

PANEL 3: Semantic Harmonization of Standards

Jeff Swanson, MD CPC
Internal Medicine
Physician Lead – KP Convergent Medical Terminology

August 25, 2021

Overview of Kaiser Permanente

8 regions:

- California – Northern California
- California – Southern California
- Colorado
- Georgia
- Hawaii
- Mid-Atlantic States
- Northwest (Oregon and SW Washington)
- Washington



Internal Interoperability

- All 8 Kaiser regions share an EHR platform*
- Each has their own instance(s) of the EHR
- A KP member traveling and seeking care in another KP region 'looks' like a new patient to this region
- Must do clinical discovery and reconciliation for this visiting-member, just like a new patient to any other healthcare system

- KP's Convergent Medical Terminology (CMT) and other program-wide groups set standards that are used in all regions*, allowing for the best possible care across the enterprise and consistent data for best-practice development, research, ...

* *KP Washington has not yet moved to the KP National build*

Why multiple instances?

- *Initial scalability limitations*
- *Variations allowed between instances (state/local requirements, unique programs, innovation, ...)*

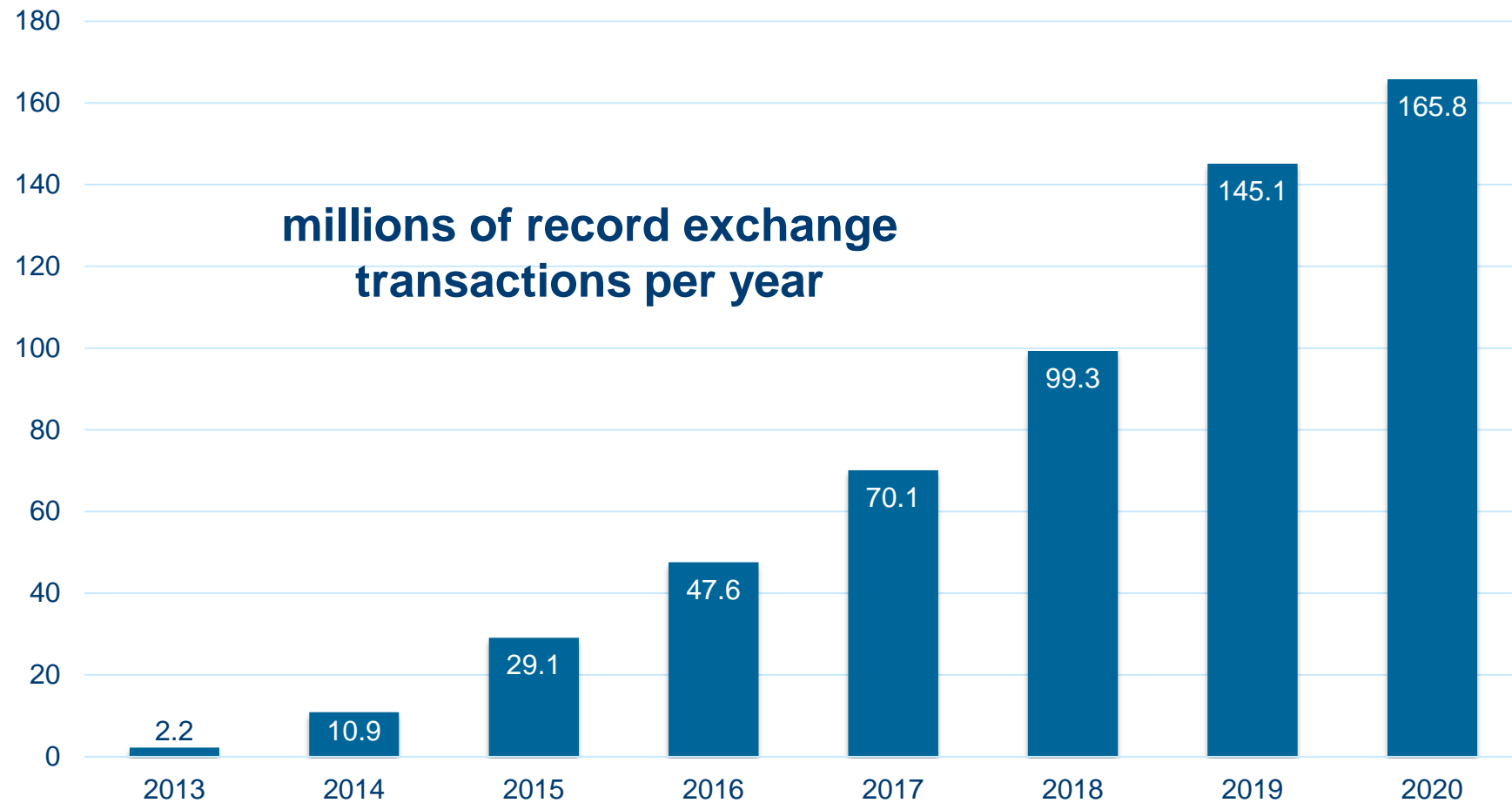
Internal and External Interoperability

- The 100,000+ Kaiser physicians, clinicians and providers use the same diagnoses and procedures in all regions.
- Front-line physician experience with a visiting-member: Reconciliation of Problem List diagnoses and viewing of test results is straightforward, fast and comfortable.
- The experience with a new patient or a KP member coming back after seeking care outside is often complex, slow and confusing:
 - Automated mapping can be both incomplete and incorrect:
 - Automated mapping often fails → requires time and effort to reconcile manually
 - An automated map suggestion may be completely wrong, requiring the front-line clinician to be vigilant
 - Terminologies (diagnosis and procedure names) are often different enough to feel foreign and are challenging to reconcile when automated mapping fails.

Automated mapping recommendations based on:

- *SNOMED SCTID*
- *ICD-10*
- *exact text match*

In 2020, KP exchanged electronic medical records with external providers over 165 million times, and our long-term averages are near 50% inbound and 50% outbound records.



Semantic Harmonization of Standards

Kaiser Permanente is dedicated to the best care of all of our patients – new and existing, and those receiving care at non-KP facilities.

- KP uses the same terminology in all 7 CMT regions
- KP maps our terminology to all the major standards (SNOMED, ICD, CPT, LOINC, ...)
- KP is so committed to semantic interoperability that we also actively contribute to those standards → KP is a formal partner with IHTSDO/SNOMED and the NLM, through the KP SNOMED Donation Program.
 - To date **25,531 concepts** submitted by KP have been accepted into SNOMED Core or the US extension.
 - To further encourage development of semantic compatibility KP donates our CMT product to the world, regularly publishing it on the NLM UMLS site for all to see and use:
 - <https://www.nlm.nih.gov/research/umls/Snomed/cmt.html>

→ Adopting or 1:1 mapping to a shared standard is required for optimal care of patients, regardless of health system.

We appreciate the efforts of everyone here today and look forward to working with you to further this work.

Thank you for your time, effort and collegiality.

