



Office of Inspector General

AUDIT OF ADVANCED FOOD PROCESSING AND DELIVERY SYSTEMS IN OHIO AND WESTERN PENNSYLVANIA

Centralized Food Production Reduces Cost

Report No.: 98-00156-39

Date: February 9, 2000



DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
Washington DC 20420

Memorandum to the Acting Under Secretary for Health (10)

**Audit of Advanced Food Processing and Delivery Systems
in Ohio and Western Pennsylvania**

1. The Office of Inspector General (OIG) conducted a follow-up audit of the Veterans Health Administration's (VHA) central food production program and its advanced food processing and delivery systems (AFPDS). The purpose of the audit was to determine whether the central food production program implemented in 1998 at VA medical facilities in Dayton, Chillicothe, and Cleveland, Ohio; and in Butler, Pennsylvania, achieved its projected cost savings of about \$1.7 million, mostly from staff reductions. The Dayton program was VHA's first central food production program that covered such a wide geographical area and operated among four facilities.
2. A March 1990 OIG Audit Report, *VHS&RA Plans for Advanced Food Processing Systems and Advanced Delivery Systems*, recommended the development of central food production programs nationwide. The audit found that the use of AFPDS would save significant operating and construction costs over more conventional stand-alone food programs at each of the VA medical facilities. VHA did not concur in the audit conclusion, and cited pilot test results that showed that centralized food production could not effectively function in the VA food service environment.
3. Generally, a central food production program has one facility producing many food items in bulk and providing them to other remote facilities in a chilled state for rethermalization within 45 days. The process provides a form of convenience foods at less cost than buying them commercially, and provides the opportunity to reduce staffing. Most staffing decreases result from limiting food tray assembly to one line; pre-plating food items in a one-shift work day; accomplishing food preparation in a 5-day, one-shift work week; and focusing on batch food preparation for inventory rather than individual meal items. When advance food processing is combined with advance food delivery carts that heat chilled foods just prior to serving, further opportunities exist to reduce overtime and decrease staffing levels.
4. The follow-up audit found that the advanced food processing and delivery system established in Veterans Integrated Service Network (VISN) 10 is a best practice that should be analyzed, broadcast, and adopted by other VISNs, if feasible. The Dayton

central food production program exceeded its expected economies and efficiencies. The VISN experienced staffing reductions greater than anticipated, attributing reductions of 80 full-time equivalent employees (FTEE) to the central food production program. The efficiencies experienced as a result of implementing this central food production program suggests the potential to significantly reduce VA nationwide costs of inpatient food service. For example, if other VISNs experience the same degree of efficiencies as the Dayton central food production system, VHA has the potential to reduce costs by over \$35 million.

5. VHA has already begun achieving these efficiencies through partial implementation of advanced food production concepts. Individual facilities have implemented AFPDS without participating in a central food production program where one facility serves as a central production site to prepare food in bulk for participating stations. In our opinion, significantly greater efficiencies could be achieved with effective implementation of central food production programs and improvement in the management of AFPDS.

6. The Dayton central food production program could significantly exceed the already achieved efficiencies by further enhancing management of the program. Placing more authority in the central production Nutrition and Food Service chief to oversee the advanced food preparation program would result in additional efficiencies and quality improvements. Management oversight could enforce consistency at sites by such actions as further consolidating menus, limiting the use of commercial convenience foods, and developing best staffing practices to optimize cost efficiencies.

7. We recommended that the Acting Under Secretary for Health utilize the Dayton advanced food processing and delivery system as a best practice. The system should be analyzed, broadcast, and if feasible, implemented nationwide.

8. The Acting Under Secretary for Health concurred with the finding and recommendation. However, he stated that the centralized production system did not meet VHA's definition of a best practice, but he agreed that the system did achieve measurable efficiencies. He said that Nutrition and Food Service already recommends the system as an option for food service operations. He also stated that he would encourage VISNs to implement this or other food processing systems in as many service areas as possible by furnishing each VISN Director a copy of the audit report. His plan to disseminate the audit report to all VISN Directors meets the intent of a best practice broadcast. His plan to analyze the system and implement it nationwide if feasible meets the intent of the recommendation. Therefore, we consider the issues resolved.

