

Department of Veterans Affairs Overview of CARES Study Data for VISN 12

- ▼ **FY2010 Demand for Health Care Services**
- ▼ **Current Facilities and Use Assessment Survey Baseline**

April 2 – 6, 2001

Booz-Allen & Hamilton

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1. Background

▼ **The CARES Study is developing a market-driven, need-based methodology as the basis for providing veteran health care in 2010 with a sensitivity analysis to 2020. VISN12 is the pilot site for the CARES methodology**

- The Study is being undertaken with a recognition that:
 - ✓ The projected enrolled veteran in VISN 12 population is aging and declining
 - ✓ The priority 1-6 eligible enrolled veteran population is also declining
 - ✓ Aging carries implications for increased utilization
- The need for health care services for these groups has been projected by an actuary retained by VA using a number of sophisticated techniques

▼ **The CARES study is also examining the condition and suitability of the existing facilities to meet future service model**

- Projected 2010 demand for health care services
- Draft facility and use assessment survey results are provided for:
 - ✓ Iron Mountain
 - ✓ Tomah
 - ✓ Milwaukee
 - ✓ Madison VA
 - ✓ North Chicago
 - ✓ VA CHCS
 - Lakeside
 - West Side
 - ✓ Hines

The slide features a large blue gradient graphic that forms a cross shape. A vertical bar is on the left, and a horizontal bar is in the center. The text is positioned within the white space of the horizontal bar. Below the horizontal bar, there is a solid blue horizontal line.

2. Projected 2010 Demand for Health Care

2.1 Methodological Summary For Projecting Demand

- ▼ **The foundation for the projection of Veterans Health care needs in 2010 are actuarial projections:**
 - Using the veteran health care utilization and expenditure models developed previously by contractor/actuary for the Enrollment Level Decision Analysis
 - Incorporating enhancements to estimate demand for selected special disability and other clinical programs within VISN12

- ▼ **The VA CARES team has expanded the demand model to include:**
 - Existing programs and services such as residential/domiciliary care not modeled by the actuarial firm
 - Adjustments to determine total, across the board service utilization for special disability programs
 - Restatement of future projections from private sector categories to VA Inpatient and Ambulatory/ Clinic Stop categories

- ▼ **The BA&H CARES team will continue to test and refine the data and modeling requirements in order to maximize the usefulness of these projections**

2.1 Methodological Summary For Projecting Demand: Actuarial Projection Model Methodology for Determining Enrollees

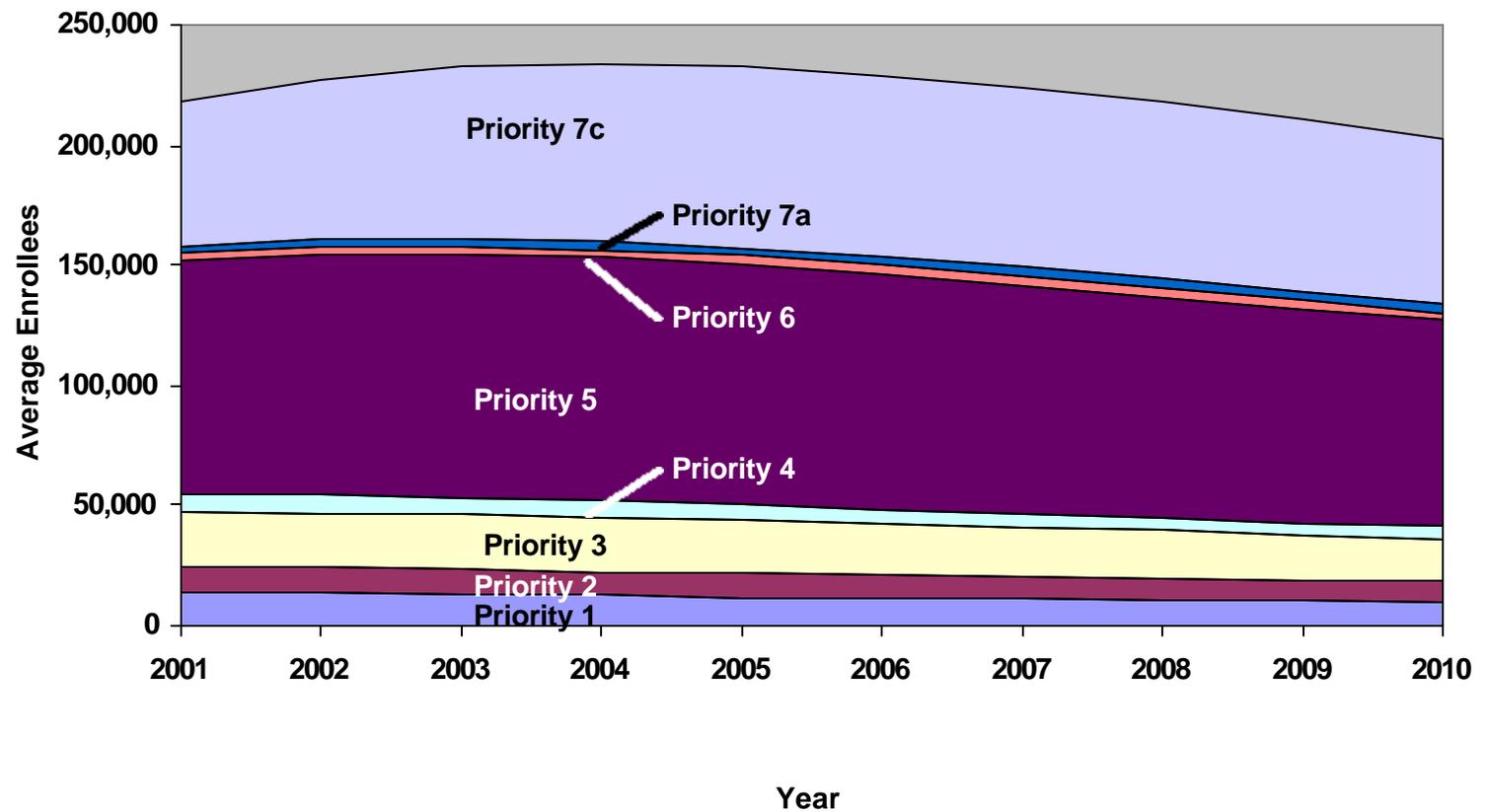
- ▼ **Step 1: Gather actual VHA enrollment data.**
- ▼ **Step 2: Develop enrollment trend rates using VHA historical enrollment, marketing and outreach information, and VETPOP data.**
- ▼ **Step 3: Develop projections of new enrollees using the trend rates developed in Step 2 and the baseline from Step 1.**
- ▼ **Step 4: Apply mortality rates to enrollment projections.**

