

# Task Force Subgroup Report: Imaging/Radiology

VA New Hampshire VISION 2025 Task Force

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# Membership

- Caroline Taylor MD – Acting VISN 1 Imaging Service Line Director
- Keith Thibault RT(R,CT) – VISN 1 Imaging Program Manager
- Edward DeAngelo MD – Manchester Radiology Service Chief
- Holly Conroy RT (R) – Manchester Radiology Administrative Officer
- Doreen Mitchell ARDMS – Manchester Radiology Chief Technologist

# Process

- Data reviewed: *Current workload, NVCC Cost, OPES*
- Site visits completed: *Manchester Radiology F/U with Surgery and Medicine*
- Staff listening sessions completed: *Manchester Radiology staff , Oncology and Cardiology Service representatives*
- Other resources considered: *Future plans/needs of Surgery/Medicine/Primary care subgroups/Stakeholder feedback*

# Background Information
# to support Options and Discussion

# Imaging Modalities Primer

- Imaging is a support service for diagnosis and treatment
- Images may be interpreted on-site or remotely (teleradiology)

- **Diagnostic/General Radiology:**
  - Radiography – Chest x-rays, bone x rays, etc.
  - Fluoroscopy – GI (barium studies), arthrograms, etc.
  - Portable services – Bedside radiology, operating room fluoroscopy, pain management guidance
- **Ultrasound:** using ultrahigh frequency sound waves to image internal soft tissue structures
  - Abdominal imaging
  - Vascular – arteries and veins
  - Women's Health imaging
  - Can be portable

# Imaging Modalities

- **Computed Tomography (CT):** specialized X-ray cross-sectional imaging
  - Head to toe imaging
  - Vascular imaging (with intravenous "IV" contrast)
  - Guidance for interventional procedures
- **Magnetic Resonance Imaging (MRI):** specialized magnetic radiation and radio wave cross-sectional imaging
  - Head to toe imaging
  - Vascular imaging (with and without contrast)
- **Nuclear Medicine**: using radioactive IV tracers to demonstrate anatomy and disease activity
  - Cancer detection and tracking
  - Cardiac function

# Imaging Modalities

- **Positron Emission Tomography (PET/CT):** combination nuclear medicine with CT
  - Cancer detection and tracking
  - Cardiac function
  - Neurological function
- **Interventional Radiology (IR):** Using radiology to guide treatment without surgery
  - Direct tumor treatments with drugs, heat, or radiation
  - Unblocking blood vessels via catheter
  - Draining abscesses such as abdominal infections of the appendix or colon
  - Biopsy by needle of tumors in the lungs or solid organs
  - Placement of stents, valves, or filters.

# Current State
# (Services and Hours of Operation)

- **General Radiology**
  - Monday – Friday 7am – 8pm,  Saturday and Sunday 8am – 4:30pm
- **Ultrasound**
  - Monday – Friday 7am – 3:30pm
- **Computed Tomography**
  - Monday – Friday 7am – 8pm (limited services 5pm-8pm)  Saturday and Sunday 8a-4:30p
- **Magnetic Resonance Imaging**
  - Monday – Friday 7am – 4pm, one Saturday a Month
- **Nuclear Medicine**
  - Monday – Friday 7:30am – 4pm