For the Assistant Inspector General for Auditing

(Original signed by:)

JAMES R. HUDSON

Director, Atlanta Audit Operations Division

TABLE OF CONTENTS

	<u>Page</u>
Memorandum to the Acting Under Secretary for Health	i
RESULTS AND RECOMMENDATIONS	
Creating Central Food Production Programs Results in Significant Savings	1
Conclusion	6
Recommendation	6
Comments and Implementation Plan	6
APPENDIXES	
I OBJECTIVE, SCOPE, AND METHODOLOGY	9
II BACKGROUND	11
III CENTRALIZED MANAGEMENT COULD OPTIMIZE THE COST-EFFECTIVENESS OF THE DAYTON FOOD PRODUCTION PROGRAM.....	13
IV CONCERNS RELATED TO CONVERSION TO FOOD FACTORIES AND AFPDS CITED BY VHA IN 1993	15
V COMMENTS OF THE ACTING UNDER SECRETARY FOR HEALTH.....	19
VI REPORT DISTRIBUTION	23

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RESULTS AND RECOMMENDATIONS

Creating Central Food Production Programs Results in Significant Savings

Overview

The Office of Inspector General conducted a follow-up audit of the advanced food processing and delivery systems (AFPDS) and central food production program in use at VA medical centers (VAMCs) in Dayton, Chillicothe, and Cleveland, Ohio; and in Butler, Pennsylvania. The Veterans Health Administration (VHA) did not concur with our recommendation in 1990 to implement central food production programs nationwide as a cost savings measure. The purpose of the audit was to determine if the implemented AFPDS concept resulted in improved quality of food service and achieved projected cost savings of about \$1.7 million, mostly through staff reductions.

The audit showed that Dayton, the central production facility, and the participating remote facilities successfully implemented the central food production program. Facilities achieved expected improvements in food service and realized or exceeded expected staff reductions. Implementing food factories, if feasible, in other areas of the country would be an effective means of achieving similar significant efficiencies that could exceed \$35 million VA-wide.¹

Facilities Met or Exceeded Their Expected Staff Reductions and Achieved Improvements in Food Service

The four facilities participating in the Dayton program estimated total savings of about \$1.7 million over 5 years. We reviewed cost records and discussed program results with Nutrition and Food Service (NFS) managers from each facility. We made site visits to three of the sites: Dayton, Chillicothe, and Butler. NFS management officials substantiated that they experienced staffing reductions greater than anticipated, attributing the reduction of 80 full-time equivalent employees (FTEE) to the central food production program, and believed that they would meet their 5-year projections. Butler was in the process of installing its new food delivery system at the time of our audit, but had already achieved savings through purchasing foods from the central production facility at Dayton, and by staff reductions in anticipation of fully implementing its new program.

We also found that the quality of food service improved under central food production. The system process guarantees that food is served at optimal serving temperatures with improved nutritional value over traditional food production systems. The system guarantees meeting selected industry-wide food safety standards that cannot be met by more traditional methods.

¹ \$1.7 million x 21 VISNs = \$35.7 million

The primary benefits for improved food service are the ability to serve tray meals on wards at appropriate temperatures and to improve the quality and preserve the nutritional content of foods for patient consumption. The advanced food delivery system provides for the heating of meals on or near wards just prior to being served in specially designed rethermalization carts. This system prevents heated foods from cooling down while sitting for long periods of time on tray lines during tray preparation, and in carts during delivery to ward units. Similarly, advanced food preparation systems improve the environment in which foods are prepared and stored; thus, better preserving the nutritional content of foods and reducing the opportunities for food to become contaminated.

Cost Savings Could Be Increased

While the Dayton program represents a best practice in comparison to traditional systems used by VHA, there is opportunity to further improve the system and optimize cost savings. Additional efficiencies and quality improvements could be achieved by: (a) increasing the number of participating sites; (b) strengthening management of the program; (c) consolidating equipment procurement; (d) monitoring equipment performance; (e) limiting the scope of associated construction projects; and (f) reducing utility costs.

Additional Participating Facilities

Dayton had the capacity to expand production to meet the needs of additional nearby facilities, such as those located in Pennsylvania and West Virginia. This premise was considered possible for future exploration as the program evolved and its success could be demonstrated to other Veterans Integrated Services Networks (VISNs). Any facility can benefit from a central food production's less costly source of soups, vegetable dishes, eggs, sauces, meat entrees, and other food items compared to commercially available products or the cost of preparing food locally at each facility.

Subsequent to our onsite visits, VISN 10 (Ohio facilities) signed a Memorandum of Understanding for provision of central food production services to VAMCs in VISN 4 (Pennsylvania and West Virginia) interested in participating in the program. Staff at Dayton anticipated providing services to Clarksburg, in addition to Butler, in the near future. VISN 10 had also initiated action to include Cincinnati in the program, although a specific target date was not established as of early April 1999.

