claim this as any evidence of recapture of network pharmacy workload. We did find a possible indication of a slight NMOP/TMOP recapture, but the evidence was not particularly strong, and other external influences may have played a role in the slight drop observed in TMOP fills at the pilot sites.

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4.0 SATISFACTION AMONG BENEFICIARIES

Before visiting each site, we sent a list of questions to the primary points of contact, asking them to discuss the issues with their staffs before we arrived. We reviewed the questions at each site (two CNA analysts and a TMA representative) and asked the staff to tell us about any concerns they might have or issues that we had failed to ask about.

4.1 Implications of penetration rates for CMOP use

As we observed in the previous section, the patterns of beneficiary participation at the pilot sites show that, in general, beneficiaries found value with the mail refill service concept. Although acceptance and participation were greater at Naval Medical Center San Diego than at the other sites, all sites in the pilot demonstrated acceptance of the program and willingness by a significant share of beneficiaries to use the MRMS. It is possible that the greater willingness to use the program in San Diego reflected the mix of pharmaceuticals available through the CMOP, the desire to avoid crowded parking lots and traffic in a congested urban area, and the mix of beneficiaries in the San Diego area. However, using a weighted average over all the sites, it appears that the overall beneficiary use rate reached about 60 percent. Although utilization appeared to be leveling off by the end of the pilot study, overall utilization might increase even further over a longer pilot period.

Conversations with the staff at each site indicate that they felt that beneficiaries were quite satisfied with the MRMS program and how it was working. All sites experienced some initial difficulties (e.g., incorrect addresses delaying delivery, concerns regarding standardized descriptions for prepackaged medications). At all three pilot sites, however, DoD personnel felt that these initial problems were essentially part of the “learning curve.” The overall impression was that initial problems were well on the way to being resolved, and that the program was progressing smoothly after several months of implementation. The personnel we spoke to at all of the sites indicated that their beneficiaries would definitely want the program to be continued after the end of the pilot period, and that their recommendation would be to expand the program system-wide.

4.2 Discussions at site visits

Beneficiary satisfaction was reported to be high, despite some initial implementation issues. From the beneficiary perspective, most difficulties have been caused by incorrect addresses, an issue that can be quickly resolved and that does not pose a long-term problem. Other dissatisfaction may be associated with an inability to receive a specific pharmaceutical through the mail service (e.g., controlled substances, which still had to be obtained at the MTF, or specific drugs that the MTF may not have marked as refillable at the CMOP). The average time from refill request to receiving mailed prescriptions was reported by pharmacy staff to be 3-5 days, even during the Christmas holidays.

Some beneficiaries were not comfortable receiving a mailed medication that might not look exactly like the medication they had received from the MTF. For example, the

CMOP may have used a generic from a different manufacturer than the MTF used for the original fill. This potential confusion could be mitigated through enhanced information on the patient information sheets included in the package. The information sheet could include a description of the included medication and could highlight important information (e.g., physical description, generic equivalency).¹⁰

4.3 Satisfaction evidence from VA card survey

The VA sends out postcards in a random sample of prescriptions mailed from the CMOPs each month to calculate an ongoing assessment of general user satisfaction. These cards ask the recipients to answer a short survey on the card and then drop the pre-addressed, postage-paid card in the mail. Based on feedback from these cards, the VA keeps track of beneficiary satisfaction with the mailed prescription service (usually we expect that those who are unhappy with a service are the ones most likely to respond).

TMA asked the VA for the CMOP card survey results so that they could evaluate DoD beneficiary satisfaction over the time of the pilot project. Initial sample sizes were small, especially for the subset of cards that were mailed to DoD participating sites. Table 4.1 presents the results obtained from the VA card survey by quarter over the pilot period. The first three rows detail the sample sizes. “Avg. days Rx in mail” describes the average number of days it took for beneficiaries to receive a prescription after it was mailed. “Satisfaction” means the percentage of beneficiaries who were satisfied with the prescription mail service, based on rating the service as very good or excellent.

Table 4.1. VA and DoD Beneficiary Satisfaction Based on Card Survey Returns*

	October to December 2002	January to March 2003	April to June 2003	July to September 2003	Total Pilot
Cards mailed	1,303	2,116	2,404	3,324	9,147
Cards returned	696	1,008	1,151	1,510	4,365
Cards returned DoD	30	34	166	629	859
Avg. days Rx in mail	2.9	3.0	2.9	3.0	3.0
Overall Satisfaction	91.8%	90.4%	91.8%	92.7%	91.8%
Satisfaction DoD	100%	94%	98.5%	96.9%	97.2%

* Patient Satisfaction scale: poor, fair, good, very good, or excellent. Satisfaction is based on receiving a score of either excellent or very good: 90% satisfied means 90% of returns were excellent or very good. By December 2003, a total of 859 DoD cards had been returned, with 97.4% satisfaction reported overall (survey cards may still be returned well after the survey ends, and additional cards may yet be returned in 2004).

Most of the DoD cards returned were from the period of April to September 2003. Based on all 859 DoD card responses, 97.2 percent reported satisfaction as excellent or very good, compared to the overall satisfaction (DoD and VA combined) of 91.8 percent. On average, it took 3 days from the time that a refill was mailed until it reached the

¹⁰ MTF and VA pharmacies occasionally obtain different generic versions of the same drugs, generally due to temporary supply limitations; this is not an MTF-CMOP phenomenon.

beneficiary. Although the numbers of cards mailed and returned varied substantially by quarter, the measures of satisfaction and mailing time were very stable across the time frame of the pilot study.

4.4 NMC San Diego beneficiary survey

We spoke to the staff at the Naval Medical Center San Diego with respect to the overall satisfaction of those who had used the mailed refill option, along with general attitudes of beneficiaries toward a mailed refill benefit. Beneficiary satisfaction was reported to be high. We asked whether there was specific information to support this impression. As a result, NMC San Diego arranged to conduct a small survey of beneficiaries who used the call-in system, to determine their awareness and attitude toward using the refill mail system.¹¹ Conducting a brief automated survey using the pharmacy autodial system offered a good way to validate beneficiary attitudes and satisfaction, and provided more systematic data than were available from anecdotal information. We worked with NMC San Diego to devise a very short questionnaire to investigate beneficiary attitudes, based on the following survey design (1 = yes, 2 = no):

- 1) Hello, this is NMCS D Pharmacy Services calling. Would you like to participate in this short survey on the “free mail-order” refill prescription service? It consists of approximately 5 yes/no questions. YES/NO
- 2) Are you aware that NMCS D Pharmacy Services now offers “free mail-order” refill prescription services? YES/NO (if NO, then skip to question 5)
- 3) Have you or any of your family members used the “free mail-order” refill prescription service at NMCS D? YES/NO (if NO, then skip to question 5)
- 4) Do you like the “free mail-order” refill prescription service? YES/NO (End here)
- 5) Would you be interested in using NMCS D’s “free mail-order” refill prescription service in the future? YES/NO (End here)

The questionnaire was administered July 7-11, 2003, and about 1,000 people responded to the AudioSurvey. The results indicate that more than 80 percent were aware of the MRMS initiative, and that 62 percent (respondent or family member) had used the mail order option. For those answering the question, “Do you like the free mail order refill prescription service,” 86 percent responded yes. For the final question, of whether the respondent would be interested in using NMC San Diego’s free mail order prescription service in the future, 88 percent of those answering said yes.

Although this is not a scientifically designed and implemented survey, the results are based on a substantial number of responses. In addition, the evidence seems to clearly indicate that respondents were aware of, and supportive of, the MRMS initiative.

¹¹ Our thanks to LT Michael Vancheri, MSC, USNR, NMCS D Main Pharmacy, for developing the concept of the survey and working to implement the process and collect the data.