2.1 Methodological Summary For Projecting Demand: Actuarial Projection Model Methodology for Determining Utilization

- ▼ **Step 1: Summarize private sector health care utilization averages by geographic area.**

- ▼ **Step 2: Adjust utilization to reflect:**
 - Uniform Benefit Package and Millennium Bill services
 - Age and gender characteristics of the projected veteran enrollee populations
 - Morbidity of the projected veteran enrollee populations relative to the underlying private sector populations. (VA patient diagnosis data used to assess relative morbidity levels.)
 - Estimated degree of health care management observed within the VA health care system relative to the loosely managed level observed in the local community. (VA inpatient diagnosis and workload data used to assess Degree of Management.)
 - Estimated veteran enrollee reliance on VHA for their health care needs. (Veteran enrollee survey data used to assess reliance.)
 - Residual differences between modeled and actual historical VA workload (estimates of unmeasured morbidity, reliance and degree of health care management differences.)

2.2 Data Projections: Enrolled Population by Priority Level



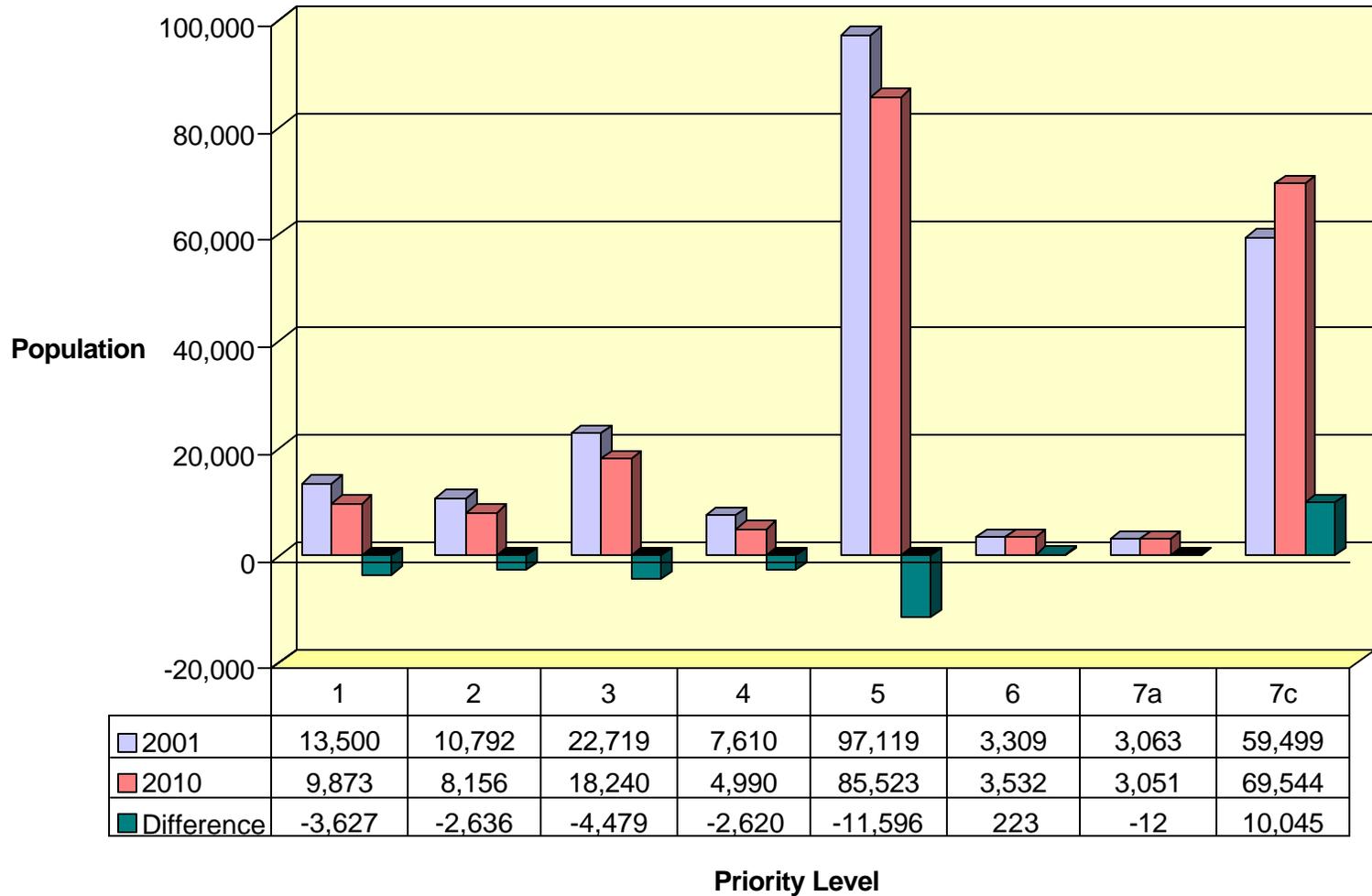
Source: VHA Data

2.2 Data Projections: Enrolled Population (cont'd.)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-------------|--------|--------|---------|---------|--------|--------|--------|--------|--------|--------|
| Priority 1 | 13,500 | 13,229 | 12,881 | 12,489 | 12,070 | 11,635 | 11,192 | 10,749 | 10,308 | 9,873 |
| Priority 2 | 10,792 | 10,726 | 10,530 | 10,257 | 9,937 | 9,590 | 9,231 | 8,868 | 8,508 | 8,156 |
| Priority 3 | 22,719 | 22,827 | 22,637 | 22,244 | 21,713 | 21,091 | 20,409 | 19,696 | 18,968 | 18,240 |
| Priority 4 | 7,610 | 7,454 | 7,199 | 6,897 | 6,574 | 6,244 | 5,917 | 5,596 | 5,287 | 4,990 |
| Priority 5 | 97,119 | 99,936 | 101,038 | 100,834 | 99,629 | 97,663 | 95,127 | 92,178 | 88,943 | 85,523 |
| Priority 6 | 3,309 | 3,511 | 3,640 | 3,716 | 3,749 | 3,749 | 3,723 | 3,675 | 3,610 | 3,532 |
| Priority 7a | 3,063 | 3,220 | 3,312 | 3,355 | 3,361 | 3,337 | 3,290 | 3,223 | 3,143 | 3,051 |
| Priority 7c | 59,499 | 66,279 | 70,924 | 73,837 | 75,336 | 75,685 | 75,107 | 73,788 | 71,889 | 69,544 |