Centralized Management

Dayton Manager -- Placing more authority in the central food production NFS Chief to oversee the advanced food preparation program would result in additional efficiencies and quality improvements. While a committee existed to occasionally meet and discuss menu planning and further use of advanced food processing techniques, no one manager had authority to resolve differences in opinion in order to enforce consistency among the sites. The potential existed for expanding the number of food items produced by the central processing system; thus, increasing productivity and cost savings. However, further consolidating menus, limiting the use of commercial convenience foods, and developing best staffing practices are some of the actions necessary to achieve further efficiencies (See APPENDIX III). A VISN-wide food service business line under one program chief could prove very beneficial to optimizing cost effectiveness in a centralized food production program.

National Director -- The Acting Director of NFS has been in that position since about September 1996, when the previous Director vacated the position. The Acting Director is the Chief, Quality Management, and noted that the Director's position may become more of a consultative type position with the Director assigned to a facility chief's position at one of the stations in the field.

In our opinion, consideration should be given to selecting someone with a proven record of cost efficiency in food production. Unlike many other sections of the inpatient infrastructure, NFS has experienced significant decreases in its workload without resultant decreases in operating costs. A consultative type position may be inappropriate to effectively address the many changing and evolving conditions facing NFS nationwide.

In addition to the complexities of assessing the benefit of central food production programs and AFPDS, NFS faces significant issues such as integrating food services with Veterans Canteen Service and meeting new food service standards. VHA may benefit most from stronger centralized management out of NFS in VA Central Office at this point in time.

Consolidated Equipment Procurement

Sites were individually contracting with selected vendors to purchase their equipment rather than consolidating their purchases to achieve greater volume discounts. Vendors we contacted during the 1990 audit stated that they could discount AFPDS equipment more than 15 percent on a consolidated procurement. Sites also varied significantly in the model and styles of equipment purchased, especially the types of rethermalization carts used. This made cost comparison more difficult because each vendor offered different options.

Differences in carts brought forth a variety of concerns among staff using the carts related to occupational safety and health matters. Some models weighed more than others and/or were taller than others, which obscured the vision of staff maneuvering them along hallways. Such issues should be assessed to establish best practices for equipment selection and procurement.

Equipment Performance

Possible manufacturing defects in the brand of rethermalization carts used by Dayton and Chillicothe suggested the need for NFS to address a nationwide review of that vendor's equipment in VA facilities. Defects at Dayton resulted in the vendor replacing all of Dayton's carts valued at \$444,000 during their warranty period. Staff at Chillicothe also had concerns about the quality of their carts from the same vendor; however, detailed deficiencies were not documented sufficiently to address the problem with the vendor. We suggested that Chillicothe more effectively document any problems with the equipment in order that they could resolve them prior to any warranty period expiration. We also advised Butler to closely monitor their carts during early use in order to assess any systemic problems with this vendor as a source of equipment.

Construction Projects

Conversion to AFPDS tends to require some minimal renovation to implement the program. Most significant is the need to enhance electrical systems in the area used to activate rethermalization carts. For example, renovation at the two remote sites visited were \$76,000 and \$163,000, respectively.

However, additional renovation tends to incorporate itself into project justifications. Typically, much of the additional renovation is unrelated to use of the AFPDS, but tends to be construction to resolve other long-standing conditions, or to make various improvements that would not otherwise receive priority funding in competition with clinical program areas. Thus, while renovation costs specific to implementing a central food production program may be minimal, a significant cost may accrue in other renovation work if not monitored closely. While some of the work may be justified, the scope of work requested tends to be excessive. The excesses must be avoided to prevent potential savings from being offset by construction costs.

Utility Costs

None of the facilities had data on the cost of operating their freezers and refrigerators, although the central food production program results in significant changes in utilization of this type of space. Use of prime vendors to eliminate storing large volumes of food, as well as implementation of AFPDS and the dwindling inpatient workload, have eliminated

the need for many freezer and refrigeration areas that were once required. We noted several refrigerated spaces excess to need at two sites that continued in operation, holding only minimal food items, if any. Engineering Service's estimate at one site was that as much as \$60,000 in annual utility costs may be saved if minimally used freezer/refrigerator space is discontinued.

VHA Should Re-Examine the Benefit of Central Food Production Programs

VHA's pilot test sites in the early 1990s were not successful in demonstrating the need for such programs. However, analysis of pilot test results suggested failure of the programs was based on the need for stronger management and oversight of the programs during the tests.