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5.0 SATISFACTION AT THE MTF LEVEL

Fort Hood is in a very rural area. The surrounding city of Killeen is quite small, and the active duty population and associated dependents (about 55,000 people) make up about 63 percent of the city's overall population. Fort Hood has been able to staff an additional satellite partly because its workload has been eased with the advent of using the CMOP to process a significant proportion of refills. Kirtland AFB, in contrast, is in a fairly large metropolitan area with a population of about 450,000. In the case of Albuquerque, the active duty and dependent population is small compared with the civilian population. Kirtland has a satellite that only processes refills.

Compared with the other pilot sites, NMC San Diego is in a relatively large (over 1.2 million population), somewhat congested metropolitan area and demonstrates a typical urban dynamic with respect to parking and driving issues. The pharmacy is in a secure environment, and security and parking issues are relevant for patients who want to pick up prescriptions in person. NMC San Diego serves a much larger base of beneficiaries than the other sites.

As noted earlier, differences in geographic location may be useful to help to explain differences in acceptance and/or satisfaction with the mail order refill service. For example, the high utilization rate of the mail order pharmacy refills for NMC San Diego may be partly caused by the congested urban environment of San Diego, which encourages beneficiaries to avoid traffic and parking problems by receiving mailed refills. At the same time, the isolation and security perimeter at Fort Hood may encourage use of mail service for refills, whereas Kirtland's easy accessibility and plentiful parking may mean that beneficiaries are reasonably satisfied with pharmacy access.

All sites reported initial investments of time to get the MRMS process started, with significant time given to advertising the program, counseling beneficiaries about use of the mail service, and interacting with the CMOP at Leavenworth.¹² All sites phased in beneficiary participation slowly, opening up a limited number of pharmaceuticals for CMOP fills in the initial period of the pilot. Once the initial period of adjustment was completed, however, the staffs reported a substantial decrease in the time required to handle interactions with beneficiaries and the CMOP and deal with problems.

Once initial implementation of the program had been accomplished, staff members did not report having to spend a significant amount of time on CMOP-related problems. For example, the staff members we spoke to at Kirtland reported spending only 10-20 minutes per day on such issues. At Fort Hood, the staff members we spoke to reported the time requirement to be between 2 and 3 hours per week. NMC San Diego designated a "CMOP specialist" to have primary responsibility for dealing with CMOP questions or problems (e.g., correcting patient access problems), although this person had other duties

¹² With regard to marketing efforts, it would appear that NMC San Diego was more aggressive than the other pilot sites. NMC San Diego detailed a comprehensive list of actions taken to encourage CMOP use.

as well, and typically did not spend the entire workweek on CMOP issues.¹³ As noted at all sites, it appears that staff members did not consistently use the tracking sheets provided by TMA to record problems as well as the time needed to resolve them.

5.1 Positives reported

Staff at all sites were positive and enthusiastic about their initial experience with using the CMOP at Leavenworth, Kansas, to process refills. All sites reported some initial difficulties with the process, which were generally resolved after discussions with the staff at the CMOP. Because Kirtland AFB started a little later than Fort Hood and NMC San Diego, it was able to use lessons learned during the Fort Hood and NMC San Diego startups to anticipate and at least partially avoid certain difficulties.

At all sites, the staff members agreed that beneficiary services had been improved by the reduction of their repetitive burden to process numerous refills. They indicated that having more time allowed them to pursue other important beneficiary services, such as patient counseling (drug interactions), reviewing beneficiary profiles for the delivery of pharmaceutical care, and exploring noncompliance rates. At NMC San Diego, in particular, the mailing of refills means that fewer beneficiaries need to enter the secure area and find parking spaces each week, which is viewed as very beneficial. Lack of available parking is reported as a major irritation for those who work at and visit the Medical Center. All sites report that, as the pilot has progressed, beneficiary satisfaction appears to be high, and demand for mailed refills appears to be either stable or growing.

In addition, staff at all sites reported shorter beneficiary waiting times at their pharmacies. The average waiting time at the PX fell from between 2 and 3 hours to 1.5 hours at Fort Hood, and to less than half an hour at the pharmacy at Darnall ACH. At Kirtland AFB, there had been a 2-day turnaround time for refills at its satellite pharmacy. The staff indicated that turnaround time had been shortened to 1 day.

At San Diego, the staff indicated that they observed shorter beneficiary waiting times and shorter lines at their pharmacies. In addition, they reported that severe parking shortages had been somewhat alleviated by shifting refills to the CMOP. They indicated that they were quite aggressive at marketing the availability and advantages of using the mailed refill option through the CMOP. Some satellite clinics were closed temporarily during the pilot study, and this also may have encouraged beneficiaries using these sites to consider switching to mailed refills.

The command staff at NMC San Diego spoke to us concerning their view that offering a mail option for refills is extremely important. In fact, it was considered important enough that NMC San Diego had decided to offer all beneficiaries who call in refills the option to have the refill mailed to their home address, whether or not it was a pharmaceutical

¹³ NMC San Diego reported freeing up 3 of the 11 full-time equivalent (FTE) pharmacy technicians from its refill division, based on reduced workload from sending refills to the CMOP. The CMOP specialist position was filled by 1 technician, and NMC San Diego reassigned the remaining 2 technicians to support the new prescription division and the new patient greeting area (where civilian prescriptions are screened and staff address clinical warnings before filling prescriptions).

product currently available from the CMOP. In other words, if the CMOP could not (at that time) support mailing the refill, the NMC San Diego pharmacy system provided its own mailing service to the beneficiary. San Diego is the only pilot site that adopted this approach, and it indicates how strongly it supported the mailed-refill option.

The consensus of the staff at all sites was to recommend that DoD continue the pilot programs beyond the initial 1-year period. In addition, they recommended moving toward system-wide adoption of using the CMOP system to process refills, based on experience with the pilot project. Fort Hood and Kirtland AFB staff thought that including controlled substances in an expanded program would be good but might cause some processing difficulties. Personnel at NMC San Diego felt strongly that it would be important to include controlled substances; they anticipated that this would be a smooth process that would pose few problems.

5.2 Problems and remedies

The primary difficulties encountered at the sites involved incorrect beneficiary addresses, “unit of issue” terminology, formulary differences, and software considerations.

One of the most significant problems occurred with respect to incorrect beneficiary addresses. Early participation revealed that a significant number of home addresses in the system were invalid. (Note that a DEERS update of the address does not trigger an update of the address for the MTF files.) This was more problematic for Fort Hood and NMC San Diego; Kirtland anticipated this problem based on lessons learned from Fort Hood and NMC San Diego, which started the pilot earlier in the year. Kirtland started the pilot with a focus on asking participants to update their addresses to minimize this type of problem, and found that this approach worked well.

All sites emphasized that the address update should include the city and ZIP code as well as the new street address. In addition, beneficiaries must be careful to add to DEERS the social security number (SSN) of all beneficiaries, not just the SSN of the sponsor (military member). NMC San Diego alerted family members to the problem of pseudo-SSNs, which are not unique and could generate mix-ups in medications.¹⁴ All pseudo-SSNs start with a common string, so it is possible to identify them. These beneficiaries were not offered a mailed refill option until the “pseudo social” was replaced with the patient’s actual SSN.

Another issue observed at all sites involves CMOP-MTF language mismatches on the terminology of prescription refills. This is a unit-of-issue problem for prepackaged drugs. Simply put, for a specific drug, does the quantity “one” imply one pill or one bottle, and does “one hundred” imply a hundred pills or a hundred bottles? Equally important, does “fifteen” mean fifteen grams of an ointment, or fifteen tubes of ointment? These types of problems are easily recognized, and the solution is to select a single, common protocol

¹⁴ Pseudo-SSNs may be generated when a patient needs care but cannot provide an SSN. For example, infants, NATO Forces, or civilians brought to the emergency room may be assigned a pseudo-SSN in lieu of having (or being able to give) an actual SSN.

between the MTFs and the CMOP. This problem appears to be a startup issue and was quickly resolved at all sites. In the long run, it would make sense for the VHA National Drug File to be revised to comply with commercial standards as a way to negate this type of problem.