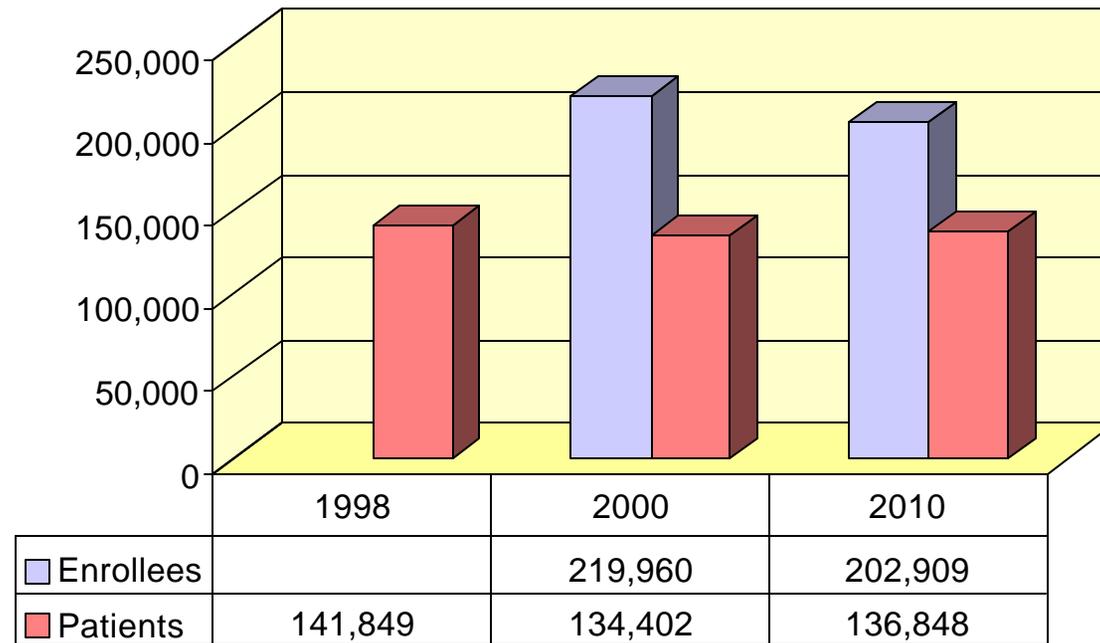
Source: VHA Data

2.3 Changes in Enrolled Populations: by Priority Level



Source: Actuary Data

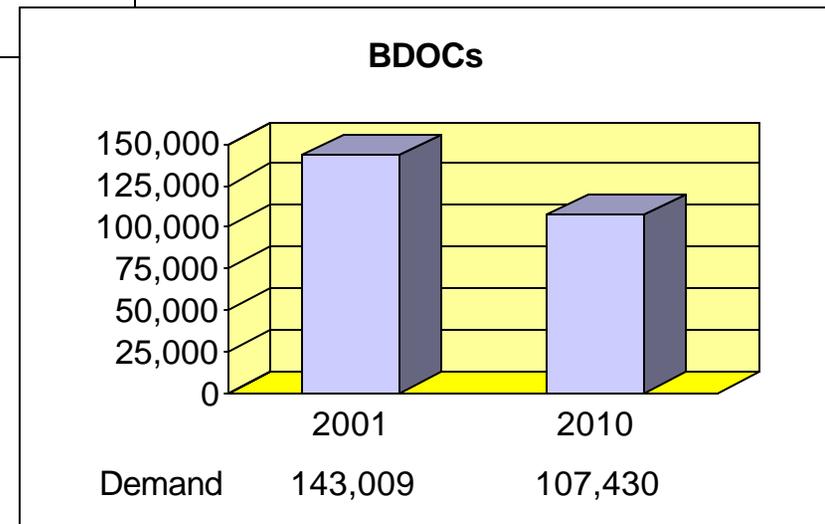
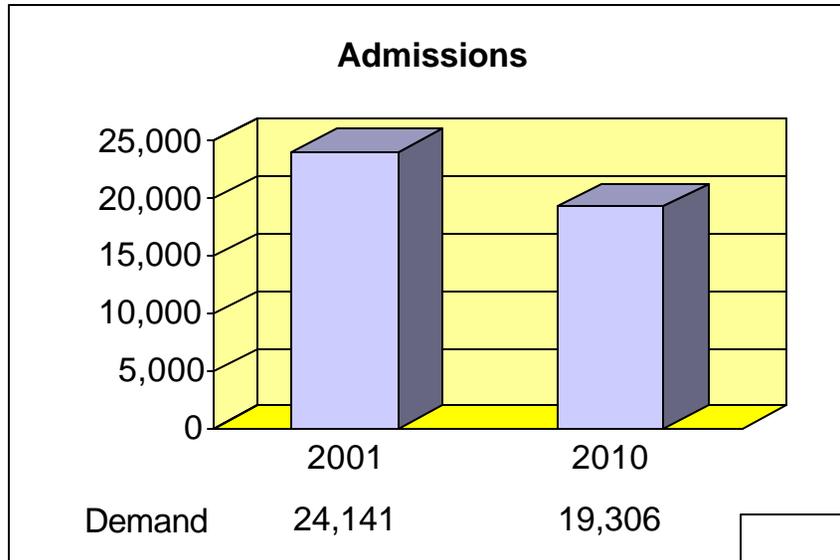
2.3 Changes in Enrolled Population: Enrollees vs. Patients (Users)*



