



**Department of Veterans Affairs
Office of Inspector General**

Office of Healthcare Inspections

Report No. 16-00351-453

OIG Determination of VHA Occupational Staffing Shortages

September 28, 2016

Washington, DC 20420

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Executive Summary

The VA Office of Inspector General (OIG) conducted its third determination of Veterans Health Administration (VHA) occupations with the largest staffing shortages as required by Section 301 of the Veterans Access, Choice, and Accountability Act of 2014.

We analyzed VHA facility rankings of critical occupations, as described in Appendix A, to interpret "largest staffing shortages." This is a broader, and in our opinion more appropriate, deliberation than simply the number needed to replace or backfill vacant positions. We performed a rules-based analysis on VHA data to identify these occupations, analyzed data on gains and losses for occupations with the largest staffing shortages, and assessed VHA's progress with implementing staffing models.

We determined that the largest critical need occupations were Medical Officer, Nurse, Psychologist, Physician Assistant, Physical Therapist, and Medical Technologist. Because of a tie for 5th place, we had six occupations in our determination.

Our analysis of the staffing gains and losses for the first full year after implementation of the Veterans Access, Choice, and Accountability Act of 2014 shows that for critical need occupations, a significant percentage of the total gains continues to be offset by staff losses. We also determined that the percentage of regrettable losses to total onboard staff in many critical need occupations was high relative to net increases in onboard staff.

While VHA has made progress in developing and implementing staffing models, we did not identify a plan that included a set of milestones and timelines for further staffing model development to achieve full implementation. VHA has a draft report on staffing models which is pending presentation to senior leadership.

We made four recommendations, of which two are repeat recommendations.¹

1. We restated our prior recommendation that the Under Secretary for Health ensure that VHA develops staffing models for critical need occupations, and we further recommended that VHA sets forth milestones and a timetable for further critical need occupations' staffing model development, piloting, and implementation.
2. We restated our prior recommendation that the Under Secretary for Health review data on regrettable losses and consider implementing measures to reduce such losses.
3. We recommended that the Under Secretary for Health consider incorporating data that predicts changes in veteran demand for health care into its staffing model.
4. We recommended that the Under Secretary for Health assess VHA's resources and expertise in developing staffing models and determine whether exploration of external options to develop the above staffing model is necessary.

¹ *OIG Determination of Veterans Health Administration's Occupational Staffing Shortages*, Report No. 15-03063-511, September 1, 2015.

Comments

The Under Secretary for Health concurred with our recommendations and provided an acceptable action plan. (See Appendix B, pages 15–23 for comments.) We will follow up on the planned actions until they are completed.



JOHN D. DAIGH, JR., M.D.
Assistant Inspector General for
Healthcare Inspections

Purpose

On August 7, 2014, the Veterans Access, Choice, and Accountability Act (Public Law 113-146) was signed into law. PL 113-146 requires the Office of Inspector General (OIG) to annually determine "...the five occupations of personnel of this title of the Department covered under section 7401 of this title for which there are the largest staffing shortages throughout the Department as calculated over the five-year period preceding the determination." As specified, the first determination was performed and published within 180 days of the passage of the law on January 30, 2015. Annual determinations were required by September 30 in subsequent years thereafter.

In the second report, published on September 1, 2015, we determined the "largest" staffing shortages existed in the following 5 occupations: Medical Officer, Nurse, Physician Assistant, Physical Therapist, and Psychologist.² We recommended the Under Secretary for Health continue to develop and implement staffing models for these and other critical need occupations. We also recommended that the Under Secretary for Health review the data on regrettable losses and consider implementing measures to reduce such losses. During the course of this third determination, we sought to ascertain VHA's progress in implementing these two recommendations.

Background

A. The Veterans Access, Choice, and Accountability Act of 2014

In May 2014, the OIG reported ongoing concerns regarding access to Veterans Health Administration (VHA) care, VHA scheduling practices, and excessive wait times. In response to these concerns, Congress passed the Veterans Access, Choice, and Accountability Act (VACAA) of 2014.

Title III of this law addressed healthcare staffing, recruitment, and training. Section 301 requires the OIG to determine the five occupations of "largest staffing shortages." In addition, the law requires VHA to address "...appropriate staffing levels for healthcare professionals to meet the goals of the Secretary for timely access to care for veterans." The law specifies four clinical areas of heightened concern including primary care, mental health, women's health, gastroenterology, and other areas as determined by the VA Secretary.

For the purposes of this OIG report, the phrase "largest staffing shortages" is interpreted to encompass broader deliberation than simply the number needed to replace or backfill vacant positions for an occupation. Because of this interpretation, we referred to occupations from our determination, as detailed in Appendix A, as critical need occupations.

² *OIG Determination of Veterans Health Administration's Occupational Staffing Shortages*, Report No. 15-03063-511, September 1, 2015.

Occupational staffing shortages may be assessed in many potential ways. Criteria might include but are not limited to:

- The number of vacancies
- Occupations with past and anticipated growth in demand
- Occupations for which the available labor force is highly competitive
- Occupations with historically high attrition rates
- Incorporation of existing or anticipated programmatic growth
- Geographic and demographic variability
- Productivity and allocation of staff duties between direct-care, administrative, and research responsibilities
- Occupations which overlap in their contributions to patient care
- Variance from data-driven occupational staffing standards

B. VHA's Workforce Succession Strategic Plan

VHA annually collects and analyzes system-wide data to determine its workforce needs. This work is summarized in VHA's Workforce Succession Strategic Plan, which is developed and published annually.