There are also minor formulary differences between DoD and VA, especially with regard to pediatric medications. A formulary-associated problem occurred when the CMOP had difficulty obtaining a specific pharmaceutical, and/or had a temporary stock availability problem.¹⁵ In either case, the MTF beneficiary might find that the CMOP was unable to process the requested refill. We consider these problems together because the solution is similar: the MTF can establish a list of pharmaceuticals that are not available (or currently on backorder) from the CMOP, and a computer check can flag any refill attempt that requests a refill of a currently non-available drug. These refills were rerouted directly to the MTF without being sent to the CMOP. In addition, the pharmacy personnel reported that the system could be adapted so that patients requesting mail delivery of flagged drugs would not even receive the mailing option when calling in refills.

Some software interface problems arose, but these have apparently been resolved. Most were resolved within a day or two, or even a couple of hours. The relationship between personnel at the MTFs and the CMOP staff at Leavenworth appeared to be excellent: MTF staff reported that the CMOP staff was responsive, easily reached, and worked well with MTF personnel to resolve problems quickly. However, continued communication between the MTF personnel and the CMOP staff was considered crucial because there were times when the CMOP made changes to the system and forgot to inform the MTF. In general, these problems were considered minor and/or temporary in nature.

5.2.1 Other issues noted during site visits

We asked personnel at both sites whether they thought they could see any differences with respect to potential recapture of workload from the retail network and TMOP. Staff at Fort Hood believed they were processing an increase in the number of prescriptions written by civilian doctors, which gave them the sense that they were recapturing workload. The staff at Kirtland did not seem to think that they were recapturing much workload from the retail network or TMOP, although they thought that they might have recaptured some workload from the VA.

With respect to documenting the time required by staff to deal with CMOP refill problems, we based our findings on direct estimates provided by the people with whom we met. TMA provided a template of tracking sheets for personnel at the sites to use to fill in details of the time required to resolve CMOP-MTF problems. For all sites, however, it appeared that staff members did not continue to use the problem-tracking sheets provided by TMA.¹⁶ This made it difficult to obtain consistent data reported across

¹⁵ Occasional backorder problems are common across the pharmaceutical industry, including DoD.

¹⁶ Although the problem and time-to-resolve tracking sheets were used initially, they apparently were not subsequently used. The fact that the sites agreed that they needed to spend relatively little time on resolving CMOP-MTF problems may account for this behavior. NMC San Diego spent more time this way than the other sites, but this was to be expected because they had a much larger base of refills being processed.

the pilot sites. During the site visits, personnel at all sites were reminded that the problem-tracking sheets provided by TMA should be filled in and sent back to TMA.

We asked about the labor mix used to staff the pharmacy and satellite refill centers at both sites. The labor mix is important to document because it will determine how much flexibility a site has with respect to adding or deleting pharmacists and pharmacy technicians. This may be important to consider over time if the mail refill pilot is ever expanded. Contract labor provides the most flexibility, followed by General Service (GS) civilian personnel. Contract and GS labor could be reduced if the MTF found that pharmacy services could be provided with fewer personnel as a result of mailed refill services through the CMOP.¹⁷

With respect to labor mix, Fort Hood had a mixture of active duty, GS, and contract personnel, for both pharmacists and technicians. Kirtland, however, had primarily active duty personnel for pharmacy technicians, and a split of active duty and contract pharmacists. It did not have GS personnel among pharmacists or technicians. We asked about the composition of the staff serving the pharmacy at NMC San Diego and were told about 30 percent were active duty, about 30 percent were GS employees, and about 40 percent were contract employees. The observed mixtures of personnel result in considerable flexibility in the personnel pool that supports pharmacy services.

5.2.2 Overall recommendations

At each site, the pilot program was deemed a success; the overall recommendation was that it should be continued and extended system-wide. Everyone we encountered agreed on this recommendation. We asked specifically about whether controlled substances should be included if the program became system-wide. On that issue, some felt that it would be good to include controlled substances; others felt that this might require the use of significantly more control mechanisms. NMC San Diego had the most positive view of including controlled substances in the future.

We also consulted with staff at the Leavenworth CMOP to get their input on the implementation of the pilot program and their assessment of the progress to date. The staff at the Leavenworth CMOP indicated that they had biweekly teleconferences set up with the DoD pilot sites. In addition, the IT section fielded calls from the sites dealing with a variety of issues (e.g., prescription batch issues, such as transmissions, and matching products with the VHA National Drug File). The CMOP personnel felt that issues were being readily addressed and corrected in a timely manner. In addition, they indicated that all issues to date had been learning-curve issues.

In summary, findings from the site visits reinforced the evidence obtained from evaluating the data observed through the 1-year pilot. The data demonstrated significant growth in beneficiary acceptance of the CMOP mailing option, and discussions with

¹⁷ However, pharmacy personnel might be retained even if the refill workload diminishes at the MTF. Pharmacy staff might be able to provide additional services to beneficiaries as the refill workload falls, or provide faster turnaround of prescriptions and reduced pickup times.

pharmacy personnel indicated that beneficiaries were generally quite satisfied with the pilot program. In addition, the pharmacy staff reported satisfaction with the program and were supportive of continuation and/or expansion of the MRMS pilot. In fact, NMC San Diego personnel indicated that they hoped to continue with a mail-order program regardless of whether the MRMS initiative was to be implemented system-wide.

5.3 Lessons learned

We found that most of the problems mentioned during our site visits were short term in nature—problems that are always part of the learning curve for a new endeavor. Based on the experiences at the pilot sites, we can observe a number of lessons that would be important input for any new site that might use the MRMS in the future.

With respect to issues that need to be considered before potentially expanding the pilot study, staff identified several points:

- Startup efforts should focus on requiring participants to provide updated addresses, complete with city and ZIP codes.
- Updating beneficiary social security number information in DEERS is essential.
- MTFs and CMOPs need to establish a common unit of measure for all prepackaged pharmaceutical products.
- MTFs and CMOPs must keep in close communication regarding the specific pharmaceutical products supported by the CMOP and any temporary shortage/backlog issues.
- Frequent CMOP and MTF communications in general will be key to keeping a smooth process in place, and resolving or preventing problems, especially with regard to software changes.

If the MRMS is ever expanded, it should be possible to extend these lessons learned to smooth the implementation process. Next, we turn to some of the cost implications that would need to be considered if DoD and VA were to decide to expand the MRMS initiative.

6.0 COST IMPLICATIONS

To fully capture the significance of the MRMS implementation, it is important to know the impact of the workload changes with respect to the changes in costs for the MTF. As refill workload shifts to the CMOP, the MTF total workload falls, but the decrease is in the refill part of its overall workload. The remaining MTF workload shifts to a greater proportion of first fills, which require more intensive use of resources than is the case for refills. Therefore, to fully capture the impact of the shift of workload, it is important to have estimates of the cost of refills and first fills separately. It is also possible to use the ratio of the resources used for a refill vice a first fill to approximate the impact of the changing workload.

However, it is not a trivial task to extract this type of cost information for the production of pharmacy services at the MTFs. First, the pharmacy is usually part of a larger installation, and it is difficult to appropriately allocate fixed and administrative costs to each separate activity. It is also challenging to separate out the amount of time and resources to do a refill vice a first fill. DoD adopted a cost-of-dispensing algorithm that allocates costs (e.g., fixed, variable, administrative). A review of historical MTF-specific cost data generated via that algorithm for the Air Force for FY 2000 revealed high (and unexplained) variability across facilities.¹⁸

This cost-of-dispensing algorithm was modified in June 2003 at the direction of the Service Pharmacy Specialty Leaders. The modified algorithm was sent to staff members at NMC San Diego and Fort Hood. The modified algorithm asks staff members to estimate the ratio of their time spent dispensing new fills compared to refills, for example, which can be a somewhat subjective measure. Kirtland AFB did not provide cost estimates using the new algorithm.