- * Unique enrolled users, excludes non-veteran users
- Slight decline in enrollment
 - Number of patients remains about the same.

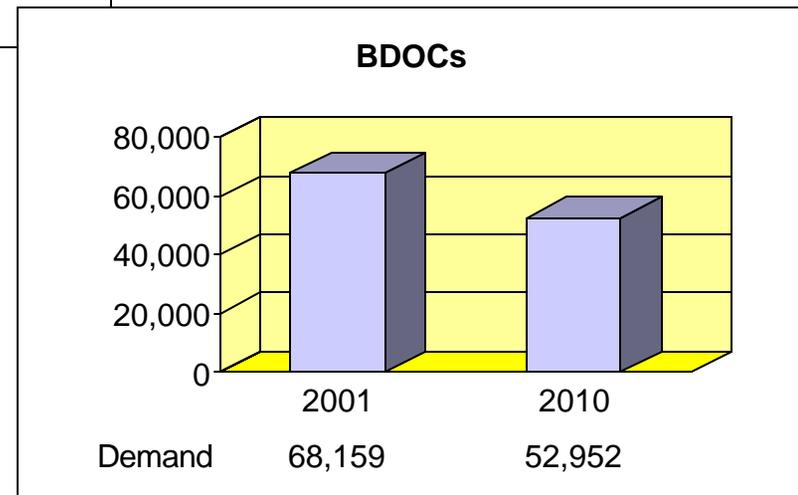
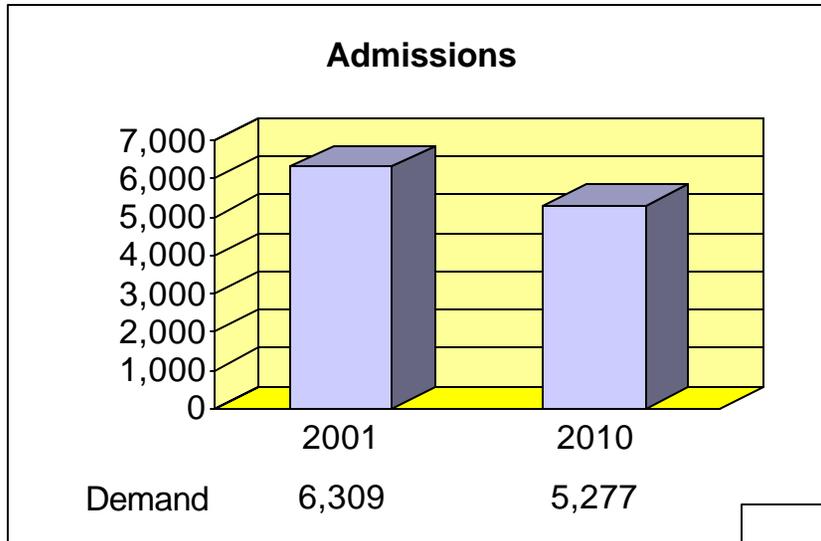
Source: BA&H Data