For example, one of the early proponents of central food production programs was VAMC Butler. This facility participated in one of the pilot studies as a remote site. Butler withdrew from the test after the first year because management of the program from the central production facility was so poor that Butler's food costs were significantly escalating. Butler attributed the failure to management of the system and not the system itself. Notwithstanding its experience with the central food production pilot, Butler had opted to join the Dayton program because management had successfully implemented the program.

Both top managers of Dayton's NFS came from private industry and have a positive attitude toward central food production programs. They attributed the success of the program to this attitude, as well as the cooperation of the VISN Director and staff at Cleveland, Chillicothe, and Butler. The Ohio sites were specifically recommended as an ideal location for a central food production program in our 1990 report. However, VHA outlined many reasons why a central food production program could not function in the Ohio geographical area (See APPENDIX IV).

In recent years, the initiative of the Acting Under Secretary for Health to duplicate the more successful and cost efficient practices of private industry, gave the new managers in Dayton an opportunity to present their cost saving proposal to implement a central food production program in Ohio to VISN managers willing to pursue this proven method.

Implementation of food factories in other locations cannot necessarily be effectively achieved without strong and committed management. Managers unwilling to try new concepts, or who are not convinced of the program's benefits, will not create a cooperative team environment in which to make the program work. Additionally, managers unable to effectively manage the resources associated with their conventional programs guarantee failure of central food production programs. Using weak management methods to implement new systems contributes to limited success.

Very strong management in the central production facility is absolutely essential, and is very important in the remote facilities. Any group of facilities unwilling to limit renovation to actual needs, reduce staffing, revise their menu, and cooperate among themselves will diminish the full success of the program.

Conclusion

Facilities participating in the Dayton central food production program achieved or exceeded their expected staff reductions as estimated in vendor consultations, and should save over \$1.7 million by the end of their first 5 years in operation. The program could also significantly exceed its expected savings if further improvements are made to the program. The experienced results in this central food production program, as well as studies in two other VISNs, suggest the potential to significantly reduce costs of inpatient food service VA-wide. Using the central production concept and AFPDS contributed to improving the quality of food service in the participating programs.

Recommendation

We recommend that the Acting Under Secretary for Health utilize the Dayton advanced food processing and delivery system as a best practice. The system should be analyzed, broadcast, and if feasible, implemented nationwide.

Comments of the Acting Under Secretary for Health

The Acting Under Secretary for Health concurred with the finding and recommendation. However, he stated that the centralized production system did not meet VHA's definition of a best practice, but he agreed that the system did achieve measurable efficiencies. He said that Nutrition and Food Service already recommends the system as an option for selected food service operations. He also stated that he would encourage application of the food factory concept in as many other service areas as possible by furnishing each VISN Director a copy of the audit report, and that advanced food processing and delivery systems would be implemented where feasible.

(Comments of the Acting Under Secretary for Health are provided in their entirety in APPENDIX V.)

Implementation Plan

A copy of the audit report will be provided to all VISN Directors for further review. Food and Nutrition Service will continue to carefully monitor progress by those facilities using the centralized production unit approach, as well as service delivery trends in the private sector that might impact its operations. Also, the concept will receive

consideration along with other service delivery programs in order to match the most effective processes with the individualized needs of each VISN.

Office of Inspector General Comments

The Acting Under Secretary for Health's plan to disseminate the audit report to all VISN Directors to provide information on the economy and efficiency of centralized production systems meets the intent of a best practice broadcast. His plans to monitor the progress of existing central food production programs, and to encourage application of the food factory concept in as many other service areas as possible, meet the intent to analyze the system and implement it nationwide if feasible. Therefore, we consider the issues resolved.

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OBJECTIVE, SCOPE, AND METHODOLOGY

Objective

The Office of Inspector General conducted a follow-up audit of VHA's advanced food processing and delivery systems (AFPDS) and central food production program that was conducted in 1990. The purpose of the audit was to determine if the central food production concept implemented at Dayton, Chillicothe, and Cleveland, Ohio; and in Butler Pennsylvania resulted in improved quality of food service and achieved cost savings of about \$1.7 million.

Scope

The scope of our audit placed emphasis on the operation of a central food production program out of the central production facility in Dayton, Ohio and in two of its remote sites in Chillicothe, Ohio; and Butler, Pennsylvania. We made site visits to these three locations during the period June 1 to August 26, 1998. We also obtained background information on another participating site in Cleveland, Ohio. VA facilities in Ohio comprise VISN 10. The VA facility in Butler was in VISN 4.