Looking at FY 2003 cost data for first fills and refills provided from San Diego and Fort Hood using the new algorithm, we can observe inconsistencies that would need to be resolved. The inconsistencies may be due to different data extractions, different interpretations of the algorithm's elements, different business practices, or to other unknown factors. For Fort Hood, the estimated cost of providing refills and first fills were almost identical (\$2.61 and \$2.76, respectively). Such minor variation between first fills and refills seems unusual. NMC San Diego reported first-fill costs of \$3.82 and refill costs of \$1.53 using the new cost-of-dispensing algorithm, showing a much greater spread between refill and first-fill costs. The new algorithm should be validated (and compared with results obtained using the previous algorithm), and would need to be applied to facilities DoD-wide to generate aggregate cost estimates for refills and first fills.

Finally, the cost levels and changes in costs for the MTFs should be considered in comparison with costs within the CMOP system. It is more straightforward to evaluate

¹⁸ LtCol Greg Russie provided this cost-of-dispensing algorithm and data. Some of the observed variation may be due to different methods of extracting the data, or varying interpretations of the algorithm.

costs within the CMOP system because it is more of a standalone system that specializes in processing fills, and not in patient interactions and services.¹⁹

6.1 Costs of refill dispensing at the CMOP and for MTFs

Table 6.1 reports the total dispensing costs at CMOP Leavenworth for DoD refill workload from the first three quarters of FY 2003. These costs remained stable over the initial pilot period. For FY 2003 as a whole, processing costs totaled \$1.31 per fill and mailing costs amounted to \$1.02 per fill, yielding an average dispensing cost of \$2.33 per fill. Given that DoD demand would be only a small subset of total CMOP workload, this average cost could be viewed as a good estimate of the marginal dispensing cost to DoD of using CMOP Leavenworth to process a percentage of its refill workload. However, in July 2003 the CMOP system changed to a blended rate over all CMOP facilities, and charges to DoD dropped to \$2.23 per fill (\$1.22 processing cost plus \$1.01 mailing cost).²⁰ This blended rate may fall over time as CMOP replacement and modernization operations are completed.

Table 6.1: CMOP Leavenworth Dispensing Costs, DoD Pilot Sites, FY 2003

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Fiscal Year
Number of fills	75,012	113,649	144,942	155,439	489,042
Salary cost per fill	\$ 0.82	\$ 0.77	\$ 0.74	\$ 0.71	\$ 0.75
Incremental inventory charge ¹	\$ 0.12	\$ 0.13	\$ 0.14	\$ 0.14	\$ 0.13
Operating cost per fill	\$ 0.43	\$ 0.47	\$ 0.44	\$ 0.40	\$ 0.43
Mailing cost per fill	\$ 1.01	\$ 0.98	\$ 1.04	\$ 1.03	\$ 1.02
Total cost per fill	\$ 2.38	\$ 2.35	\$ 2.35	\$ 2.28	\$ 2.33
¹ A surcharge of 0.4%					

We have had difficulties in obtaining comparable data on the cost of processing refills at the MTFs. As indicated above, disentangling comparable costs within the MTF system is difficult. We met with the DoD Pharmacy Board of Directors on April 8, 2002, to hear their views and concerns regarding the MRMS pilot study. At that time, TMA requested that the board members provide Service-specific information regarding the cost of pharmacy services, and the ratio of first-fill costs vice refill costs, to CNA by June 1, 2003. However, the pharmacy board members were unable to provide us with the requested information, except for pilot site-specific data for Fort Hood (\$2.61 for refills and \$2.76 for first fills) and NMC San Diego (\$1.54 for refills and \$3.82 for first fills), using the modified cost-of-dispensing algorithm discussed earlier. For both sites,

¹⁹ The CMOP system does have some administrative costs intertwined with the overall VA system, but the degree of overlap between the CMOP system and the VA is much smaller than the overlap of the typical MTF pharmacy and the overall MTF structure.

²⁰ The fourth quarter total cost per fill reported in table 6.1 is slightly higher because the CMOP did not move to the blended rate until after the fourth quarter had started. The price partially reflects the higher pre-blended rate regime.

estimated processing costs for refills were greater than the CMOP processing cost of \$1.22, although at San Diego, the estimated refill cost (\$1.54) was less than the *combined* processing and mailing cost of \$2.23 for each CMOP fill. However, aggregate information on the cost of first fills and refills across all Services would be needed in order to compare DoD processing costs to CMOP processing and mailing costs on a system-wide basis.

Until more complete MTF cost information becomes available, we must rely on other information to build an approximation of the cost impact of the reduced workload for the MTF pharmacies. This will not provide a precise estimate, and in some sense it can best be viewed as a simulation based on what we believe to be reasonable assumptions.

One possibility is to rely on pharmacy data for FY 2000 based on Air Force data provided by TMA. These data estimate dispensing costs based on three categories—fixed direct costs, variable direct costs, and indirect costs (DoD definitions)—and are based on the DoD cost-of-dispensing algorithm in use in FY 2000.²¹ The data were computed separately for pharmacies with a mixture of services and for satellite refill-only pharmacies. The overall fill cost for Air Force general outpatient pharmacies (excluding refill-only satellites) in FY 2000 was approximately \$3.34; separate satellite Air Force refill-only pharmacies reported an average refill cost of about \$1.91. However, the ratio of these numbers does not reveal the ratio of first-fill to refill cost because the figure of \$3.34 is derived from pharmacies with an unknown mixture of first fills and refills.

These data can be updated by using inflation factors (3 percent annually) to 2003 prices, in which case the approximate cost of a refill at the Air Force standalone refill satellites would be about \$2.09. This may underestimate comparable refill costs for the Navy and Army, however, for two reasons. First, the Air Force refill pharmacies are primarily staffed with pharmacy technicians, whereas the Army and Navy pharmacy technicians who prepare refills are often checked by pharmacists. In addition, efficiencies may exist in a pharmacy that does only refills, compared with a mixed pharmacy setting.

If we rely on this comparison, we are essentially comparing the DoD cost of a refill that is picked up by the beneficiary with the CMOP cost of a mailed refill—in essence, a different product. The comparable CMOP processing cost, stripping out the mailing portion, would be about \$1.22, compared to the Air Force estimated processing cost of \$2.09. However, this does not offer a direct comparison of similar costs, and it also does not deal with the practical issues of whether DoD will save money, or face increased costs, by sending refills to the CMOP system.

6.2 Cost implications of expanding the MRMS initiative

Overall, if the MRMS initiative were to be expanded CONUS-wide, the experience in the three pilot sites leads us to expect that CMOP facilities would fill a little over half of all

²¹ The cost-of-dispensing algorithm provided by LtCol Russie describes the DoD cost definitions in detail. For example, salaries (labor costs) are categorized as direct fixed costs (because they do not vary according to pharmacy volume). Economists generally categorize labor costs as variable costs.

MTF refills, or about 9.35 million refills. At the CMOP blended rate cost of \$2.23 per fill, using the CMOP would cost DoD \$20.9 million. However, DoD would recover non-labor direct variable cost savings (e.g., vials, bottle, labels) that would reduce the net cost to \$19.5 million. Based on preliminary evidence from the pilot sites combined with DoD-wide beneficiary demographic information, we estimate that Medicare-eligible beneficiaries using the CMOP system would account for about \$8.6 million of this amount. The remaining \$10.9 million in cost would be targeted to DHP.

