PET CON Workgroup
Charge #2 Subcommittee

4/22/2021

CHARGE #2 SUBCOMMITTEE MEMBERS

- Jenny Groseclose
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- Ryan Mysen
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- Arlene Elliott
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MEETING OBJECTIVE

- Revisit the Charge and Concern
- Presentation
- Discussion
- Identify what additional information may be needed
- Determine next steps

CHARGE

CHARGE #2 - Review minimum volume requirement to convert to a fixed service.

Section 3(4) An applicant proposing to initiate a fixed PET scanner service with its first PET scanner shall project 2,600 PET data units or shall demonstrate all of the following:

(a) The applicant is currently a host site being served by one or more mobile PET scanner services.

(b) The applicant has performed:

- i. 1,700 PET equivalents in the most recent 12-month period verifiable by the Department for a host site in a metropolitan statistical area county, or
- ii. 1,500 PET equivalents in the most recent 12-month period verifiable by the Department for a host site in a rural or micropolitan statistical area county.

BACKGROUND – 2019 data

- 18 mobile PET units
- 72 unique mobile host sites
- Each mobile PET unit serves ~ 4.4 host sites
- All PET units provided 38,503 PET scans
  - Average – 2,139 scans per mobile unit
  - Average – 535 scans per host site
    - 37 sites <500 equivalents
    - 35 sites >500 equivalents
    - 11 sites >1000 equivalents
    - 4 sites had between 1500-1661 equivalents

  - One site (Beaumont Troy) had 2,035 equivalents and has filed to convert. It was served by a mobile PET unit that served one other site.

BACKGROUND – 2019 data

EXAMPLE:

- St. Joseph Mercy Ann Arbor has received mobile PET 3 days per week with 12 hours days
- It would need to add a 4th day to reach the CON requirement

St. Joseph Mercy Ann Arbor	2016	2017	2018	2019	2020	CON REQUIREMENT
Patient Exams	1186	1175	1281	1452	1458	**1645**
PET equivalents	1203	1201	1311	1486	1507	**1700**
Patient exams/day	7.6	7.5	8.2	9.3	9.3	**10.5**
Equivalents/day	7.7	7.7	8.4	9.5	9.7	**10.9**

CONCERN

When comparing the Mobile to Fixed conversion for PET and MRI
- Both standards present high thresholds

Since 2010
- PET currently has 72 PET mobile host sites
- Only 1 application to convert from mobile to fixed PET

- MRI has 134 MRI mobile host sites
- 17 applications to convert from mobile to fixed MRI

This historical data support the fact the PET Eq threshold is too high to allow conversion to fixed PET, potentially impacting the quality, access and cost to service for the patients of Michigan.

PROPOSED REDUCTION TO PET Eq – MOBILE TO FIXED

Charge #2 Workgroup Proposal

- Metropolitan:
  - Reduce current 1700 PET Eq to 1500 PET Eq (11.8%)
    - 1500 PET Eq = 12 hrs/day for 3 days/week

- Micro/Rural:
  - Reduce current 1500 PET Eq to 1325 PET Eq (11.8%)

QUALITY

- Improved Image Quality with Fixed PET due to:
  - Avoidance of wear/tear from travel
  - Opportunities for routine equipment maintenance
  - Advanced options such as wider bore & increased table limits to accommodate larger body habitus
  - Opportunity for Radiation Oncology Treatment Planning due to stability of laser localization system

- Improved Patient Experience with Fixed PET
  - Sedation Options for Anesthesia & monitoring equipment – space to accommodate equipment & staff
  - Safer Environment for Non-ambulatory & Bariatric Patients – access space for stretcher & large wheelchair
  - Larger physical space to accommodate addition equipment & staff for cardiac PET pharmacologic stress
  - Code Blue Team access to patient's bedside rather than removing the patient from the coach
  - Temperature-controlled environment vs. Heat/cold, rain/snow related to air-bag issues on the coach
  - Proximity between PET scanner, injection & holding areas for ease of transition (less walking for ill patients)
  - Increased scanner utilization rate to allow for growth/expansion
  - Site-specific staff provide continuity with organization policies & contacts (IT, Security, Radiology/Cardiology, Code Teams, etc.)

- Reduced Radiology Exposure for Fixed PET via Design & Construction for the Staff & General Population
  - Larger physical space lends to opportunity to distance the Hot Lab from the PET scanner reducing the radiation level for the PET Technologists
  - Patient Holding Areas may be in closer proximity to the PET scanner thereby reducing the radiation levels in public hallways to and from the mobile unit for the general population & the PET Technologist

ACCESS

- Geographic Access: Patients remain in their communities for PET services
  - Conversion to Fixed PET for high volume sites – increases availability of mobile PET services to host sites
  - By allowing the highest volume host sites to covert to Fixed PET, the mobile route would be afforded significant time available to increase access to other sites struggling to obtain days of service needed for their patients
  - Mobile PET allows smaller communities access to PET services
  - Oncology & Radiation Oncology services are increasingly available in smaller communities, leading to the desire for PET service availability
  - Increased access ensures less travel for both patients and caregivers

- Appointment Availability:
  - 1700 PET Eq Threshold requires a minimum of 5 days/week for 1 year; essentially rendering the mobile unit as a fixed asset
  - Coordinating PET appointment with Multidisciplinary or Oncology appointments to achieve prompt diagnosis & treatment requires frequent & timely access to mobile or fixed PET based on the size of the patient population
    - Delays in PET appointments equal delays in diagnosis & treatment and potential loss of patient alignment with healthcare providers
  - PET Appointment scheduling differs from CT & MRI.
    - PET Radiopharmaceutical availability is limited to a 12-hour day to ensure correct dose activity and prompt delivery of doses for all customers.
    - The site's potential daily throughput is limited by external factors.

COST

Due to the high capital investment for PET, either mobile or fixed, the operational cost of PET is closely aligned with the site's volume/utilization.

- Lower volume sites benefit from mobile model with a shared cost
- Higher volume sites benefit from fixed model with opportunities for continued expansion meeting site needs & lower cost with increased volume

The replacement cycle of the PET scanner and Truck/Coach affects the cost and varies by Mobile Provider & Fixed Institution

- Mobile replacement is affected by
  - Frequency of travel
  - Distance
  - Scanner utilization rate, including growth/expansion
  - Advancing technology
  - Maintenance schedule

- Fixed replacement is affected by
  - Availability of Capital funding
  - Scanner utilization rate, including growth/expansion
  - Advancing technology

Other Concerns

- Future PET volume anticipated to increase due to
  - New radiopharmaceuticals to market
  - Increased availability & utilization Rubidium generators for Cardiac PET imaging

In anticipation of increased PET volume across the state and current limited capacity, acting now to address the limitations will provide an opportunity to meet the need for current and future PET imaging in metro and rural communities.

DISCUSSION

- Thoughts? Suggestions?
- What additional information is needed?
- Next steps