As part of its annual submission, each facility with guidance from the VHA Workforce Management and Consulting Office (WMCO) generates a ranking of up to 15 of the most difficult occupations to recruit and retain. Individual facility rankings are submitted to the relevant Veterans Integrated Service Network (VISN). This year, WMCO provided additional detail on the criteria that facilities should use when determining critical need occupations to include workforce need and recruitment and retention.

WMCO also provides guidance to VISN planners who may modify the results based on their knowledge and analysis of the occupations. The specific ranking process is left up to each VISN to determine. VISN Human Resources staff can describe further their selection of top occupations and projections for those occupations in a narrative component.

WMCO uses the VISN level rankings to calculate a score for each occupation. The average VISN rank for an occupation is multiplied by the number of VISNs that ranked the specific occupation in the top 10 for critical need. VHA WMCO makes adjustments to the rankings to incorporate feedback from program offices, VHA human resources recruiters, and other relevant VHA offices.

C. VHA's Productivity and Staffing Models: Specialty Care

In June 2012, the Under Secretary for Health charged a VHA Task Force on Specialty Physician Productivity and Staffing with developing productivity models for specialty provider group practice in VHA. To address the Under Secretary for Health's charge, VHA's Office of Productivity, Efficiency and Staffing (OPES) developed Physician Productivity, Benchmarks & Study Data as a data source, by considering the management of specialty provider group practice practitioners and ancillary health care personnel.

The Physician Productivity, Benchmarks & Study Data, Specialty Physician Productivity Report and Specialty Productivity Access Report and Quadrant Tool (SPARQ) provides for a relative value unit based model to measure specialty provider group practice productivity and staffing.

If the SPARQ data shows a specialty group practice has high productivity and good access, no action would be indicated. If the specialty is high in productivity but has poor access, it is suggested the facility review for the potential need for increased resources, such as increased staffing or use of contracted care providers. If the specialty is low in productivity but positive in access, this is an indicator for facilities to review for potential expansion to other facilities with need via telehealth or interfacility sharing of resources to fully utilize capacity.

Scope and Methodology

We interviewed the VHA Chief Financial Officer; the Director of OPES; the Director of Finance and Business Office, Workforce Management and Consulting Office; and the Acting Assistant Chief Officer, VHA Human Capital Systems and Services. We reviewed VHA facility rankings of occupations of critical need for fiscal year 2016. We examined rankings at the VISN and National level, and the VHA facility level data collection tool used for the annual ranking of occupations of critical need.

We used a rules-based methodology to determine occupations of critical need and focused on facility-level rankings. We did not include occupations relating to administrative, clerical, physical plant maintenance, or protective services. As VHA did in its determination, we used the Office of Personnel Management occupational series.³ A more detailed discussion of our methodology can be found in Appendix A.

We compared our determination of five occupations of critical need using an OIG rules-based methodology to VHA's determination as well as to our previous determinations.

In addition, we reviewed and analyzed relevant VHA onboarding data (number of people in an occupation working at a facility) for FY 2011 through FY 2015 and VHA

³ Handbook of Occupational Groups and Families. May 2009. <http://www.opm.gov/policy-data-oversight/classification-qualifications/classifying-general-schedule-positions/occupationalhandbook.pdf> Accessed 12/11/2014.

gains and loss data for FY 2014 through FY 2015 (latest available). We also requested and analyzed VHA data on reasons for losses, for example, retirements and voluntary separations.

We reviewed VHA updated submissions in response to our prior staffing reports, work group charter documents, and meeting minutes.

In the absence of current VA/VHA policy, we considered previous guidance to be in effect until superseded by an updated or re-certified Directive, Handbook, or other policy document on the same or similar issue(s).

We conducted the inspection in accordance with *Quality Standards for Inspection and Evaluation* published by the Council of the Inspectors General on Integrity and Efficiency.

Results

I. OIG Determination of Critical Need Occupations

In our previous determinations, we chose to focus on facility level rankings of occupations of critical need. In contrast to VHA, which calculated system-wide ranking of critical need occupations based on a two-step process involving VISN level aggregation and then national level aggregation, we aggregated facility rankings directly to make our determination. By conducting our analysis on a facility level, each facility's ranking carries equal weight in the determination. In contrast, a VISN level aggregation prior to national aggregation underweights the rankings of individual facilities in VISNs with more VA medical centers. Table 1 shows the OIG's determination of the five occupations with "largest staffing shortages" for its 2016 determination with a ranking of "1" being the most critical.

Table 1: OIG Determination for FY 2016 of Five Occupations with Largest Staffing Shortages

Ranking	Occupational Series
1	Medical Officer
2	Nurse
3 (tied)	Psychologist
3 (tied)	Physician Assistant
5 (tied)	Physical Therapist
5 (tied)	Medical Technologist

Source: VA OIG analysis of facility rankings of critical need occupations submitted to WMCO

With the exception of the addition of Medical Technologist, the top five occupations from our two previous determinations were the same as this year's ranking. As with the initial determination, Medical Officer and Nurse were the top two critical need occupations. Psychologist, Physician Assistant, and Physical Therapist were again determined to be in the top five, but their relative order changed with respect to the initial determination, with Psychologist and Physician Assistant tied in the third position and Physical Therapist and Medical Technologist tied for the fifth spot using our methodology.

In comparing the OIG's 2016 five occupations with the largest staffing shortage to that of VHA's most recent determination, we found the rankings to be similar. However, OIG and VA rankings differ in that a tie results in two 5th ranked occupations in the OIG's results while the same occupations are ranked 5th and 6th in the VA ranking. Therefore our determination includes one more occupation than the VA ranking.