The share of the potential cost of a nationwide MRMS initiative attributable to utilization by Medicare-eligible beneficiaries should be considered in terms of possible cost-avoidance. The MTFs receive funding from the Accrual Fund based on the number of fills that are provided to Medicare-eligible beneficiaries. The Accrual Fund provides reimbursement for drug costs plus an administrative fee based on MTF-specific level-of-effort calculations from the TMA resource management division. The DoD system-wide average administrative reimbursement per fill is \$6.18 (MILPAY of \$2.93 plus O&M non-ingredient reimbursement of \$3.25).²²

Comparing the average administrative reimbursement fee of \$6.18 to the MTFs with the CMOP cost of \$2.23 (including mailing) reveals the potential for a substantial cost avoidance based on Accrual Fund reimbursement. The comparison also reveals other issues that must be addressed, including the MILPAY portion of the administrative reimbursement and implications for DHP if the accrual fund is used to reimburse the CMOP rather than the MTF for refills used by Medicare-eligible beneficiaries.²³

Turning to the remaining \$10.9 million targeted to DHP, there are several ways this cost could be covered. This would be the cost of a nationwide MRMS initiative to DHP if **neither** of the following occurred:

- The Services cut back on staff at MTF pharmacies, or
- MTFs recaptured a portion of pharmacy workload currently being processed by TRICARE network pharmacies or TMOP.

However, instead of cutting staff, DoD might want to consider reassigning staff to provide additional customer and clinical services that add value. In the next two sections, we consider the cost savings that might be associated with either of these actions to determine the feasibility of covering the probable DHP cost of MRMS expansion.

²² These numbers include data from some non-CONUS locations. The non-CONUS sites represent less than 1 percent of the fills in the data.

²³ For an example from one of the pilot sites, we can consider NMC San Diego for June 2003. During this month, Medicare-eligible beneficiaries accounted for 18,700 of the approximately 34,000 refills sent to the CMOP. Using the fee reimbursement rate of the Accrual Fund specific to the NMC San Diego, and the June data on refills, we calculated potential cost avoidance of over \$400,000 annually for NMC San Diego. This does not consider the issue of the MILPAY portion of the Accrual Fund reimbursement rate.

6.2.1 Possible cost savings at MTF pharmacies

The first example considers the possibility of savings to be obtained by cutting MTF pharmacy staff as a consequence of shifting DoD refill workload from the MTF to the CMOP system. This exercise requires making a number of assumptions, any of which can be varied to consider more realistic information as it becomes available.

We assume that the pattern of workload shifting observed is approximately the same as has been observed to date for the pilot sites – specifically, that there is an aggregate reduction in workload, based on total fills, of about 16 percent. Second, we note that refills use fewer resources than first fills, so the true “work” that goes away will be less than 16 percent. Here we use our best (but very limited) information on the ratio of the cost of refills to first fills, based on FY 2000 Air Force data (provided by TMA), inflated to FY 2003 prices, and on GAO estimates that the ratio is 0.6.²⁴ This is not very precise information. To be conservative, we chose a ratio of 0.5.

Assuming that a refill takes about half the resources of a first fill, we continue the exercise by assuming that the 16-percent reduction in fill workload (all refills) results in only an 8-percent reduction in labor required (we ignore the costs of bottles, labels, and supplies because they are small compared to labor costs, and we consider these elsewhere). Under these assumptions, the shift of refill workload to the CMOP might reasonably lead to a reduction of required staff at the MTF by up to 8 percent. However, this estimate would need to be refined with more precise information regarding the relative resources used to provide first fills and refills by Service.

Another way to proceed is to consider the total number of refills that might be shifted to the CMOP system under a nationwide MRMS initiative, and estimate the number of outpatient pharmacy staff that would have been required to process those refills. Using this methodology, we estimate (very conservatively) that in the aggregate, pharmacy outpatient staff could be cut by at least 100 positions, and possibly more. The mix of pharmacy staff to be cut (pharmacists and pharmacy technicians) would determine the potential for savings. Using Army and Navy data for contract pharmacists and pharmacy technicians, we estimate that it would be possible to save at least \$5 million by trimming outpatient pharmacy staff by 100 positions.²⁵

²⁴ Cost data for the Air Force pharmacy program demonstrated a wide range of estimates. The data indicated an approximate overall cost of refills for FY 2003 of \$2.09 and an estimated first-fill cost of about \$4.41 (based on extrapolations of the FY 2000 Air Force data under specific assumptions, including annual inflation of 3 percent). Individual Air Force pharmacy estimates varied widely. As noted earlier, more recent estimates for Fort Hood estimate the refill cost at \$2.61 and the first-fill cost at \$2.76, based on the new (June 2003) cost-of-dispensing methodology. In contrast, NMC San Diego reported a refill cost of \$1.53 and a first-fill cost of \$3.82 using the new cost-of-dispensing algorithm.

²⁵ If personnel were to be reduced, the savings obtained would depend on the mixture of personnel cut, both in terms of pharmacists vice pharmacy technicians and in terms of active duty vice contract and/or GS personnel. The average salary and benefits of contract pharmacists and pharmacy technicians can be used to approximate the savings from cutting personnel. Using contract data from the Army and Navy, we estimate that contract pharmacists earn salary and benefits of about \$92,000 per year, while contract pharmacy technicians have salary and benefits of about \$36,000 annually. More accurate estimates would require Service-specific updated information.

This might well be achieved over time by attrition. Vacancies would not be filled for a period of time until the desired level of staffing was achieved. Alternatively, the Services currently use a substantial portion of contract and GS pharmacy personnel, which provides a more flexible way to trim staff in a shorter period of time. The services of contract pharmacy personnel, for example, can be easily curtailed, by not renewing the contracts. Table 6.2 shows the distribution of full-time-equivalent pharmacy personnel (including inpatient) based on data for June 2003 provided by the Services to TMA.

Using this target as an example, the Services could implement a cut of 100 outpatient pharmacy staff by releasing contract employees only. It would not be necessary to cut active duty or civilian (GS) personnel. Taken separately, the Army and Navy have a sufficient share of pharmacy personnel under contract to make the suggested reduction without cutting active duty or civilian (GS) pharmacy personnel, but this does not hold true for the Air Force. We do not know, of course, if each Service would decide to reduce pharmacy personnel by the same percentage, if at all. This example is not intended to represent the actual size of cut, if any, that might be implemented. Similarly, we do not attempt to determine the appropriate distribution of cuts across the Services, which would require consideration of actual manning compared to authorizations.

Table 6.2. Services Inventory of Pharmacy Personnel by Source: FY 2002

	Annualized Full-Time Equivalents*			
	Pharmacists		Pharmacy Technicians	
	Number	Pct. of Total	Number	Pct. of Total
Army				
Officer/Enlisted	124	25.4	667	76.1
Civilian GS	310	63.4	173	19.7
Civilian Contract	55	11.2	37	4.2
Air Force				
Officer/Enlisted	240	87.6	999	90.2
Civilian GS	21	7.7	94	8.5
Civilian Contract	13	4.7	14	1.3
Navy				
Officer/Enlisted	153	49.4	896	84.5
Civilian GS	108	34.8	72	6.8
Civilian Contract	49	15.8	92	8.7
Coast Guard				
Officer/Enlisted	16	94.1	50	100.0
Civilian GS				
Civilian Contract	1	5.9		
Total all Services	1,090		3,094	

*Data provided by the Services to TMA. Data aggregated by TMA. These numbers reflect reported manpower, and do not necessarily reflect authorizations. Includes inpatient pharmacy personnel.

It is not clear, however, that cutting personnel would be an appropriate action to take. One reason that the MRMS initiative came under consideration was to provide relief to the Services, which have found it difficult to staff pharmacies to requirements. In addition, the shift of refill workload to the CMOP system might provide an opportunity to allow overburdened DoD pharmacy personnel to resume other priority tasks, such as providing primary services to beneficiaries.