Emphasis was placed on reviewing data from each site for Fiscal Years (FYs) 1997 and 1998. However, we obtained selected site and nationwide background material from as early as 1990 from the office of the Acting Director, Nutrition and Food Service (NFS). Selected material included the FY 1997 and 1998 Annual Nutrition and Food Service Reports.

We also reviewed proposals for central food production programs being considered in VISNs 1 and 4. We briefed the Acting Director, NFS, on the status of our site visits on a regular basis.

We assessed the validity of the computer database of information used to compile the FY 1997 annual report. We concluded the data was reasonably accurate for comparison purposes in our opinion.

The audit was performed in accordance with generally accepted Government Auditing Standards.

Methodology

At the sites visited, we toured the space comprising NFS and discussed the implementation and future plans for the central food production program. We reviewed changes in staffing to determine the degree to which cost savings were achieved that could be attributed to participating in a central food production program. We also

APPENDIX I

validated workload and productivity reports used to report program activity annually to VA Central Office. We assessed changes in space and equipment resources and their impact on program costs and staff utilization. We reviewed menus in use and evaluated patient satisfaction surveys, quality control measures, and training programs. Findings from each site were compared to the findings at other sites visited.

BACKGROUND

Generally, the central food production program involves one central production facility preparing many food items in bulk and providing them to other remote facilities in a chilled state for rethermalization within 45 days (advanced food processing). This process provides a form of convenience foods at less cost than buying them commercially and provides the opportunity to reduce staffing. Facilities supplement the food items provided by the central production facility with onsite preparation of other food items using (i) commercially available convenience foods, (ii) conventional dishes made from scratch, or (iii) foods prepared by a blast/chill process requiring rethermalization within 5 days.

Advance food processing combined with advance food delivery systems (food delivery carts engineered to heat chilled foods or boost the temperature of food to proper serving levels just prior to serving) results in further opportunities to reduce overtime and decrease staffing levels. Most staffing decreases result from limiting food tray assembly to one line; pre-plating food items in a one-shift work day; accomplishing food preparation in a 5-day, one-shift work week; and focusing on batch food preparation for inventory, rather than individual meal items. Central food production programs are also referred to as food factory or cook-to-inventory programs.

In FY 1993, Dayton equipped its NFS with AFPDS sufficient to function as a central production site, although it was only preparing food for local use. VISN 10 subsequently pursued this opportunity to develop a central food production program out of Dayton. In 1998, the VISN implemented such a program at other participating VA facilities in Chillicothe and Cleveland in VISN 10, and at Butler from VISN 4. Dayton became the first VA facility to operate a central food production program over such a wide geographical area and among four facilities. The program expected to save \$1.7 million over 5 years (\$4.6 million in reduced staffing costs less \$2.9 million in new and replacement equipment).

Results at Dayton

Dayton decreased their staffing from 175 to 114 FTEE from FY 1993 to FY 1998. Dayton attributed 46 of the FTEE reductions to implementation of AFPDS. This level of staffing changes constituted the level of staffing needed by their facility to meet the goal of \$1.7 million in savings program-wide. The program changes also freed 5,000 square feet of space in the main hospital building for use as an orthotics laboratory.

Results at Chillicothe

Chillicothe decreased their cumulative FTEE from 93 to 70 from FY 1993 to FY 1998. Managers attributed 12 of the staff reductions to use of AFPDS.

Results at Butler

Butler decreased their staffing from 51 to 35 from FY 1993 to 1998 and attributed about 8 of the reductions to their activity in process to implement AFPDS within the next 60 days.

Results at Cleveland

Cleveland's two divisions had reduced staffing by about 14 FTEE to date, and planned 18 additional reductions with full implementation of AFPDS.

CENTRALIZED MANAGEMENT COULD OPTIMIZE THE COST EFFECTIVENESS OF THE DAYTON FOOD PRODUCTION PROGRAM

Potential exists to increase productivity and cost savings of the centralized food production system. However, this requires a centralized manager with the authority to enforce consistency among the sites. For example, further consolidating menus, limiting the use of commercial convenience foods, and developing best staffing practices are some of the ways to produce additional efficiencies. These issues are discussed in detail below.

Menu Consolidation

One cost-effective use of the central food production program relies upon use of a common menu among the participating facilities. This enhances the food planning and production processes for obvious reasons. However, we found a large degree of variance among the sites in their menus.