VHA's rankings initially included Human Resources Officer as the number three ranked occupation. Because section 7401 of the VACAA excludes administrative positions, we did not include this occupation in our ranking methodology, and we removed human resource officer from the VHA ranking for this comparison.

II. Gains and Losses for Critical Need Occupations

We requested VHA data on gains and losses for FY 2015 and had previous data from FY 2011 through FY 2014. We analyzed the number of staff onboard and full-time employee equivalents (FTE) from FY 2011 through FY 2015.

Although VHA provided information on hires, that data could not be used to accurately determine staffing at VHA medical facilities as some personnel actions that increase onboard staff are not considered hires.⁴ VHA also reports onboard numbers, which more accurately reflect the number of individuals working in each occupation. We calculated the gains in staffing using losses and net increases in onboard staff.⁵ In this report, we define the gains to be the number of additional people working in VA, the losses to be the number of people who are no longer working in VA, and the net increase or decrease in onboard staff to be the change in the overall number of staff in an occupation.

Table 2 displays the requested data for the top 10 critical needs occupations from VHA's most recent ranking. Human Resources Officer has been removed; Diagnostic Radiologic Technologist was also removed, as it was not included in the top 10 listing this year and comparison data was not reported to us. Therefore, data for only eight occupations is included in the table.

Table 2. Gains, Losses, and Changes in Onboard Staff in FY 2015

Occupation	Total Gains	Losses	Net Increase in Onboard
0180 Psychologist	829	427	402
0602 Medical Officer	3480	2119	1361
0603 Physician Assistant	355	225	130
0610 Nurse	8528	4966	3562
0631 Occupational Therapist	165	87	78
0633 Physical Therapist	327	152	175
0644 Medical Technologist	454	391	63
0660 Pharmacist	887	416	471

Source: VAOIG Analysis of VHA data

In FY15, Medical Officer losses were 2,119, and the net increase (gains – losses) in onboard Medical Officers was 1,361. We calculated that the total gains in Medical Officers for that year was 3,480 (2,119 + 1,361). We noted that only 39 percent of the gains represented a net increase in VHA's workforce given the offsetting losses. Similarly, for some of the other top critical need occupations reviewed, most of the gains in staffing replaced existing losses rather than providing additional capacity to deliver

⁴ For example, the change in employment status of an individual who was a resident at the facility and then hired as an attending physician could be classified as a promotion rather than a hire.

⁵ The gains were calculated using this method because the number of hires did not capture all additions to staff.

health care. However, VA did increase the absolute numbers of staff (that is, net onboard) in the top five critical need occupations, moving VA closer to its goal of improving staffing levels.

Table 3. Net Gain for Top Critical Need Occupations in FY 2015

Occupation Name	Rate of Net Gain
Psychologist	48.5%
Medical Officer	39.1%
Physician Assistant	36.6%
Nurse	41.8%
Occupational Therapist	47.3%
Physical Therapist	53.5%
Medical Technologist	13.9%
Pharmacist	53.1%

Source: VAOIG Analysis of VHA Data.

VHA categorizes staffing losses into three broad categories—voluntary retirements, regrettable losses, and other losses. (See Table 4) Regrettable losses are defined as those individuals who resign from the VA or who transfer to another government agency. Regrettable losses are staff that potentially could have stayed on at VHA and represent a missed opportunity for VHA to retain staff.

For Medical Officer, we noted that regrettable losses represent 61 percent of the total losses in FY 2015, while 30 percent were due to voluntary retirement, and 8 percent from other causes. For the other critical need occupations, regrettable losses comprised between 45 and 55 percent of loss, and voluntary retirements ranged between 21 and 46 percent of loss.

Table 4. Reasons for Losses (in percent) for Top Critical Need Occupations in FY 2015

Occupation	Voluntary Retirements	Regrettable Losses	Other
Psychologist	21.1%	50.6%	27.2%
Medical Officer	30.2%	61.3%	7.8%
Nurse	40.9%	52.0%	6.5%
Physician Assistant	28.9%	45.8%	25.3%
Physical Therapist	15.8%	44.7%	39.5%
Occupational Therapist	28.7%	55.2%	16.1%
Medical Technologist	45.8%	47.3%	5.6%
Pharmacist	40.6%	45.2%	13.0%

Source: VAOIG Analysis of VHA data

Because the total losses for an occupation may only represent a fraction of the entire occupation, it is also important to compare total occupational losses to the number of people onboard in an occupation. For example, Medical Officer total losses compared

to the total number of Medical Officers onboard was 8.7 percent, and regrettable losses compared to the total number onboard was 5.4 percent. To put these numbers in perspective, the annualized net gain for Medical Officers over the past 3 years was 4.3 percent. (See Table 5.)