6.2.2 Potential benefits obtained by shifting pharmacy personnel to other tasks

Among the potential benefits from freeing up pharmacy personnel as a consequence of shifting refill work to the CMOP system would be allowing pharmacy staff to spend more time pursuing important beneficiary services. At all of the pilot sites, the staff members agreed that beneficiary services had been improved due to the reduction of their repetitive burden to process numerous refills. They were able to provide fills more quickly for beneficiaries and decrease pickup time. They also indicated that having more time would allow them to potentially pursue other important beneficiary services, such as:

- Enhancing patient counseling
- Comprehensive medication use review with beneficiaries (disease state management)
- Reduction of noncompliance rates (by identifying reasons and establishing processes to increase compliance).

Staff indicated that an additional benefit from shifting refills to the CMOP would result from reduction of fill error rates due to the automation procedures (including automated equipment and bar code checks) in place at the CMOP.

Other benefits would directly accrue to the beneficiaries, including:

- Shorter waiting time for those coming into the pharmacy
- Shorter pickup turnaround time for those calling in prescriptions to pick up
- Convenience of having prescription(s) delivered to the home
- Less time spent driving, getting on and off base, and parking
- Ability to send CMOP refills to deployed Service members at duty stations or on board ship, and ability to send fills to family members that may go to live with relatives temporarily while Service members are deployed.

Finally, general benefits for Service members as well as beneficiaries may be obtained:

- Less congestion in the parking lots
- Reduced reliance on the base pharmacy/satellites, which may be important as security conditions change (higher security conditions may result in limited access to the base, or to limited services at some locations – meaning that the CMOP may help provide a seamless delivery of fills).

6.3 Possible savings from TRICARE network and TMOP recapture

Although DoD could save costs by slightly downsizing some of its MTF pharmacies, it might choose not to do so. Instead, DoD might want to use current MTF staff in different ways in order to improve customer service. In this case, DoD might still be able to pay for most or all of its CMOP costs by recapturing a portion of the workload that is currently being processed by TRICARE network pharmacies and through TMOP. Recapturing network pharmacy workload would likely have significant cost implications because these retail prescriptions tend to be the most costly to DoD despite the copays charged to beneficiaries. It is beyond the scope of this study to project the extent of any recapture that may materialize.²⁶ However, it is possible to estimate the amount of recaptured network workload that would be necessary to fully cover the remaining DHP cost share (\$10.9 million) of an expanded MRMS initiative. In table 6.3, we list the assumptions we use in generating this estimate. However, these calculations and estimated savings will be substantially diminished (or even eradicated) if federal pricing can be implemented for TRICARE retail pharmacy.

Table 6.3: Assumptions Used in Estimating Necessary Network Pharmacy Workload

Network Pharmacy Assumptions	CMOP Assumptions
Average total cost per fill: \$60.30 Average dispensing fee: \$2.50 Average copay: \$6.30	Average length of fill: 60 days Savings on ingredient costs: 40% Average dispensing cost: \$2.23 Average net dispensing cost: \$2.08* Total number of CMOP fills: 5.24 million

*Average net dispensing cost for the CMOP nets out the direct variable costs that DoD eliminates by sending refills to the CMOP (e.g., bottles, vials, labels).

Our assumption on the total average cost for a network fill comes from the PDTS and reflects the average cost for network prescriptions as of the summer of 2003. Note that this number includes the dispensing cost and that the average copay has not been netted out of this figure. The average network dispensing cost is based on the national average retail dispensing cost as reported in the *2002 Takeda Prescription Drug Benefits Cost and*

²⁶ As noted earlier, we looked at the issue of whether any recapture was being observed at the pilot sites at this point in the year. We did not find evidence for recapture from the TRICARE retail pharmacy system, but we saw a slight indication that there might (or might not) be a small recapture developing from TMOP. For the time frame of the CMOP pilot program, we would not expect that recapture would be occurring. First, this is a pilot program, and beneficiaries would not necessarily want to go to the trouble of switching their refills to the MTF if they fear that the pilot program may not be continued. A switch is more likely to occur when a patient visits the physician again for a new prescription. Second, the pilot sites have concentrated on getting current MTF users to consider switching to the CMOP mailed refill system. To our knowledge, there has been no systematic effort to advertise or market the CMOP mailed refill system to beneficiaries who are currently using TRICARE retail pharmacies or TMOP. In general, it is entirely possible that the beneficiaries DoD might like to recapture were not even aware of the existence of the CMOP program. If the CMOP pilot were to be continued or expanded, DoD might want to redesign the demonstration by adding an effort to attract beneficiaries targeted for recapture.

Plan Design Survey Report. The basis of the “Takeda Report” is an annual survey conducted by the Pharmacy Benefit Management Institute, Inc. Finally, we assume that the average copay for a network pharmacy prescription is \$6.30, which implies a network pharmacy workload that is 55 percent brand name drug and 45 percent generic drugs. The brand name/generic split was determined based on PDTS reports for FY 2003.

Our first CMOP assumption is that the average length of fill is 60 days. This assumption turns out to be not very important, based on sensitivity analyses that we have conducted. We also assume that ingredient costs for prescriptions filled under CMOP would be about 40 percent lower than on prescriptions filled by the network pharmacies. This is based on information obtained from various Congressional Budget Office and General Accounting Office reports and conversations with TMA. The average dispensing cost comes from table 7.1 of the Takeda Report cited earlier.

TRICARE retail pharmacy figures show that for the MSCS within catchment workload, there are almost 7 million fills per year from non-Medicare eligible beneficiaries (and almost 15 million for this group in CONUS).²⁷ Given this base and our assumptions, we estimate that, in order to cover the costs of the DHP share of anticipated CMOP fills, a little under 600,000 of the non-Medicare-eligible beneficiary fills from the TRICARE network pharmacies would have to be recaptured. Within this base of non-Medicare-eligible beneficiary fills (or DHP fills), this represents about 8.8 percent of all network fills processed by pharmacies inside catchment areas, or 4.0 percent of all network fills processed by all network pharmacies. This estimate gives DoD an approximate recapture target for the DHP share of retail pharmacy fills, in that this amount of recapture would fully cover the expected DHP cost share of expanding the MRMS initiative system-wide. The amount of recapture needed to cover the cost of the program appears to be a feasible target, although this would depend on the approach and tools DoD might choose to use to encourage retail pharmacy recapture. In addition, if DoD moves to federal pricing for the retail pharmacies, this would substantially lower the per-fill savings from retail recapture.

Although it is quite possible that the MRMS initiative could pay for itself through recapture of network pharmacy workload, it is not likely that recapture of TMOP workload alone would have the same effect. Consider that there is no difference in drug ingredient costs between the MRMS and TMOP programs. The processing fee of about \$10.20 per fill being charged DoD by Express Scripts is much larger than the \$2.23 processing cost under the CMOP; however, if we assume an average copay of \$6.30 on each TMOP fill, the net cost to DoD is \$3.90 for each fill under TMOP. This means that DoD would only save \$1.67 on each TMOP fill that might get recaptured by the CMOP.

In FY 2003, the NMOP/TMOP program only filled roughly 5.2 million prescriptions (and about three-quarters of these were for Medicare-eligible beneficiaries). Clearly, TMOP recapture could never cover the costs of a nationwide MRMS initiative on its own. Of course, any TMOP recapture achieved would help lower the rate of TRICARE network pharmacy recapture that would be necessary to help pay for the initiative.

²⁷ Medicare-eligible beneficiaries account for about 7.6 million within-catchment fills and 17.5 million CONUS fills.

With respect to the issue of recapture, it is important to consider the potential cost of an expanded MRMS initiative from the perspective of the accrual fund. Recall that we estimated that the cost of the program attributable to refills for Medicare-eligible beneficiaries would be about \$8.6 million. Although accrual fund reimbursements to the MTFs provide one way to recover some of this cost, any attempt to recapture beneficiaries that currently use TRICARE retail pharmacies and TMOP will be likely to recapture Medicare-eligible beneficiaries as well as beneficiaries that fall under DHP.

