Optimize Your Musculoskeletal Tumor Registry Data Capture with Epic SmartForms

October 25th 2023
Agenda

• Background: Musculoskeletal Tumor Registry

• MsTR Differentiators and Data Elements

• Background: SmartForms

• SmartForm Updates and Access

• Q&A
Background

Through collaboration with the Musculoskeletal Tumor Society (MSTS), MsTR is the third subspecialty registry to be incorporated into the AAOS family of registries.

The wide-spread rollout of the MsT Registry allows surgeons to combine data about rare bone and soft tissue tumors from sites around the country, thereby potentially answering treatment and outcome questions that are otherwise unable to be answered due to the rarity of the disease.

The MsTR feedback and dashboards will help clinicians and health systems track function, complications, and outcomes in patients treated for these sarcomas with the potential to expand to metastatic bone disease and other musculoskeletal tumors in the future.
MsTR | Guiding Pillars

- Provide a Flexible Framework for Future
- Be of Minimal Burden to Participating Sites and Surgeons
  - Data entry
  - EHR abstraction
- Collect Research Quality Data
  - Patient, tumor, treatment details
  - Local recurrence, metastasis, complications
  - Functional outcomes and QoL
MsTR Steering Committee

- Benjamin James Miller, MD, MS, FAAOS – Chair
  University of Iowa
- Megan E. Anderson, MD, FAAOS
  Beth Israel Deaconess Medical Center
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- Joseph Schwab, MD, MS, FAAOS
  Cedars-Sinai Orthopaedics
- Kristy L. Weber, MD, FAAOS
  University of Pennsylvania
MsTR | Differentiators

**Diagnosis Based Registry**
- Patients appropriate for inclusion are identified by their underlying ICD-10 DX code
- More than 60 unique ICD-10 codes are utilized to trigger registry inclusion

**Provider Entered Elements**
- Not easily extracted from EHR
- Value add for research quality data

**Registry Participation Requirements**
- SmartForm Utilization
- Exploring additional standardized data collection methods
MsTR | Data Element Overview

**PATIENT**
- Name (Last, First)
- Date of Birth
- Social Security Number
- Diagnosis (ICD-10, CPT)
- Gender
- Race/Ethnicity
- Height + Weight/Body Mass Index
- Payer Status

**SURGICAL INTERVENTION**
- Procedure Type (ICD-10, CPT)
- Date of Surgery
- Implants
- Details Surrounding Surgery Type
- Comorbidities (ICD-10)

**NON-SURGICAL INTERVENTION**
- Chemotherapy
- Radiation
- Clinical Trial

**TUMOR BASELINE**
- Size
- Metastasis at Diagnosis
- Margins
- Tissue Type
- Biopsy Type

**ENCOUNTERS**
- Hospital Admission
- Procedure (ICD-10, CPT)
- Diagnosis (ICD-10)
- Recurrence

**PROs**
- PROMIS-10 Global or VR-12
- MSTS
- TESS
**MsTR | Data Element Sources**

**Abstracted from EHR**
- Patient demographics
- Treatment dates, procedures
- Diagnosis codes
- Manufacturers and implants

**Entered by practitioner**
- Tumor details
  - Location, size, histology, stage
- Treatment details
  - Systemic therapy, radiation, reconstruction
- Complications
What is a SmartForm?

- SmartForms capture detailed procedure-specific information.
- Go beyond traditional ICD-10 and CPT coding.
- Include tailored data elements for patient presentation, procedure, approach, tissue observations, and complications.
- SmartForms use branching logic to gather additional clinically relevant details as data points are provided.
Value of Smartforms for Data Capture

Streamlined and Standardized Data Entry

• Standard EPIC released elements
• SmartForms allow for conditional branching logic format to better facilitate ease of data entry while minimizing clinician burden.
• UIowa pre-built conditional forms to allow for instant implementation within user environments.
• Provides institutions with a means to centralize data collection within the registry framework of AAOS
• Allows provider to collect historical information
• Patient level Smart Data Elements (SDE)
• Includes question “Should this patient be included in the MsT Registry?”
  • Goal for this questions was to allow for troubleshooting and validation
• Record Complete selection
  • Causes larger font “Record Complete” to display at top of form
• Note can be generated from form completion
Details appear in Clinic note through text generation
- Captures discrete data through documentation that follows a surgeon’s existing workflow and thought process

Follow-up Encounters:
- Custom Multi-Tab exam SmartForm
- Includes tab for Musculoskeletal Tumor Score
SmartForm | Alleviating Initial Barriers to Participation

No staff requirement

Conditional Branching Logic: minimize data entry time by only answering relevant questions
Time per case: 1.5 minutes
   Entry -> 1 minute
   Operative Notes -> 30 seconds
   Can be done when dictating notes

Asynchronous process: data input does not need to happen all at once

Abstraction of clinical info can happen electronically

SmartForms have been created specifically to work into the clinical flow and align with AAOS MsTR data specs
SmartForm | Limitations with Implementation, Utilization, & Data Extraction

- Complex Retrieval and Install
- Non-Standardized Data Elements
- Customization Overhead
- Lack of Standardized Reporting
- Data Consistency
SmartForm | How New Adaptation Addresses and Solves for Limitations

- Simplified SmartForm Retrieval and Install
- Standardized Epic Data Elements
- Customization Overhead Reduced
- Standardized Reporting
- Data Consistency
Smart Data Element Submission

Alignment of Smart Data Elements to the Spec Manual and submission to Epic to create foundation elements.
SmartForms Updated with New Epic Foundational Elements
SmartForm | Access

- SmartForms can be accessed through Turbocharger package in the Epic Community Library. Turbochargers are tools to share content created with Epic.
- No specific Epic modules that are needed (i.e. bones module).
- Turbocharger package will work in Epic versions May 23 and lower. If on May 22 then special update E10222175 is needed. If on Nov 22 then special update E10304083 is needed.

***Special updates are for the final Epic-released SDEs so that all SDEs in the SmartForms are Epic-released.

For additional information reference Epic’s galaxy documentation by searching for the Turbocharger Setup and Support Guide, or you may also work with your dedicated Epic technical support representative.
QUESTIONS?