Table 5. Total Losses and Regrettable Losses as a Percentage of Total Onboard Staff in Top Critical Need Occupations in FY 2015 Compared to the Average Net Increase in Onboard FY 2011–2015

Occupation	FY 2015 Total Losses to Onboard	FY 2015 Regrettable Losses to Onboard	Annualized Net Increase in Onboard FYs 2011–2015
Psychologist	8.2%	4.1%	8.4%
Medical Officer	8.7%	5.4%	4.3%
Nurse	7.8%	4.1%	4.4%
Physician Assistant	10.5%	4.8%	3.1%
Physical Therapist	7.7%	3.4%	7.0%
Occupational Therapist	7.1%	3.9%	4.5%
Medical Technologist	8.1%	3.4%	0.5%
Pharmacist	5.6%	2.5%	4.4%

Source: VAOIG Analysis of VHA data

Our analysis focused on gains and losses in critical need occupations during a single year. When looking at changes to the staffing process, the impact of cumulative changes over time should be considered as well. Although some of these numbers are small on a yearly basis, consistent losses over years can compound to result in more significant changes. Because our analysis for this year's data is similar to last year's, and we noted in last year's report that loss numbers have been relatively consistent over the preceding 4 years, we consider this point particularly relevant when analyzing this data. The analysis of gains and losses above includes data from FY 2015, which is the first full year of data after the implementation of the VACAA in 2014.

III. VHA's Progress in Developing Staffing Models

OPES staff has developed and extended SPARQ tools over the past year to include additional groups of providers.

A. Extension of the SPARQ Tools

In our FY 2015 report, we noted that the SPARQ tool provided valuable data on productivity and access and could better inform specialty provider staffing decisions. It allows facilities to examine the relative productivity of staff, and VHA leadership at the local, regional, and national level to examine issues associated with resource allocation and productivity. However, the SPARQ tool does not provide an optimal number for staffing in an occupation.

OPES staff told us that tools are now available for analyzing data on nurse practitioners, physician assistants, and rehabilitation providers. We verified that OPES staff met their goal of developing the advanced practice provider and rehabilitation services tools by accessing these reports on internal VHA websites.

OPES staff reported that while they provided information from SPARQ to medical center leadership and had developed tools designed to be helpful for making staffing decisions, they were unsure whether this tool was being used at the medical center level. Review of SPARQ web hits suggests the tool was being accessed by medical centers and VISNs; however, the number of people accessing the site does not assure actual integration of the information into decision making.

B. Challenges with Developing Staffing Models

VHA staff had identified both the complexities and potential benefits of comprehensive staffing models that would potentially allow VHA to anticipate the need to alter staffing prior to a supply/demand imbalance as well as provide a data-driven way to determine optimal staffing.

VHA staff identified several challenges in developing staffing models during interviews. Building models which accurately predict staffing needs is challenging because of the number of factors that need to be considered, such as staff productivity and anticipated workload. Using existing staffing as a basis is also challenging as similar facilities serving the same number of patients may have very different staffing. Previous efforts at developing staffing models were considered unsuccessful when they produced answers that were inconsistent with other information available on staffing. Concerns about whether VHA had sufficient expertise and resources to develop staffing models were also raised.

C. Resource Allocation and Effect on Staffing

We were informed that VHA facilities receive resources based on historical workload data. In areas with rapidly changing veteran demand, historical workload data is a lagging indicator for current need. Historical data which may not represent current resource needs, coupled with long lag times to bring new personnel on board, means that facilities could find themselves without adequate resources to deal with current demand.

As of July 2016, VA was using actuarial data to build its global budget. We were informed that such data is based on veteran population trends, demographics, and health care utilization but is not used to allocate funding to the field. Models that incorporate such data could assist VA in addressing changing veteran demand for healthcare at facilities.

We also learned that VA has made some adjustments in resource management to allow for more flexibility at the local level. Examples of increased local flexibility include more of the VA budget being devoted to general purpose funding (to be used as needed in the clinical care of patients) and earlier distribution of resources in the fiscal year. While

such changes indirectly affect staffing, they do allow for a more rapid response to changing needs by providing resources earlier in the funding cycle .

IV. Assessment of VHA's Progress with Previous OIG Recommendations

In the initial OIG staffing determination published on January 30, 2015, we recommended the Interim Under Secretary for Health continue to develop and implement staffing models for critical need occupations.

The September 2015 report noted progress on models associated with primary care physicians, and select specialty care physicians, with more specialties under development. The overall plan at that time was to develop staffing models related to the top 5 critical occupations. We noted in last year's report that VHA was researching staffing model development but did not have specific milestones for implementing models.

A. Staffing Model Development

VHA has made limited progress on comprehensive staffing model development for critical needs occupations. VHA has chartered a working group that has drafted a report on staffing models, but as of early August 2016, the draft report ideas had yet to be presented to senior leadership. VHA staff who were involved in developing the draft report informed us that they anticipate presentation to senior leadership will occur by the end of FY 2016 .

B. VHA Regrettable Losses Workgroup

In last year's report, we recommended that VHA review the data on regrettable losses and consider ways that these numbers could be reduced. A work group was chartered in April 2016 with an end date of December 2016. The group had produced a draft report that has yet to be reviewed by senior leaders in Workforce Management as of August 2016. No new actions have been taken on this issue in response to last year's recommendation at the time of the writing of this report.

Conclusions

This determination is the third in a series of 5 annual determinations of staffing shortages in VHA. We determined that the top five critical need occupations for FY 2016 are Medical Officer, Nurse, Psychologist, Physician Assistant, Physical Therapist, and Medical Technologist. Because of a tie for 5th place, we had six occupations in our determination.

In looking at the gains, losses, and changes in onboard staffing for critical need occupations, we found that in the past year, VHA continued to increase the absolute number of staff in critical need occupations. However the net gains are still significantly reduced by high loss rates. We also note that the timeframe of the gains and loss data examined in this report includes the first full year after the passage of the VACAA legislation and did not indicate changes in staffing trends.

