AMERICAN ASSOCIATION of PHYSICISTS IN MEDICINE

June 16, 2023

The Honorable Micky Tripathi, PhD, MPP
National Coordinator for Health Information Technology
Office of the National Coordinator for Health Information Technology
U.S. Department of Health and Human Services
330 C St SW; Floor 7
Washington, DC 20201

Re: United States Cored Data for Interoperability (USCDI) + Quality

Dear National Coordinator Tripathi:

The American Association of Physicists in Medicine (AAPM)[1] is pleased to submit comments on the draft USCDI + Quality proposal from the Office of the National Coordinator for Health Information Technology (ONC), compiled from submissions to USCDI. **AAPM strongly endorses ONC's objective with USCDI + Quality to support the transition of quality reporting to a Fast Healthcare Interoperability Resources (FHIR) based ecosystem.**

Background

AAPM is fully committed to improving data quality, interoperability, and effective utility, serving as a founding member with Health Level Seven (HL7) and Mitre Corporation to create the Common Oncology Data Elements eXtensions (CodeX) Project. We have worked alongside many professional organizations in developing cancer care informatics standardizations to inform HL7-FHIR interfaces within the radiation therapy treatment data (RTTD) implementation guidelines. Additionally, AAPM is an active member in Integrating the Healthcare Enterprise (IHE) for radiation oncology efforts.

AAPM leads a multi-professional society effort—including the American Society for Radiation Oncology (ASTRO), Canadian Association of Radiation Oncology (CARO), Canadian Organization of Medical Physicists (COMP), and the European Society for Therapeutic Radiation Oncology (ESTRO)—in developing a consensus-based standardized Operational Ontology for Oncology (O3). O3 provides comprehensive and prioritized detailing of data elements that are needed to support both clinical practice and research in cancer care. Currently there exist multiple, loosely coupled, electronic systems for treating cancer patients, and thus the development of standards to promote interoperability is a priority for members of these societies. O3 serves as a foundation for data element recommendations to USCDI, as well as creation of HL7-FHIR interfaces within CodeX.

[1] The American Association of Physicists in Medicine (AAPM) is the premier organization in medical physics, a broadly-based scientific and professional discipline encompassing physics principles and applications in biology and medicine. AAPM's mission is to advance the science, education and professional practice of medical physics. Medical physicists contribute to the effectiveness of radiological imaging procedures by assuring radiation safety and helping to develop improved imaging techniques (e.g., mammography CT, MR, ultrasound). They contribute to development of therapeutic techniques (e.g., prostate implants, stereotactic radiosurgery), collaborate with radiation oncologists to design treatment plans, and monitor equipment and procedures to ensure that cancer patients receive the prescribed dose of radiation to the correct location. Medical physicists are responsible for ensuring that imaging and treatment facilities meet the rules and regulations of the U.S. Nuclear Regulatory Commission (NRC) and various state regulatory agencies. AAPM represents over 9,000 medical physicists.

While these efforts have been substantial and ongoing, AAPM recognizes that lack of standardization in what data are collected and how they are represented is a primary barrier to their effective use to improve quality of and access to care. Inconsistencies in data may also create risks in the deployment of artificial intelligence (AI). As AI systems are being integrated into health care, standardization gaps can generate unintended biases that influence their output. Lack of standardization compromises our ability to improve the quality and cost-effectiveness of care, which might otherwise be achieved with the use of uniform large scale, population representative, real-world data.

Discussion of Data Class Elements

With AAPM's broad support of this initiative, we offer the following suggestions to further enhance the data class elements.

1. **Time from Diagnosis to Treatment.** While *Date of Diagnosis* is clearly listed as an element, it is less obvious that the *Dates for Diagnosis-Related-Treatment Approaches* (surgery, chemotherapy, radiation therapy) are included. Determining the time from diagnosis to treatment is a vital factor for evaluation of quality of care, equity, and assessing regional differences. AAPM recommends ensuring that these data class elements are sufficiently complete to enable calculating the time from diagnosis to diagnosis-related-treatments.

2. **Cancer Treatment Outcomes (i.e., Radiation Therapy Outcome, Disease Status, Provider Reported Toxicity).** These outcomes are not currently listed among the cancer care elements. AAPM requests inclusion of outcome elements previously submitted to USCDI. Only through systematic collection of this information can we develop evidence-based medicine that identifies optimal treatments, informs cost effectiveness, and quantifies a broad range of factors on public health policy. Links to suggestions on the USCDI website are provided below:

Cancer Care	Level 1	*Radiation Therapy Outcome/Disease Status*	https://www.healthit.gov/isa/uscdi-data/radiation-therapy-outcomedisease-status
Cancer Care	Level 1	*Provider Reported Toxicity Measure and Value*	https://www.healthit.gov/isa/uscdi-data/provider-reported-toxicity-measure https://www.healthit.gov/isa/uscdi-data/provider-reported-toxicity-value

3. **Social Determinants of Health (SDOH) (i.e., Financial Insecurity, Employment Status, etc.).** SDOH measures are important both for modeling optimal treatment approaches in patients and for informing public health decisions. Several SDOH measures submitted to USCDI in differing data classes appear in various data classes within USCDI + Quality.

4. **Provider for Person with Disability Status.** In one case, an SDOH element submitted to USCDI could not be identified on the current draft list of *Patient Demographics* class elements, that is for *Provider for Person with Disability Status*. Disabilities affect health care processes, options, and outcomes. This not only affects the individual but also for family unit caregivers. AAPM suggests inclusion of this element, along with other SDOH measures already on the list.

5. **Disability Status.** AAPM notes that *Disability Status* is not currently an explicit measure. Data elements *Functional Ability and Goals: Self-Care*, and *Functional Ability and Goals: Mobility* within the *Goals Data Class* are indirect measures. These may not be sufficient for inferring information about how disability affects health care outcomes, equity, and access. This would be more accurately represented by a dedicated element.

6. **Medications.** AAPM fully endorses inclusion of *Medications* among the items on USCDI + Quality. That said, we strongly suggest adding if the medication is a *Chemotherapy* or *Systemic Therapy Agent*. This would support more effective use of medication information when identifying patients on specific chemotherapy regimens.

Summary

On behalf of the American Association of Physicists in Medicine, we applaud ONC and USCDI for their leadership to improve health care systems through more efficient use of data for improved patient care. We thank you for your consideration of our suggestions and for the opportunity to participate in your review process. If we can provide with any additional information, please contact AAPM's Senior Government Relations Manager, David Crowley (david@aapm.org).

Sincerely,

Ehsan Samei, PhD, DABR, FACR, FAAPM, FSPIE, FAIMBE, FIOMP
President, AAPM
Chief Imaging Physicist, Duke University Health System
Reed and Martha Rice Distinguished Professor of Radiology, Physics, Medical Physics, Biomedical Engineering, and Electrical and Computer Engineering, Duke University
samei@duke.edu
Office: 919-684-7852