There are about 17.5 million TRICARE retail pharmacy fills for Medicare-eligible beneficiaries annually in CONUS, with about 7.6 million of these in catchment. Under current assumptions (e.g., the federal pricing schedule for pharmaceuticals does not apply to TRICARE retail pharmacies), recapture of 3.3 percent of the CONUS workload of Medicare-eligible fills, or 7.4 percent of the in catchment workload, would cover the full cost of sending these refills to the CMOP system. Therefore, DoD should consider the full implications of a recapture program, with respect to both the categories of beneficiaries they are likely to recapture and how savings or cost avoidance could be achieved. DHP savings, whether through staff cuts (or re-investment of pharmacy personnel to value-added customer or clinical activities), or recapture efforts, would need to be considered in the overall context of accrual fund cost avoidance and recapture of Medicare-eligible refills.

As noted earlier, we looked at the issue of whether any recapture was being observed at the pilot sites, although for the time frame and design of the CMOP pilot program, we would not expect that recapture would be occurring. As expected, we did not find evidence for recapture from the TRICARE retail pharmacy system, and only a slight indication that there might (or might not) be a small recapture developing from TMOP. To estimate potential for recapture, the pilot sites would need to concentrate on advertising or marketing the CMOP mailed refill system to beneficiaries who are currently using TRICARE retail pharmacies or TMOP. If DoD and VA decide to extend or expand the MRMS initiative, DoD may want to redesign the demonstration by adding an effort to attract beneficiaries targeted for recapture.²⁸

So far we have considered various cost-avoidance measures that could be used to pay for the MRMS initiative. Another option to help to defray the costs of the MRMS initiative would be to charge a nominal copay, or “convenience fee,” for mailed MTF refills.²⁹ This copay could be as low as \$1 per fill (to cover the CMOP mailing costs) or could be set at a level high enough to cover the total CMOP per-fill cost plus the costs of collecting the copay. Charging a copay for CMOP mailed refills could not be seen as a reduction in the benefit because beneficiaries would still be able to pick up their prescriptions at the MTF

²⁸ Any effort to recapture beneficiaries should be designed to facilitate measuring success or failure. Baseline data should be compared to subsequent observations for the relevant beneficiary groups. It is important to control for external influences, as we need to know whether beneficiaries using retail pharmacies are returning to the MTFs due to the influence of the CMOP pilot or to other factors.

²⁹ Although this may not be considered a desirable policy, we offer this option for the sake of completeness. This approach was not explored in the DoD/VA CMOP pilot. With regard to setting a copay strategy, DoD would need to take into account the anticipated administrative costs required to process and collect copays.

with no copay. Certainly, beneficiary use of the program might be lower than it would be with no copay,³⁰ but it is likely that a significant portion of MTF refills would still be processed by the CMOPs, leaving MTF pharmacy staff able to perform more customer service and clinical functions.

³⁰ The number of DoD CMOP refills would fall by some amount, depending on the size of the copay.

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7.0 DISCUSSION AND CONCLUSIONS

The current DoD refill workload per year is about 18.7 million, and is projected to grow consistent with historical trends. If DoD and VA want to reach a sharing arrangement to expand the MRMS program, based on the results of the VA-DoD pilot program, they should plan to phase in the DoD refills gradually over a period of several years. At present, the CMOP system does not have the capacity to absorb a large amount of DoD refills, even though two of the older CMOPs are slated for replacement by newer, high-capacity CMOP installations.

The results to date indicate substantial beneficiary acceptance of the MRMS initiative, and strong interest in continued use of a mailed refill option. In addition, there is substantial support at the MTFs for transferring a large portion of the refill workload to the CMOP system. Such a move would not only relieve MTF pharmacy staff of the time-consuming refill process but also allow them to concentrate on patient services and beneficiary counseling. In fact, NMC San Diego personnel told us that they hope to continue with a mail-order program regardless of whether the MRMS initiative is implemented system-wide.

The transition difficulties in converting MTF refills to the CMOP appear to be learning-curve issues that are well on the way to being resolved. Although issues remain to be settled, both the MTF staffs at the pilot sites and the CMOP staff we spoke to seemed convinced that the basic procedures have been established and are working well, and that no procedural difficulties would preclude processing MTF refills through the CMOP system.

7.1 Issues and concerns

If DoD and VA ever jointly plan to implement the MRMS system-wide, they would need to consider the implications of sharing the CMOP system. VA and DoD would need to jointly determine how best to fold DoD refills into the CMOP system, with respect to both the timing of phasing in DoD demand and the total amount of DoD demand that may eventually be filled by CMOPs. Based on total refills, DoD could reach 19 million refills by FY 2006. However, if DoD were to continue to offer beneficiaries the option to pick up refills in person at the MTF or at satellite clinics, only a share of these refills would be filled in the CMOP system. A conservative and reasonable estimate of DoD optional demand for CMOP fills would be over 9 million refills per year. In addition, DoD and VA would need to consider how DoD should share in the costs of providing additional CMOP capacity to provide services to DoD beneficiaries (e.g., DoD might provide unused base warehouse space for a potential eighth CMOP).

7.1.1 CMOP capacity considerations

In our previous study of the CMOP system for the VA, we considered the process of providing additional capacity to the CMOP system to meet VA-generated demand. We recommended that VA begin to invest in an additional CMOP facility in time to bring it on line when the comparison of projected demand to capacity predicts excess demand in

the range of 5 to 5.5 million fills per year. In other words, given that the expected set-up time to build a CMOP is 18 to 24 months, find the point in time at which excess demand is expected to reach 5 to 5.5 million fills per year, and start building approximately 21 months before that time.

Although the CMOP is an automated system, much of the cost of operating a CMOP is driven by labor. In this sense, a new CMOP can be operated with low average cost at 50 percent of capacity by simply using a single shift of labor. As demand grows, a second shift can be added as required to expand capacity within the facility. In addition, this provides additional needed reserve capacity to the overall CMOP system in case one or more CMOPs need to close down for a significant period of time.

7.1.2 Potential for outsourcing refills

One issue that has not been considered is the concept of outsourcing with respect to providing prescription refills. This is a complex issue for DoD and VA, given that each department wants to reduce the burden of providing a specific subset of pharmacy services—the refill segment. However, although outsourcing the refill services to a private vendor would appear to be an attractive option, it has not proved to be feasible for either VA or DoD.

Both DoD and VA have explored the option of using outsourcing to provide them with prescription fill and refill services. Specifically, they have sought outsourcing quotes from external providers for processing mailed prescription fills (under the assumption that they have already screened for beneficiary eligibility and clinical drug utilization review, the contractors would only process the refills and mail them). In addition, GAO has addressed the feasibility for DoD and/or VA to outsource prescription fills to the commercial sector. However, neither VA nor DoD has been able to obtain a commercial bid or quote for a prescription dispensing service that is comparable to the internal VA or DoD cost of dispensing.

GAO sought information regarding this issue as reported in testimony in May 2000. In GAO/T-HEHS-00-121 (p. 15), GAO reported that it “asked several commercial mail service pharmacies what dispensing fee they might charge military pharmacies to handle 23 million military refill prescriptions. The companies told us they likely would charge between \$5 and \$20 per prescription.” This validates the difficulties DoD and VA have encountered in finding a competitive outsourcing quote. Outsourcing will not be a realizable option until VA and DoD are able to negotiate a contract for an external processing or dispensing charge that is in the range of their respective internal processing costs. This may be very difficult to obtain because private vendors may perceive that the contract arrangements offered by DoD and VA will not enable them to match the profit

margins generally available in the overall commercial market.³¹ In addition, there may be other difficulties inherent in outsourcing that will be difficult and costly for DoD to surmount (e.g., legal hurdles with respect to processing refills while meeting state laws regarding ownership of original prescriptions which remain at the MTF).