We noted in prior reports that because of the relatively long onboarding process and challenges in finding suitable candidates, staffing for future needs requires hiring in anticipation of future losses, as well as ongoing and projected changes in clinical demand, staffing productivity, and FTE allocation at the individual facility level. Well-developed predictive staffing models would allow VHA to better assess and implement effective measures to address the above concerns.

We noted that VHA has made improvements in the development and availability of SPARQ. VHA staff reported modifying resource management practices to increase flexibility in hiring staff.

In our initial (January 30, 2015) determination, we recommended that VHA continue to develop and implement staffing plans for critical need occupations. In the second report we found VHA in the early stages of developing staffing models. In this third report, we find that VHA has developed draft reports on staffing models for certain medical specialties and regrettable losses that we were told would be presented to senior leadership in the near future. We did not find evidence for milestones or a timeline for developing, piloting, and implementing staffing models. We made four recommendations.

Recommendations

1. We restated our previous recommendation that the Under Secretary for Health ensure that the Veterans Health Administration develops staffing models for critical need occupations, and we further recommend that the Veterans Health Administration sets forth milestones and a timetable for further critical need occupations' staffing model development, piloting, and implementation.
2. We restated our previous recommendation that the Under Secretary for Health review data on regrettable losses and consider implementing measures to reduce such losses.
3. We recommended that the Under Secretary for Health consider incorporating data that predicts changes in veteran demand for health care into its staffing model.
4. We recommended that the Under Secretary for Health assess the Veterans Health Administration's resources and expertise in developing staffing models and determine whether exploration of external options to develop the above staffing model is necessary.

OIG Rule-Based Methodology for Ranking Occupations of Critical Need

Discussion of OIG's Methodology

The OIG analysis started with the facility rankings of the top occupations. The table below displays an example of this ranking for an individual facility.

Table 6. Sample Ranking of Critical Need Occupations by a VHA Medical Center

Facility	Occupation	Ranking
Facility 1	Medical Officer	1
Facility 1	Pharmacist	2
Facility 1	Nurse Anesthetist	3
Facility 1	Practical Nurse	4
Facility 1	Nurse	5
Facility 1	Occupational Therapist	6

Source: OIG Example

For each occupation, the average occupational rank was defined as the arithmetic mean of the rank assigned by each facility. For example, if 10 facilities identified an occupation as their number 1 top occupation and 5 facilities rated it as number 4, the average rank would be 2.0.

$$\frac{(10 \times 1) + (5 \times 4)}{(10+5)} = \frac{30}{15} = 2.0$$

In addition, for each occupation, the number of times a facility ranked an occupation in the top 10 was also tallied. The number of facilities ranking an occupation in the top 10 and the average occupational rank resulted in a table with a similar format to below. For convenience of analysis and presentation, the table is sorted by average occupational rank.

Table 7. Example of OIG Aggregation of Facility Level Rankings

Occupational Series	Average Occupation Rank	Number of Facilities Ranking Occupation in Top 10
Medical Officer	1.50	137
Nurse	3.23	132
Physician Assistant	4.96	73
Psychologist	5.10	72
Physical Therapist	5.47	87

Source: OIG Sample data from first determination published January 2015. Report No. 15-00430-103

For simplicity sake, we eliminated any occupations from further consideration which were ranked by fewer than 10 facilities as this represents less than 10 percent of all facilities.

After compilation and ordering of average occupational rank and the number of facilities ranking that occupation in the top 10, a set of OIG ranking rules were applied.

The first OIG ranking rule was as follows: When comparing two occupations, an occupation with both a higher average rank and more facilities ranking it was ranked higher than a second occupation with both lower average rank and number of facilities ranking that occupation. For example, if Psychologist has an average rank of 5.10 and is ranked by 72 facilities, it would be ranked above Dietician with an average rank of 6 and ranked by 60 facilities.

The second OIG rule was as follows: In cases where comparing two occupations showed that one had a higher average rank but the other had a greater number of facilities ranking it, the magnitude of the tradeoff between rank and number of facilities was considered, and if the difference clearly favored one of those occupations, that occupation was ranked higher. For example, when Physical Therapist was compared to Practical Nurse, although Practical Nurse had a slightly higher average rank score by 0.09 (5.382 versus 5.471), over twice as many facilities ranked Physical Therapist (87 versus 34) in the top 10 and we therefore placed Physical Therapist higher in our determination.

The third OIG rule was as follows: In cases where the tradeoff between average ranking and number of facilities ranking an occupation was not clear, we considered the relative ranking indeterminate. We then evaluated the set of all possible ranking orders along the tradeoff between the two variables for the compared occupations.

For example, Physician Assistants were rated at 4.959 by 73 facilities versus Psychologist which were ranked at 5.10 by 72 facilities and Physical Therapists were ranked on average 5.47 by 87 facilities. By our first rule, Physician Assistant outranks Psychologist. However, comparison of Physician Assistant and Physical Therapist is indeterminate. Likewise, comparison between Physician Therapist and Psychologist is also indeterminate.

With three occupations, at a maximum there would be six possible combinations of rank orders. However, because Physician Assistant outranks Psychologist under our first decision rule, among the six possible combinations only three are consistent with the first rule. This approach generates a set of rankings rather than a single ranking which allows us to consider the range of possible solutions. Table 5 illustrates the six possible combinations of rank orders. Columns 4 through 6 are not consistent with our first ranking rule.