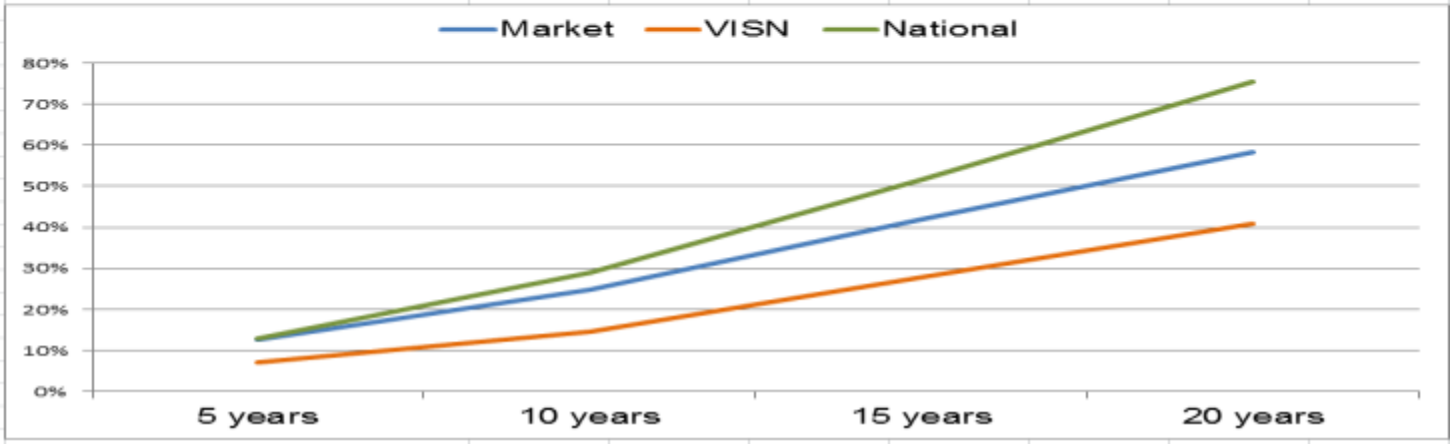
# Current state (staffing and infrastructure)

- **Technical staff** : at or below minimum levels – Leave creates a "crisis" situation
  - Results in poor access for some services (scheduled exams) and long wait times for walk-ins
  - Poor staff morale and "burn out"
- **Radiologists (specialty doctors):** are at or below minimum levels – Leave creates a "crisis situation", delayed interpretation, delay in scheduling
- **Space** : 54% below recommendations for a modern imaging service with the current services offered
- **Infrastructure**: Heat, AC, Humidity control and Power cannot meet the needs of state-of-the art imaging equipment

# Projection Data: Nuclear Medicine

| Baseline | 5 Year Proj | 5 Year Change | 10 Year Proj | 10 Year Change | 15 Year Proj | 15 Year Change | 20 Year Proj | 20 Year Change |
|---|---|---|---|---|---|---|---|---|
| 89,504 | 100,746 | 11,242 | 111,612 | 22,108 | 126,993 | 37,489 | 141,567 | 52,063 |

| Amb: LTSS Home and Community Based | 5 years | 10 years | 15 years | 20 years |
|---|---|---|---|---|
| Market | 13% | 25% | 42% | 58% |
| VISN | 7% | 15% | 28% | 41% |
| National | 13% | 29% | 52% | 76% |



# Current workload



| PRIMARY STOP CODE | FY17 ENCOUNTER 9/13/2017 | FY17 UNIQUES | FY16 ENCOUNTER | FY16 UNIQUES | Difference in PRIOR YEAR ENCOUNTERS |
|---|---|---|---|---|---|
| **REPORT TOTAL** | **17,516** | **12,863** | **18,761** | **13,824** | **-1,245** |
| (105) X-RAY | 9,993 | 6,511 | 10,620 | 7,006 | -627 |
| (109) NUCLEAR MEDICINE | 152 | 149 | 449 | 437 | -297 |
| (115) ULTRASOUND | 2,879 | 2,514 | 3,161 | 2,707 | -282 |
| (150) COMPUTERIZED TOMOGRAPHY (CT) | 2,904 | 2,330 | 2,955 | 2,324 | -51 |
| (151) MAGNETIC RESONANCE IMAGING/MRI | 1,588 | 1,359 | 1,576 | 1,350 | 12 |