Although each station used a 3-week cycle of menus, the menus varied within the cycle among stations. Food production staff at each site insisted on their own personal preferences regarding choices of side dishes, desserts, soups, sauces, and entrees, and how to prepare them, sometimes citing “regional preferences” as their justification. This impacted the food production volume and cycle at the central production site. Regional preferences also tended to be more labor intensive and less healthy menu choices. No documentation existed showing the study of food waste to support facility contentions that patients would not eat certain foods or had regional preferences.

In addition to limiting potential cost savings, a significant effect of such diverse planning was noted in the nutritional values of the meals served among the facilities. For example, menu servings at two of the sites we visited exceeded published guidelines for the percent of calories from fat, two of the sites exceeded the guidelines for sodium content, and two sites exceeded the guidelines for cholesterol. VA’s guidelines also differed from other published guidelines. VA’s guidelines allowed almost twice as much sodium as the U. S. Department of Agriculture (USDA) guidelines, and more fat content than the U.S. Dietary Guidelines. It would benefit the patient population and increase cost savings if the sites could agree on a standard menu that met sound nutritional standards and made the most benefit of AFPDS cost efficiencies.

Commercial Convenience Foods

The percentage of convenience foods used at the sites visited ranged from 30 to 60 percent. A cost study found that a northeastern VISN could realize \$685,000 in savings annually without capital investment by concentrating on achieving lower food costs. Implementing cook-chill concepts offered the opportunity to achieve further savings. The

study outlined that convenience food systems tended to be 10 percent higher in cost than cook-chill systems.

We noted numerous examples of sites buying more expensive commercial convenience foods when the central production site was providing the same product to one or more of the other facilities, or when an appropriate alternative was available from the central production. More centralized oversight would seem helpful in resolving such inefficiencies.

Best Staffing Practices

Comparing the tray line staffing of the central production facility to one of the other facilities showed that more staff were used than at the central production facility to operate the same type of tray line. Local managers agreed and initiated a change in their staffing.

We also noted that there were some unusual staffing practices at one site, such as using cooks to also drive delivery trucks between buildings at their facility. We did not assess the cost benefit of this staffing method, but since the effort to reduce staffing in central food production programs is significantly directed toward reducing higher paid staff such as cooks, this was not the best use of staffing resources. Simple comparisons among the sites to assess best practices could prove beneficial toward further streamlining staffing needs. Centralized management could coordinate this effort among the participating facilities to achieve efficiencies in staffing.

CONCERNS RELATED TO FOOD FACTORIES AND AFPDS CITED BY VHA IN 1993

Background

VHA tested the central production concept in two areas of the country – western Pennsylvania starting in 1991, and in Texas starting in 1992. In 1993 VHA cited these pilot tests as less than successful and concluded that central food production programs could not effectively operate system-wide in the VA environment. VHA noted several issues contributing to the failure of the programs. We assessed these issues at the Dayton central food production system and found that it did not experience the concerns cited by VHA in 1993, as discussed in detail below.

Transportation Costs Were Not Excessive

As recently as June 1999, the Acting Director, NFS, noted excessive transportation costs as a problem with implementing central food production programs. However, we found that Dayton developed an arrangement with their prime vendor to deliver chilled food products to its remote facilities at \$0.10 a pound. VA Central Office staff specializing in shipping costs advised us this was a cost-effective rate. This innovative means of transportation avoided leasing or purchasing, and maintaining delivery vehicles, and precluded having to staff the program with drivers.

Inclement Weather Did Not Impact Food Delivery

No deliveries had ever been delayed because of inclement weather. In fact, the basic concept of chilling foods for storage up to 45 days is a significant factor favoring central food production programs in areas where inclement weather exists, because a 1- or 2-day delay has no impact on providing scheduled food service. Early program concepts called for equipping only the central production site with blast chillers to provide 5-day refrigerated foods; however, each site is now typically equipped with a blast chiller which resolves any problems with late delivery of the central food production products.

Quality Control Costs Were Not Excessive

Remote sites did not experience any quality control costs, and the central production facility averaged only about \$2,500 a year to monitor quality control. Such costs did not seem excessive. Similarly, no food was wasted because it did not meet quality control standards. In order to meet current Food and Drug Administration (FDA) requirements for quality control over food preparation, a blast/chill system of food preparation is almost mandatory.

Subsequent to our site visits the Dayton central processing facility also received USDA certification. USDA now inspects the Dayton facility daily.