2.4 Inpatient Acute Projections: Medicine



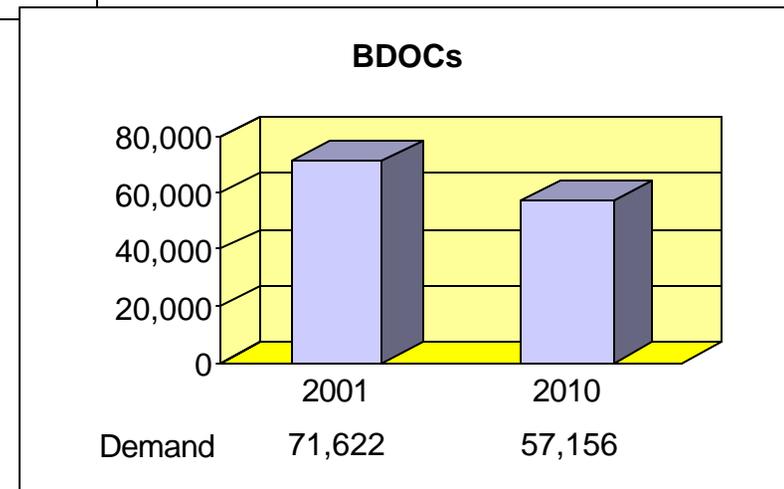
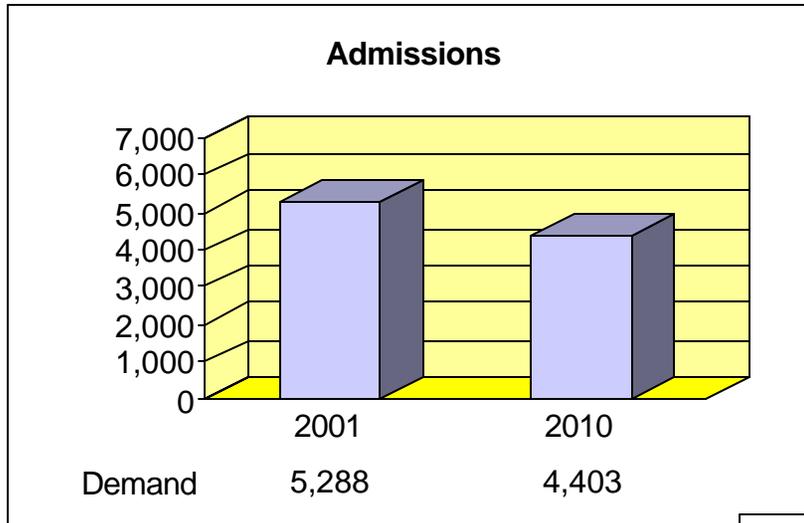
Source: Actuary Data