Table 8. Set of All Six Possible Combinations of Rankings Among Three Occupations for which Relative Rankings Were Indeterminate (PA= Physician Assistant, PT= Physical Therapist, PSY= Psychologist)

1	2	3	4	5	6
PA	PT	PA	PT	PSY	PSY
PT	PA	PSY	PSY	PA	PT
PSY	PSY	PT	PA	PT	PA

From columns 1 through 3, possible relative rankings for Physician Assistant are 1, 2, and 1; potential relative rankings for Physical Therapist are 2, 1, and 3; and potential relative rankings for Psychologist are 3, 3, and 2. When summing the potential rank orderings for each occupation, Physician Assistant ranks above Physical Therapist which in turn ranks above Psychologist.

However, if there were more than three occupations with indeterminate relative rankings, the number of combinations and resulting rankings would change. With our analysis there were four occupations (Physician Assistant, Psychologist, Physical Therapist, and Medical Technologist) among which the relative rankings were indeterminate prior to application of the third sorting rule.

Under Secretary for Health Comments

Department of Veterans Affairs

Memorandum

Date: September 22, 2016

From: Under Secretary for Health (10N)

Subj: Healthcare Inspection—OIG Determination of VHA Occupational Staffing Shortages (VAIQ 7734830)

To: Assistant Inspector General for Healthcare Inspections (54)
Director, Management Review Service (VHA 10E1D MRS Action)

1. Thank you for the opportunity to review the draft report. I concur with the report, the findings, and the recommendations.
2. Attached is the action plan for recommendations 1–4.
3. The recommendations in this report apply to Government Accountability Office High Risk Area 5 (unclear resource needs and allocation priorities).
4. VHA concurs in general that effective workforce succession planning and leveraging continuously-refined clinical staffing models will assist VHA to ensure adequate resources are available to support timely access to care for our Veterans.
5. Staffing models for the critical need occupations cited in the draft report (i.e., Medical Officer, Nurse, Physician Assistant, Physical Therapist, Psychologist and Medical Technologist) will permit VHA to more accurately project resource requirements for providing Veterans with timely access to health care. By further refining clinical staffing projections, VHA can continue to improve on the recruitment and retention of medical professionals at each facility.
6. Utilizing funds provided by the Veterans Access, Choice and Accountability Act of 2014 (VACAA), VHA has hired more than 11,000 medical professionals and support staff in all categories. Of these VACAA hires, more than 5,300 medical professionals were hired in the critical occupations cited in the OIG report.

7. Regarding Recommendation 1, as noted in the previous version of this report (September 30, 2015), VHA has made significant progress to develop clinical staffing models and improve the hiring practices for medical professionals over the last year. In addition to the successful Patient Aligned Care Team (PACT) model already deployed for Primary Care, VHA is developing additional clinical staffing model strategies in the areas of Specialty Care Services. VHA is also benchmarking staffing recommendations for nursing and other disciplines.

8. Regarding Recommendation 2, VHA recognizes the value of retaining talented and experienced professionals and currently leverages all existing tools in support of provider retention. With a workforce of over 300,000 professionals, VHA compares favorably to the health care industry as a whole for employee turnover. VHA has completed a draft analysis of regrettable losses (also known as "voluntary quits") and has identified possible trends and correlations for action. My leadership team and I will review the analysis and direct mitigation strategies to improve retention in these critical occupations.

9. Regarding Recommendation 3, VHA concurs with this recommendation. Demand projection for Veterans care is already a crucial component of VHA medical budgeting and staffing, and we will continue to refine and integrate Veteran demand projections into our models.

10. Regarding Recommendation 4, VHA concurs with this recommendation. VHA has already engaged with the Department of Defense (DoD) and other external professional organizations for a variety of analyses and research. As VHA continues to evolve our staffing models, VHA will continue to consult with external organizations for advice and insight.

11. VHA will update the OIG regularly on results and progress of actions to address the report's recommendations. I look forward to continuing our collaborations with OIG on this important work in the months to come.

12. If you have any questions, please contact Karen Rasmussen, M.D., Director, Management Review Service (10E1D) at VHA10E1D MRS Action@va.gov.

(original signed by:)

David J. Shulkin, MD
Attachment

**VETERANS HEALTH ADMINISTRATION (VHA)
Action Plan**

**Office of Inspector General (OIG) Draft Report: OIG Determination of VHA
Occupational Staffing Shortages**

Date of Draft Report: September 7, 2016

Recommendations Actions	Status	Completion Date
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Recommendation 1: We restated our prior recommendation that the Under Secretary for Health ensure that VHA develops staffing models for critical need occupations, and we further recommended that VHA sets forth milestones and a timetable for further critical need occupations' staffing model development, piloting, and implementation.

VHA Comments: Concur.

To further mature clinical staffing models for the critical occupations cited in the OIG report, VHA will leverage on-going work in three arenas: alignment, benchmarking and implementation.

Alignment:

As noted in the previous version of this report, dated September 30, 2015, VHA will continue to assess the correlation between practice area complexity, characteristics of the local Veteran population, and productivity measurements. To the extent that such a correlation exists, VHA will evaluate the effectiveness of applying additional factors to our existing modeling techniques.

To accomplish this, VHA has undertaken the following actions:

- 1) The Specialty Care Clinical Staffing Model Working Group is nearing completion of a comprehensive staffing model across all 25 Specialty Care disciplines, at all VA Medical Centers, both inpatient and ambulatory. The objective of this team is to develop a model that correlates Veteran population and utilization with productivity and capacity, and then to cost. From there, the model can be used to assist in both individual staffing determination, and for overall "make/buy" decision on expanding or contracting clinics and other medical facilities.