*Does not capture non-VA care or reflect staffing shortages

# Radiologist Productivity / Workload

## FY 2017 3 -Low Complexity Physician Productivity

Physician Productivity = Total wRVUs (RVUSumFiltered) ÷ Physician Direct Clinical FTE (Adjusted MD FTE (C))
(excludes in-house fee & contract physician work)
Anesthesiology Productivity = Total American Society of Anesthesiologists (ASA) units (tASA) ÷ Adjusted MD FTE(C)

| | | Radiology |
|---|---|---|
| Productivity Standards | **FYTD Target (Standard Mean)** | 4,745 |
| | **Annual Target (Standard Mean)** | 5,339 |
| | **25th Percentile -** (if below: requires Facility level review) | 3,836 |
| | **Mean -1 St Dev -** (if below: requires VISN level review) | 3,542 |

| Facility | Productivity | % of FYTD Target |
|---|---|---|
| (1V01) (608) Manchester, NH HCS | 5,954 | 125% |
| (1V01) (631) Central Western Massachusetts HCS | 4,389 | 92% |
| (1V02) (528A6) Bath, NY HCS | 4,804 | 101% |
| (1V02) (620) Hudson Valley, NY HCS | 3,777 | 80% |

# Initial Options Considered

1. Status quo
2. Right Size Staffing and Space
3. Inpatient Med./Surg. (Full Service Hospital)
4. Multispecialty Ambulatory Care Center (ACC)
5. CBOC imaging coverage

# Option 1 – Status Quo

- Continue with existing services – Rad, US, CT, MRI, NucMed
- Continue with current staffing - High intensity with no back up for leave or unplanned absences
- Technical and support staffing are at minimum levels.
- This option is <u>not</u> recommended

# Option 2 – Right Size Staffing and Space

- Provide additional technical and support staff to allow flexibility in staffing leave and unplanned absences, expanded hours of coverage
  - Additional 7 FTE technical
  - Additional 1.5 FTE support staff
  - Additional radiologist for appropriate level of coverage daytime/extended hours schedule
  - Can be staffed with some per diem and multiple part-time positions to allow greater flexibility
- Right size staffing and space
  - Invest in infrastructure improvements
- Recommended option for improvement of current services and access
- *(Option 2 A) Pursue PET/CT contract with staffing (utilizing existing pad area)

# Option 3 – MED/SURG Inpatient (Full Service Hospital)

- Additional 21FTE technical (across all modalities)
- Additional 1.5 Diagnostic Rad and 1.5 FTE Interventional Radiologist (**plus** 24 / 7 services contract)
- Nursing support
- Add IR services (1355 sq ft) and support space for consent, supplies, nursing , storage supplies, physiological monitoring, patient monitoring
- Mobile PET/CT services (contract w/ staff)
- Required only if full inpatient/ICU care is provided
- High cost per patient compared to larger facility with more beds

# Option 4 – Multispecialty Ambulatory Care Center (ACC)

- Additional 7-12 technical FTE depending on mission and hours (Staffing for Right Size option may be sufficient)
- Additional portable services for OR and Pain Management support
- Limited "Interventional" Radiology needs – lines, etc, multifunctional IR suite
  - Patient monitoring and consent space
  - In addition to : procedure room for "bedside" line placement by Nursing Venous Access Team
- After hours radiologist consult and reading – Nightwatch
- This model will require careful planning and coordination with design and medical/surgical and specialty services
- Access may require relocation or addition of modalities such as CT scanner
- Expansion of Urgent Care or Emergency Department will require 24/7 coverage with on-site staff or on-call coverage for General Radiology, Ultrasound and CT.

# Option 5 – CBOC Imaging (potential add on to all options)

- Requested by multiple stakeholders
- Space may not be available at all CBOC locations
- Some service my be available by mobile service / contract
- May not be efficient use of space/staffing but is patient satisfaction focused
- Central storage/ transmission of images will be challenge
- FTE requirements will be dependent on services offered
  - Radiology 2.0 FTE
  - US – 2.0 FTE
  - MRI – contract to community or mobile lease (space dependent)
  - CT – contract to community or mobile lease (space dependent)
- <u>This option can be added to any plan adopted by the Taskforce</u>

# Questions and Discussion

Thank you for your time and attention