7.2 Options and timing considerations

VA and DoD have a number of options to consider. VA is in the process of starting two new CMOPs to serve the dual role of replacing West Los Angeles and Bedford, and increasing system capacity to meet VA-generated demand. These two replacements could conceivably serve a modest amount of additional DoD demand. However, if DoD were to expand the MRMS system-wide, it would be likely to generate demand in excess of 9 million refills annually. In this case, the CMOP system might need to acquire an additional CMOP beyond the two replacement CMOPs currently in the planning stages. Such an investment would expand the CMOP system from 7 to 8 CMOPs, and would provide sufficient capacity to meet the full projected DoD demand as well as additional reserve capacity to the system.

CMOP cost calculations suggest that the mail, operating, lease, and equipment costs do not vary significantly across the United States. Most mail is delivered by the United States Postal Service, and costs do not vary by region. The single cost factor that may significantly influence the selection of a geographic location for a CMOP would be the cost of labor, which varies across regions. In consideration of two or more alternate locations, it would be worthwhile to consider the relative cost of pharmacists and pharmacy technicians at each location. Taking into account geographic variation in labor costs might lead to the selection of a site with significantly lower expected costs. Other than this factor, however, the decision of where to locate a CMOP may be primarily influenced by considerations of geographic dispersion within the CMOP system.

An expansion of the CMOP system would likely require a substantial investment on the part of both DoD and VA. In our previous study for the VA, CNA provided VA with an evaluation and a set of tools to facilitate a cost-efficient investment plan. This was designed to determine the appropriate timing and geographic location of proposed replacement and expansion CMOP facilities to meet anticipated demand. Given the fact that the lead-time required for a CMOP to come on line is 18 to 24 months, DoD should consider that an investment strategy formulated today would affect available CMOP capacity about 2 years in the future.

³¹ The private-sector price quotes are high compared to CMOP dispensing costs, and to DoD internal processing costs as well. This may be the result of a number of factors, including private-sector reliance on bundling processing or dispensing costs with drug prices. VA and DoD would plan to supply the needed drugs at DoD/VA price levels, rather than have the vendor directly supply the drugs, which would greatly lower the expected profit margin for vendors. Most private-sector prescription fill contracts stipulate drug prices considerably higher than what DoD and VA typically pay through their contractual agreements.

7.3 Cost considerations

Finally, DoD must consider the cost implications of moving refills to the CMOP system. Although the CMOP processing cost per refill appears to be lower than the average DoD internal processing cost, the CMOP cost of dispensing adds a mailing fee of \$1.01. Using an estimate of \$2.23 as the current cost of processing and mailing a refill from the CMOP lets us directly calculate the initial implementation cost of the MRMS. Using our assumption that a voluntary MRMS refill program might send about 9.35 million refills to the CMOP annually, VA would charge DoD approximately \$20.9 million, which would cost DoD about \$19.5 million after recovering direct variable costs. About \$8.6 million would be the share for Medicare-eligible beneficiaries (and might be addressed using the Accrual Fund), leaving \$10.9 million to be covered by DHP.

DoD might be able to recover some of the DHP portion of costs by trimming pharmacy staff. As discussed earlier, however, an alternative is to retain DoD pharmacy personnel and allow them to provide improved services to beneficiaries. Significant benefits could accrue from the transfer of refills to the CMOP system, and the value of these benefits must be weighed against the cost of using the CMOP. Although it may be difficult to quantify the value of the expected benefits, they could be substantial. Some benefits would directly accrue to beneficiaries, such as savings in waiting time and aggravation, and the added convenience of avoiding travel time for the beneficiaries most likely to use mailed refills—the Medicare-eligible and retiree age groups. Some of the additional benefits expected from implementing the MRMS include freeing up MTF staff to concentrate on clinical and cognitive duties, patient safety, and customer service for patients with new prescriptions and those requiring counseling and case management.

Potential recapture of beneficiaries using retail pharmacy benefits or TMOP provides another way to recover the cost of switching MTF refills to the CMOP system. Although an exact calculation is beyond the scope of this paper, we estimated the recapture that would be necessary to cover the DHP share of costs of a system-wide application of the MRMS. To do this, we did not apply Service-specific estimates; we simply relied on aggregate estimates. We find that recapture of approximately 8.8 percent of the in-catchment retail pharmacy attributable to DHP would cover the DHP cost share of the 9.3 million MTF refills sent to the CMOP annually. Cost avoidance based on the Accrual Fund should be able to compensate for the share of costs attributable to Medicare-eligible beneficiaries, although these calculations are complex. Alternatively, recapture of about 7.4 percent of the in-catchment retail pharmacy attributable to Medicare-eligible beneficiaries would also cover the cost of sending Medicare-eligible refills to the CMOP. However, these recapture savings estimates may be diminished or lost if federal pricing can be implemented for TRICARE retail pharmacy.

When considering the expected cost of an expanded MRMS initiative, it is difficult to account for the impact of DHP and Medicare-eligible costs. Although costs attributable to Medicare-eligible beneficiaries will be addressed via the Accrual Fund, it is true that Accrual Fund reimbursement costs become partially intertwined with DHP concerns. If the Accrual Fund makes payment adjustments to the rates currently paid to the MTFs,

these payment changes will affect MILPAY (the average MTF payment is \$2.93 MILPAY and \$3.25 non-ingredient O&M). In addition, it will be hard to adjust the Accrual Fund payment appropriately without knowing more about the true ratio of first-fill costs to refill costs. If the accrual reimbursement rates fall, over time a drop in the Services' payments into the Accrual Fund will reflect this, although these changes will take place after a significant lag in time. And finally, a targeted recapture program, aimed at TRICARE retail pharmacies and/or TMOP, will attract Medicare-eligible beneficiaries as well as DHP beneficiaries.

These points raise many issues and concerns. It is clear that there will be many complex details to balance in terms of deciding whether to expand the MRMS initiative, and if so, how best to recover costs as the program matures. The short-run costs are relatively easy to predict. It is much harder to predict the long-run cost-effectiveness of the program.

7.4 Overall summary and recommendations

If DoD and VA jointly determine that sharing the CMOP system is an appropriate endeavor, and plan to extend the MRMS system-wide, they need to consider several factors. DoD and VA must decide how to share the costs, and what inputs each should provide, with regard to setting up a potential eighth CMOP to meet DoD anticipated demand. Another factor they must jointly consider is the appropriate timing for expanding the MRMS; the lead-time for setting up an additional CMOP is likely to be close to 2 years. Finally, the experience of the pilot sites and CMOP Leavenworth will provide a number of important lessons that could be built on to smooth the transition process.

The VA/DoD CMOP pilot evaluation indicates that expanding the initiative could result in solid benefits for the Services. In addition, it is clear that beneficiaries would benefit from the increased choices and convenience offered by the MRMS initiative. The cost of implementation for the initiative would probably be shared between DHP and the Accrual Fund, and there appear to be several methods that might mitigate the cost of the program over time. Complex issues remain, however, such as how to share the potential cost of implementation and the difficulty of obtaining accurate DoD refill cost information to use in making comparisons to VA CMOP costs.

The MRMS pilot program reached the end of the planned one-year implementation in September 2003. DoD and VA have several options to consider, including continuing the pilot program at each of the sites. At this time DoD and VA are continuing to explore their joint options with regard to extending and/or expanding the MRMS initiative.

If DoD and VA reconsider implementing the MRMS initiative in the future, we have provided a number of issues that will need to be considered. It would also be prudent to address the VHA National Drug File issues to achieve joint agreement. In particular, the issue of different units of measure for prepackaged pharmaceuticals needs to be resolved. Finally, the electronic interface between DoD and VA could be improved to provide a more robust transmission protocol. This would also serve to enhance functionality—an important factor if DoD and VA were to consider including CMOP provision of controlled substances to DoD beneficiaries in any future MRMS pilot program or initiative.

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