Training for Conversion to AFPDS Was Not Inordinate

Use of AFPDS is not significantly different in basis from other conventional means of food preparation. Cooks received up to 6 days of supervised instruction from the vendor at no cost and other staff received about a half day of orientation. Claims of 150,000 to 220,000 staff hours in training necessary to implement central food processing systems within a two or three facility program were unfounded.

Disposal of Food Storage Bags Used in AFPDS Was Not an Environmental Issue

Bags used to store prepared foods until thermalized did not constitute any type of environmental disposal problem. The bags in use could be disposed of using normal means of trash disposal.

Quality of Food Did Not Differ From Other Conventional or Convenience Forms of Food

We personally tested the quality of food prepared by AFPDS. We ate a variety of meals prepared at the facilities, using both tray service on wards and cafeteria service in tray lines in dining rooms. The food was of high quality and did not differ in any significant way from conventionally prepared foods in our opinions.

The Variety of Food Was Appropriate to Satisfy Long-Term-Care Patients

Facility studies and staff opinions suggested that a 3-week menu cycle was sufficient to provide adequate variety to patient menus. It is unlikely that either patients or employees experience more variety in their own home menus than the 3-week cycle in use. Longer cycle menus commonly in use in VA several years ago contributed to less productivity and efficiency.

Up to 45 Days of Refrigerated Storage Was Realistic

VHA noted that 45 days of refrigerated storage was not realistic, and that most foods used a 21-day period. Since the transportation system and 3-week menu in use by the central food production program did not generally require storage up to 45 days this was not an issue according to the staff we interviewed. However, 80 percent of the foods Dayton tested could be used after 30 days, and most of them over 45 days.

Packaging Did Not Contribute to Product Wastage

A wide variety of package sizes existed that precluded any facility in need of a small amount of some food item from receiving it packaged to meet their needs.

Staffing Reductions Were Achieved

VHA noted that reductions in staffing could not be achieved. However, the four facilities achieved staffing reductions of about 80 FTEE attributed to conversion to AFPDS and the central production concept.

Commonality with Private Industry Was Achieved

VHA cited VA's lack of commonality with private industry in regard to achieving the same type of benefits that examples of private industry had achieved. Since that time, VHA has specifically targeted efforts to make its whole system more comparable to private industry. In that regard, the central food production program has become even more viable as a program having potential VA-wide.

Recipe Development Did Not Constitute a Problem

Recipe development was not a problem because the vendor provided training at the beginning of the program and most menu items do not require recipe modifications. Additionally, modified diet entrees were easy to obtain from the central production site, while commercially prepared sources of modified diets were very limited.

Drought Conditions Were Not Experienced

VHA noted that in areas of potential drought conditions, a system reliant on large amounts of water could constitute a problem. This condition never existed in the Dayton program. It is also unlikely that any health care environment such as a hospital would be placed on any water restrictions in communities in which drought conditions might potentially exist.

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COMMENTS OF THE ACTING UNDER SECRETARY FOR HEALTH**Department of
Veterans Affairs****Memorandum**

Date: December 7, 1999/

From: Acting Under Secretary for Health (10/105E)

Subj: OIG Draft Report: ***Audit of Advanced Food Processing and Delivery Systems in Ohio and Western Pennsylvania*** (#8R3-EDMS# 61892)

To: Assistant Inspector General for Auditing (52A)

1. VHA program officials have reviewed the referenced report, and after further clarification by OIG auditors about the intent of your recommendation to identify the Dayton advanced food processing and delivery system as a "best practice," we have agreed to concur with qualification to report conclusions. We do not concur, however, with your estimate of nationwide cost savings (>\$35 million) since there is a lack of valid documentation presented to support such a figure. For example, several key variables, such as significant capital equipment costs, non-recurring project/utilities costs, geographic variations in transport/utility costs, etc., were not accounted for in the calculation.

Office of Audit Comment: We believe that VHA can achieve significant efficiencies by implementing an advanced food processing and delivery system. As shown in Dayton the system is feasible at some VA medical centers and if other medical centers achieve the same efficiencies then VHA should achieve at least \$35 million in cost efficiencies nationwide.