2.4 Inpatient Acute Projections: Surgery



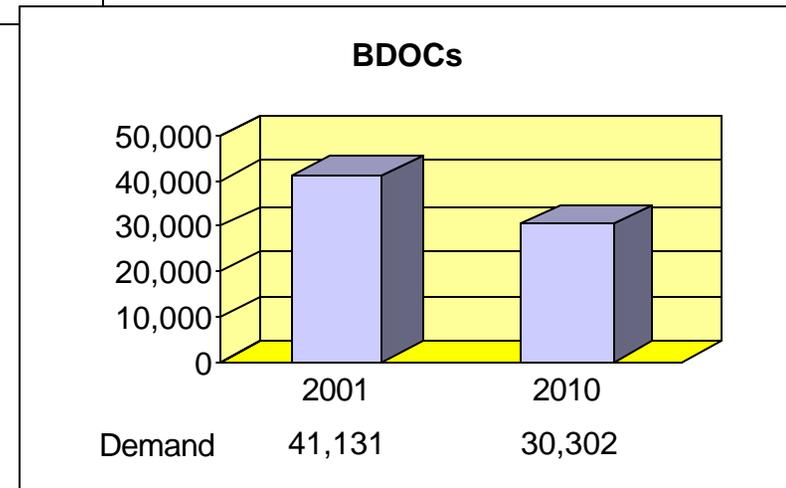
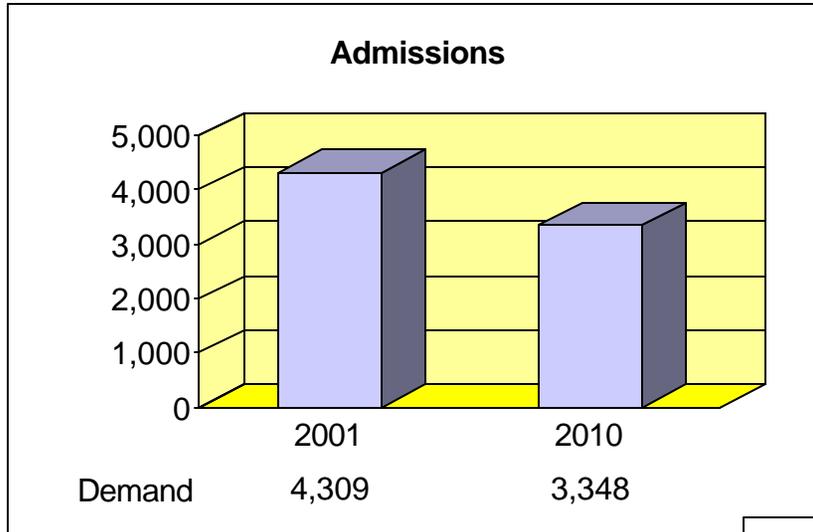
Source: Actuary Data

2.4 Inpatient Acute Projections: Psychiatry



Source: Actuary Data

2.4 Inpatient Acute Projections: Substance Abuse



Source: Actuary Data

2.5 Inpatient Extended Care Projections: Long Term Care

| | 2000 Actual | | | 2010 Projected Demand – VA LTC Model |
|-------------------|--------------|--------------|----------------|--------------------------------------|
| | Admits | ADC | BDOC | BDOC |
| Nursing Home Care | 2,829 | 591 | 215,650* | 287,817* |
| LTC Psychiatric | 217 | 116 | 42,365 | 32,875 |
| Domiciliary Care | 1,912 | 470 | 171,724 | 201,115 |
| Total | 4,958 | 1,177 | 429,739 | 521,807 |

* Represents 45% of the total BDOC for VISN 12. State Nursing Homes and Community Nursing Home Care represent the additional 55%.

Source: VHA Data

2.6 VISN 12 Demand: Average Daily Census by Priority Level for 2010

| | ADC 1-6 | ADC 7 |
|------------------------------|-------------|-----------|
| Medicine | 278 | 17 |
| Surgery | 137 | 8 |
| Psychiatry | 150 | 7 |
| Substance Abuse | 81 | 2 |
| LTC Nursing Home/Domiciliary | 757/529 | 32/22 |
| LTC Psychiatry | 85 | 5 |
| Total | 2017 | 93 |