The draft of the model will be presented to VHA leadership during October and November 2016. The model will be shared with OIG upon review and concurrence from the Under Secretary for Health.

- 2) At the direction of the Principal Deputy Under Secretary for Health, in fiscal year (FY) 2016 VHA initiated a comprehensive review of all defined VHA clinical

staffing models. This exercise has two goals: 1) to identify common best practices (and noteworthy distinctions) between the various staffing model techniques, and 2) to assess field application and evolution of the models towards the next level of excellence.

The review included more than a dozen models, ranging from the broad and continuing (such as the Primary Care Patient Aligned Care Teams) to the more narrowly-focused (such as Geriatrics & Extended Care).

During FY17, VHA will continue this evaluation of both of the objectives cited above. Specific timelines for field assessment and policy updates will be established for refinement and enhancement of the models, and for subsequent field adaptation.

Benchmarking:

Since the previous version of this report, VHA has engaged in useful discussion with both Department of Defense (DoD) and private-sector enterprise level peers. From this dialogue, VHA has confirmed that productivity standards are a key component of certain commercial health care staff modeling practices, and are regularly applied to validate business decisions.

From VHA's dialogue with DoD, we have assessed both the strengths and limitations of DOD clinical staffing techniques. A direct replication of the DoD model is not practical for VHA given the distinction between the VHA and DoD missions, serviced population, patient options, and delivery system configurations.

The ongoing clinical staffing work at the James A. Lovell Federal Health Care Center (FHCC) in Chicago, IL represents an opportunity to leverage best practices and common strategies in a joint clinical environment. In September 2016, a team of DoD and VHA professionals will convene at the FHCC to review alignment of VHA and DoD staffing models in such practice areas as Primary Care and Nursing. As the joint VHA-DoD staffing strategy matures, VHA will examine the applicability of DoD staffing techniques in VHA-specific environments.

VHA will continue to dialogue with peer organizations, expanding the conversation to include the National Institute of Health, the Indian Health Service and additional private sector partners. VHA will seek opportunities to identify best staffing and modeling practices, and to replicate them within our health care system where appropriate.

Implementation:

All of the preceding activity will be leveraged throughout FY 2017 for sustainment of the critical occupations as identified in this report. Wherever more accurate and timely clinical staffing information can be gleaned at the clinical and enterprise levels, VHA's ability to project budget, recruitment, and retention for medical officers, nursing

professionals, psychologists, psychiatrists, physician assistants, physical therapists and medical technologists will be enhanced.

The application of productivity standards will also leverage the Specialty Productivity - Access Report and Quadrant (SPARQ) tools, as cited by the OIG in the aforementioned report. Central Office and field practices will continuously review SPARQ formulae, data and execution. The goal is to evolve SPARQ in terms of both reliability and applicability as a critical aid towards informing staffing decisions.

VHA will also engage in a process of taxonomy and ontological alignment for clinical staffing terminology. Phrases such as “staffing models,” “staffing plans,” “staffing standards,” and “staffing frameworks” will be clearly defined so that each term has a specific, complementary, repeatable and commonly understood meaning. Similar work will be done with terms such as “providers”, “clinicians”, and “medical support staff.” As VHA continues to evolve and integrate clinical staffing policy, tools, data sources and communications, ensuring that these terms are consistently reflected across the health care system will aid in the application, analysis and reporting of clinical staffing practices.

Timeline for completion:

The evolution of clinical staffing models and frameworks, alignment with Workforce Succession and Planning, and the integration with the Planning, Programming, Budget and Execution (PPBE) cycle will be a multi-year effort. As noted elsewhere, no current enterprise health care system has a complete set of staffing models that cover all practice areas with “one-stop-shopping.” VHA has much effort ahead in all these areas, but the foundation for progress has been laid, and will be aggressively worked toward in the months and years to come.

VHA will provide the following documentation at completion of this action:

- Specialty Care Services Clinical Staffing Model
- Assessment of current VHA clinical staffing models
- Assessment of DoD-VHA staffing model alignment from the Lovell FHCC
- Taxonomy and Ontology Alignment

Status	Target Completion Date
In process	September 1, 2017

Recommendation 2: We restated our prior recommendation that the Under Secretary for Health review data on regrettable losses and consider implementing measures to reduce such losses.

VHA Comments: Concur.

VHA recognizes reduction of regrettable losses is a classic “force multiplier,” paying a variety of dividends in maintaining clinical capacity and quality. A strategic review of

trends, barriers, practices and solutions influencing regrettable losses has been undertaken.

Note: VHA prefers and recommends the term “voluntary quits” or “VQ” in place of “regrettable losses.” VQ is a more precise term.

Upon receiving this recommendation in previous OIG report (September 30, 2015), VHA initiated a comprehensive analysis of VQ trends. The objective was to determine if voluntary quit patterns could be identified by characteristics such as practice areas, gender, years of service, geography and other categories. To meet this requirement, VHA leadership chartered a project team of human resource experts, with subsequent review by clinical professionals. The VQ team worked continuously through the spring and summer of 2016, and has completed a draft analysis of the trends identified above. The preliminary analysis does demonstrate correlation on VQ that may be mitigated by a variety of clinical, financial and human resource strategies.

The results of the preliminary VQ data analysis will be presented to VHA leadership in October 2016 for executive review and validation. From there, VHA will then align the data trends to the various tools and strategies available for enhanced retention of professionals serving in our critical occupations.