2. The system that is currently being effectively implemented in Dayton, i.e., the cook/chill commissary type operation, is recognized by VHA's Nutrition and Food Service as one of the recommended options to be considered for selected facility operations. It is a system that requires not only a large capital investment, but also unique employee skills and a comprehensive support system (including transportation, logistics, re-thermalization delivery systems, etc.). Although more than 30 advanced delivery systems throughout VHA now utilize various forms of cook/chill with recognized efficiency enhancement, the same universal efficiencies and improvements have not been validated for the centralized production unit (CPU) concept that has been applied in Dayton. There are currently only three or four VA facility CPUs that transport bulk food/preplated trays to outlying facilities. One of the primary indicators for the cook/chill CPU operation is high daily inpatient meal workload, a measure that forms the baseline for determining capital investment payback and cost effectiveness. The national health care transition to advanced outpatient care has obvious implications in this regard.

COMMENTS OF THE ACTING UNDER SECRETARY FOR HEALTH

Page 2 OIG Draft Report: **Audit of Advanced Food Processing and Delivery Systems**

3. For these and other reasons we cannot support endorsement of the CPU system as a best practice in terms of how we commonly define the phrase on a systemwide basis. We universally broadcast “best practices” only after comprehensive analysis produces data that identify superior efficiency/effectiveness results that are endorsed by both VA and other technical experts. Nevertheless, we agree that the CPU system has resulted in measurable improvements under defined circumstances, and we will continue to carefully evaluate and monitor the CPUs currently in operation within the VA as well as food service delivery trends in the private sector. A copy of your report will be made available to all VISN Directors. As you recommend, consideration will be given to implementing components of the Dayton advanced food processing and delivery system where feasible.

4. Thank you for the opportunity to respond to this report. If additional assistance is required, please contact Paul C. Gibert, Jr., Director, Management Review and Administration Service (105E), Office of Policy and Planning (105), at 273-8355.

/s/

Thomas L Garthwaite, M.D.

Attachment

COMMENTS OF THE ACTING UNDER SECRETARY FOR HEALTH

Action Plan in Response to OIG/GAO/MI Audits/Program Evaluations/Reviews

Name of Report: OIG Draft Report: *Audit of Advanced Food Processing and Delivery Systems in Ohio and Western Pennsylvania*

Report Number: Project No. 8R3-038

Date of Report: September 9, 1999

Recommendations/ Actions	Status	Completion Date
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Recommendation

We recommend that the Acting Under Secretary for Health utilize the Dayton advanced food processing and delivery system as a best practice. The system should be analyzed, broadcast, and if feasible, implemented nationwide.

Concur with Qualification

We do not agree that the centralized production unit (CPU) approach to food service processing that is currently being implemented at Dayton can appropriately be designated a “best practice” as we define the term systemwide. The CPU, which requires considerable capital investment and specialized training, is recognized by VHA’s Nutrition and Food Service as an effective option in certain situations. One of the key criteria for CPU viability is high inpatient volume, an issue that is directly impacted by the steady movement towards expanded outpatient care. However, we recognize that the system might be an option for networks having significant long term care patient populations. There are currently three or four CPU food systems in various stages of implementation throughout VHA. There are also more than 30 advanced delivery systems that utilize some form of the cook/chill concept that have achieved measurable efficiencies. However, the same improvements have not been validated with the CPU concept. We endorse “best practices” for systemwide application only after comprehensive analysis produces adequate data to validate improvements that are agreed upon by field experts, and would be more apt to describe the Dayton experience as a “lesson learned” that should be considered whenever feasible.

It is our understanding, after follow-up discussion with the OIG auditors, that the intent of their recommendation was to encourage application of Dayton’s CPU operation in as many other service areas as possible without necessarily broadcasting the concept as an official best practice. We agree with this approach. A copy of the report will be provided to all VISN Directors for further review. In addition, the Food and Nutrition Service will continue to carefully monitor progress by those facilities using the CPU

COMMENTS OF THE ACTING UNDER SECRETARY FOR HEALTH

Page 2 VHA Action Plan/OIG Draft Report: *Audit of Advanced Food Processing and Delivery Systems in Ohio and Western Pennsylvania*

approach, as well as service delivery trends in the private sector that might have an impact on our own operations. The concept will be considered along with other emerging service delivery programs in order to match the most effective processes with individualized needs of each VISN. It is noted, for instance, that since OIG's initial audit in 1990, there have been significant improvements in food products, food service equipment and resources that have enhanced the quality of cook/chill systems. VHA has implemented (in 1996) a nationwide Subsistence Prime Vendor Program that has greatly enhanced and increased product selection (convenience foods), procurement, deliveries and operational efficiency. Efficiencies generated by this program will necessarily be balanced against projected cost benefits of the CPU approach.

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