Source: Actuary and VHA Data

2.6 VISN 12 Demand: Beds Required by Priority Level for 2010

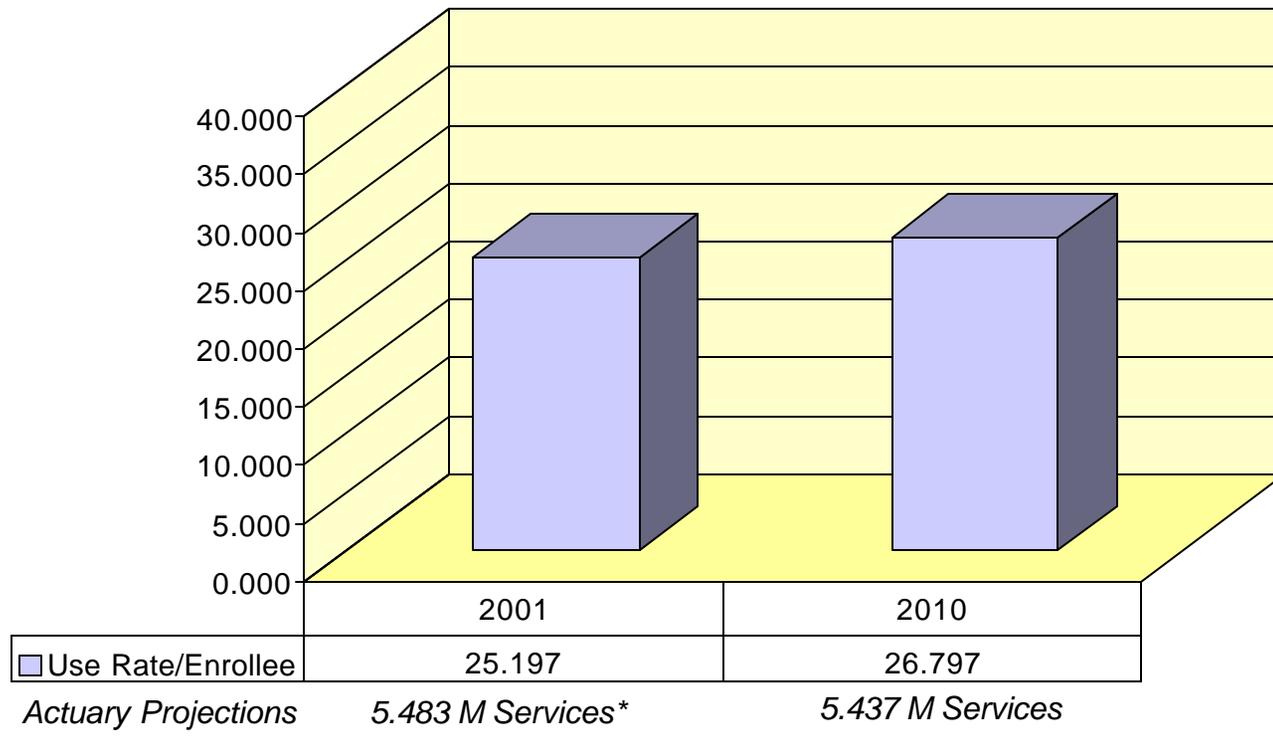
| | Beds Req. 1-6 | Beds Req. 7 | Total | 10% Range |
|----------------------------------|------------------|----------------|---------------|---------------------|
| Medicine* | 327 | 20 | 347 | 330-364 |
| Surgery | 161 | 9 | 170 | 161-179 |
| Psychiatry | 177 | 9 | 186 | 177-195 |
| Substance Abuse | 95 | 2 | 97 | 92-103 |
| LTC Nursing Home/ Domiciliary | 841/ 587 | 36/ 24 | 877/ 611 | 833-921/ 580-642 |
| LTC Psychiatry | 94 | 6 | 100 | 95-105 |
| Total | 2282 | 106 | 2,388* | 2,268-2,509 |

Medical, Surgery, Psychiatry, Substance Abuse, and LTC Psychiatry require a 85% bed occupancy rate, and Nursing Home and Domiciliary require a 90% bed occupancy rate.

* Totals include beds for Special Disabilities Programs. SCI and Blind Rehabilitation legislated bed levels are included in the medicine bed section.

Source: BA&H Data

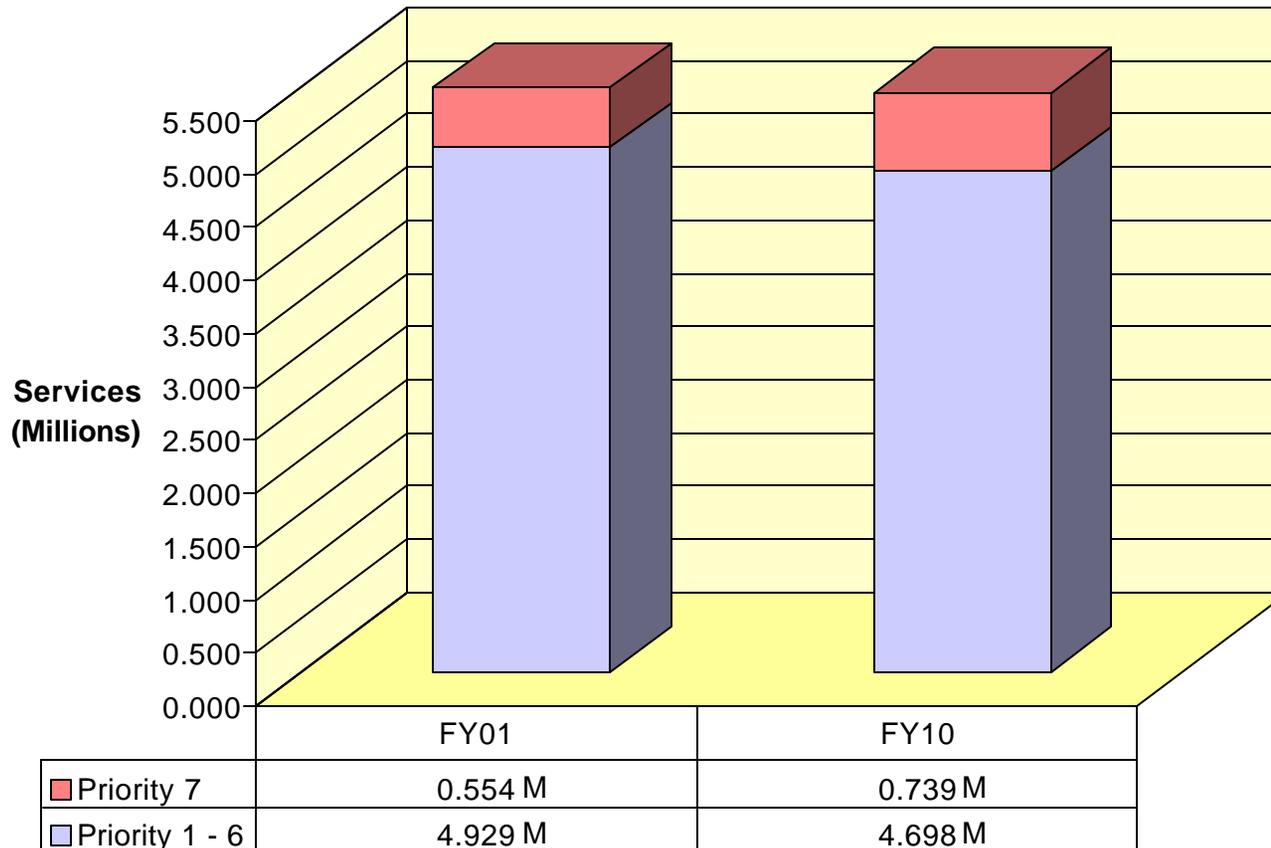
2.7 Ambulatory Care Projections: Total Ambulatory Care Services