Additional points (updated from the previous OIG report, dated September 30, 2015):

Thanks to the resources provided by VACAA, and by the urgency to increase capacity across the health care system, VHA has focused heavily on clinical recruiting over the last 18 months. Leveraging the funds provided by the Veterans Access, Choice and Accountability Act of 2014 (VACAA), VHA has hired more than 11,000 medical professionals and support staff in all categories. Of these VACAA hires, more than 5,300 medical professionals were hired in the critical occupations cited in the OIG report.

Overall, using both VACAA and non-VACAA resources, VHA has hired more than 10,900 medical professionals in these critical occupations since September 1, 2015.

There are multiple factors that influence voluntary quits, including compensation disparity with the private sector, provider workload, facility quality, organization climate, and more.

VHA already continuously strives to prevent voluntary quits, leveraging existing tools currently available to us in law, policy and practice. These tools include:

- Expanding the use of the Education Debt Reduction Program (EDRP) for retention purposes (including more than 300 new participants in FY16)
- Utilizing Retention Incentives
- Utilizing Special Salary Rates to be competitive with community pay practices
- Reviewing Locality Pay Schedules for Nurses to be competitive with community pay practices

- Conducting Physician Steering Committee reviews of Physician Compensation to ensure pay tables are competitive with community pay practices
- Utilizing Employee scholarship programs
- Providing increased Leadership Development Opportunities
- Increased use of Employee Exit Survey data as part of the Workforce Succession Planning process to identify reasons employees are leaving VHA
- Leveraging additional survey tools such as the All Employees Survey, Entrance and Exit Surveys
- Utilizing non-monetary practices such as telework, flex-time and other aids to work/life balance

The use of these tools helps VHA remain competitive in a very aggressive market – in fact, VHA compares favorably to our peers in terms of employee turnover. VHA will undertake additional efforts to further reduce voluntary quits.

VHA also reiterates the following point:

VHA recognizes there are other barriers to improving retention. VHA's FY16 annual Workforce Planning analysis has again identified Human Resources Management (HRM) as the third most critical occupation in VHA, behind Physicians and Nurses. Because HRM is an Administrative Occupation, it is excluded from the "Top 5" critical occupations as defined by VACAA and referenced in the OIG Critical Staffing Shortage report.

However, VHA recognizes that the HRM occupation is essential to the recruitment and retention of the clinical occupations. HRM provides the technical expertise and is the lead for many of the mitigation strategies identified. VHA further recognizes that this critical occupation requires a full commitment to ongoing training and support, subsequently facilitating the expansion of our mitigation strategies.

VHA will provide the following documentation at completion of this action:

- Data Analysis of Regrettable Losses (Voluntary Quits)
- Mitigation Strategy to address the trends identified in the data analysis

Status	Target Completion Date
In process	March 1, 2017

Recommendation 3: We recommended that the Under Secretary for Health consider incorporating data that predicts changes in veteran demand for health care into its staffing model.

VHA Comments: Concur.

VHA agrees that demand prediction is an essential component of staffing models. While accurately assessing productivity and staffing at a given point in time is valuable, to gain the full effect of a competent model requires prediction of future states driven by the care likely to be required by Veterans at different points in time. Such capability enables focused recruiting, capacity planning and budget projections.

The VA Enrollee Health Care Projection Model (EHCPM), which was developed in 1998, is a sophisticated health care demand projection model and uses actuarial methods and approaches to project Veteran demand for VA health care. These approaches are consistent with the actuarial methods employed by the nation's insurers and public providers, such as Medicare and Medicaid. The EHCPM projects enrollment, utilization, and expenditures for the enrolled Veteran population for more than 90 categories of health care services 20 years into the future.

A key component in of the EHCPM is "reliance." A unique aspect of the enrolled Veteran population is that enrollees have many options for health care coverage in addition to VA: Medicare, Medicaid, TRICARE, and private insurance. Approximately 80 percent of enrollees have some type of public or private health care coverage in addition to VA. As a result, enrollees rely on VA for approximately a third of their health care needs. Changes in enrollee reliance occur as a result of many factors such as enrollee movement into service-connected priorities, changing economic conditions, VA's efforts to provide Veterans access to the services they need, VA's efforts to enhance its practice of health care, the opening of new or expanded facilities, and the availability of services and/or the cost sharing associated with services in the private sector.

VHA is incorporating EHCPM data into our staffing model development, including the Specialty Care Services staffing model cited above. VHA will continue to expand our capability to predict Veteran demand for care, and to further enhance the ability of our staffing models to leverage demand prediction.

VHA will provide the following documentation at completion of this action:

- Outline of VHA Veteran demand projection capabilities

Status	Target Completion Date
In process	March 1, 2017

Recommendation 4: We recommended that the Under Secretary for Health assess VHA's resources and expertise in developing staffing models and determine whether exploration of external options to develop the above staffing model is necessary.

VHA Comments: Concur.

In developing the VACAA 201 Independent Assessments submitted by VA to Congress on September 01, 2015, VHA partnered with a variety of external experts. Such third-

party evaluation and analysis proved invaluable in the successful completion of the legislative requirement. VHA has previously collaborated with commercial firms and with peer organizations on clinical staff model strategies and techniques.

In sum, VHA endorses consultation with professionals from government, education and commercial activities for the development and evolution of clinical staffing models, including OIG. VHA leadership will continue the evaluation of all ongoing activity and determine where, when and with whom such consultation will be most valuable.

VHA will provide the following documentation at completion of this action:

- Summary of external consultation for developing clinical staff models

Status	Target Completion Date
In process	June 1, 2017

OIG Contact and Staff Acknowledgments

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