* Actuary model defines ambulatory services as procedures, consults, visits and examination based on a private sector model. BA&H has mapped these services to VA encounters for planning purposes.

Source: Actuary Data

2.7 Ambulatory Care Projections: Total Ambulatory Care Services by Priority Group



Source: Actuary Data

2.7 Ambulatory Care Projections: Aggregated Clinic Stops for 2010

| | 2000 Actual | 2001 Projected Demand | 2010 Projected Demand |
|---------------------------------------|------------------|-----------------------|-----------------------|
| Total Ambulatory | 1,822,638 | 2,140,587 | 1,958,538 |
| Total Ancillary | 1,212,160 | 1,370,496 | 1,457,803 |
| Total Ambulatory and Ancillary | 3,034,798 | 3,511,083 | 3,416,341 |

Dental 2010 Projections are under development.

Source: BA&H Data

2.8 Special Disability Projections: Methodology

- ▼ **Step 1: Distributed patients by age category based on 2000 distribution.**
- ▼ **Step 2: Distributed BDOC by age category and determined % of total of BDOC in each age category.**
- ▼ **Step 3: Estimated use rate by dividing BDOC by the number of patients in each age category.**
- ▼ **Step 4: Aged patients by actuary category algorithm to establish the number of patients in each age category in 2010.**
- ▼ **Step 5: Distributed fixed population by % in each age group.**
- ▼ **Step 6: Applied use rate in each age category to the patients (determined to be the highest number of patients in a given year, 1996-2000) to get projected BDOC in 2010.**

Source: BA&H Data

2.8 Special Disability Projections: Inpatient Programs

| | Actual 2000 BDOC | 2010 Projected BDOC |
|-------------------------------|---------------------|------------------------|
| SCI/SCD | 32,250** | 33,047 |
| Blind Rehabilitation | 8,907 | 9,316 |
| Amputee | 6,035 | 7,586* |
| Traumatic Brain Injury | 775 | 722 |
| Homeless/Chronic/Mentally Ill | 15,480 | 18,287 |
| SMI/PTSD/Substance Abuse | 113,700 | 87,458* |

* Actuary Projections

** 1999 VHA SCI/SCD Data

Source: BA&H projections based on current use rates applied to capacity level or highest year (1996-2000), aged.

2.8 Special Disability Projections: Outpatient Programs*

| | Actual 2000 | 2010 Projected Demand |
|--------------------------------|--------------------|------------------------------|
| | Encounters | Encounters |
| Spinal Cord Injury/Dysfunction | 5,469 | 5,688 |
| Blind Rehabilitation | 1,695 | 1,707 |
| Traumatic Brain Injury | - | - |
| Amputation (PACT) | 2,160 | 1,859 |

* Included as a subset of ambulatory care workload. Calculated using Special Programs Patient Identification, October 2000 Capacity Report, suggested workload units, aged.

Source: BA&H Data

2.8 Special Disability Programs: Legislated Capacity Levels

| Program | Beds | Unique Patients** | |
|------------------------|------|-------------------|---------|
| | | 1996 Baseline | Planned |
| Spinal Cord Injury * | 126 | 778 | 795 |
| Blind Rehabilitation* | 30 | 392 | 661 |
| Traumatic Brain Injury | - | 8 | 21 |
| Amputation | - | 280 | 280 |
| Seriously Mentally Ill | - | 14,763 | 14,763 |
| Substance Abuse | - | 6,935 | 6,935 |
| Homeless | - | 1,216 | 1,776 |
| PTSD | - | 1,661 | 1,671 |
| PTSD (SMI Only) | - | 1,381 | 1,571 |

* These are designated bed sections.

** For planning purposes the highest capacity levels for years 1996-2000 were selected as the planning levels.

Source: Public Law 104-262, Section 104

2.9 Potential Unmet Demand

| Priority Levels | Acute Beds | | Ambulatory Care Services* |
|------------------|------------|------------|---------------------------|
| | Med/Surg | Psychiatry | |
| Priorities 1 - 6 | 93 | 24 | 594,000 |
| Priority 7 | 7 | 4 | 188,000 |
| Total | 100 | 28 | 782,000 |

* Visits, procedures, consults, exams, and prescriptions