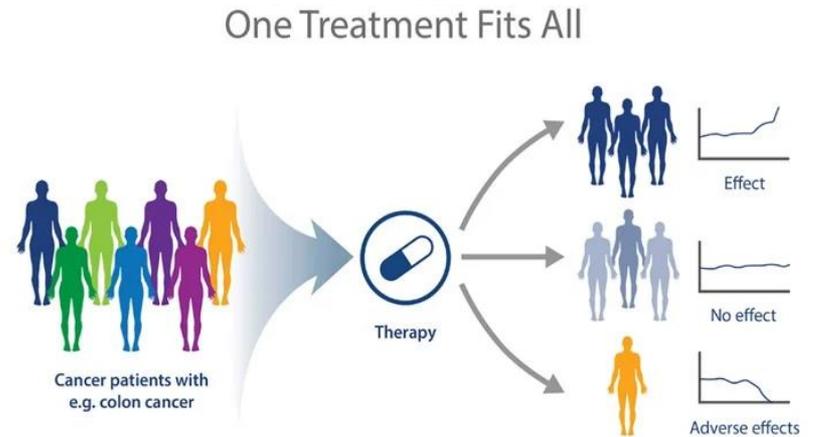


Improving Care Delivery in Oncology Through Digital Transformation

Nandita Khera MD MPH

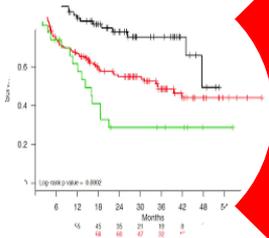
Mayo Clinic AZ

Oncology Practice early 2000s...

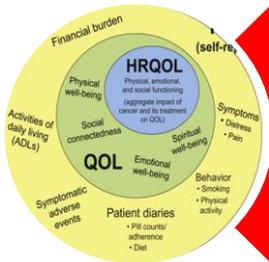


Traditional Clinical outcomes such as survival e.g using blood tests or surgical outcomes

Outcomes in the current practice



Clinical Outcomes such as survival, relapse

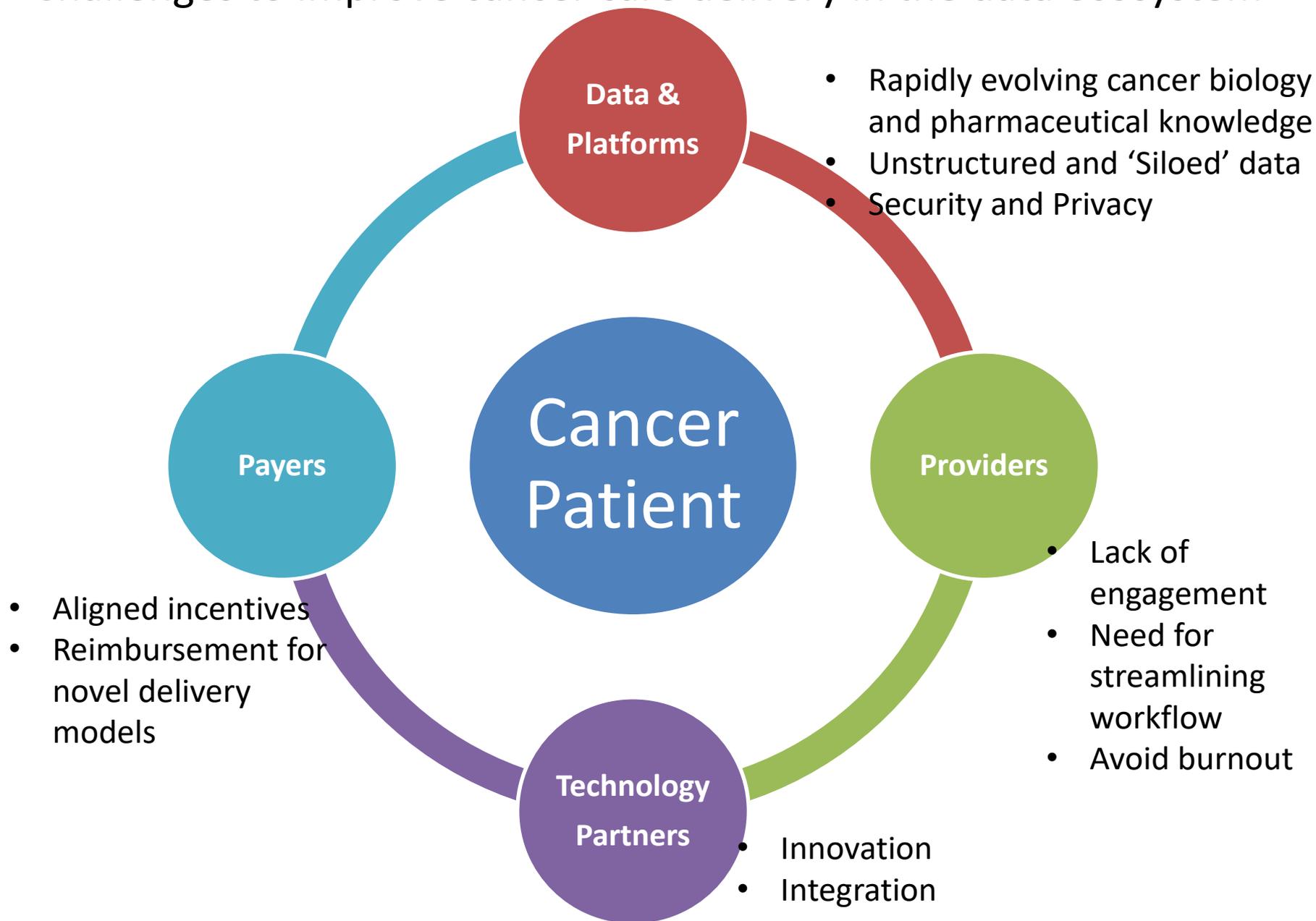


Patient centered outcomes such as PROs, PREMs



Health Care Utilization such as readmissions, ER visits

Challenges to improve cancer care delivery in the data ecosystem



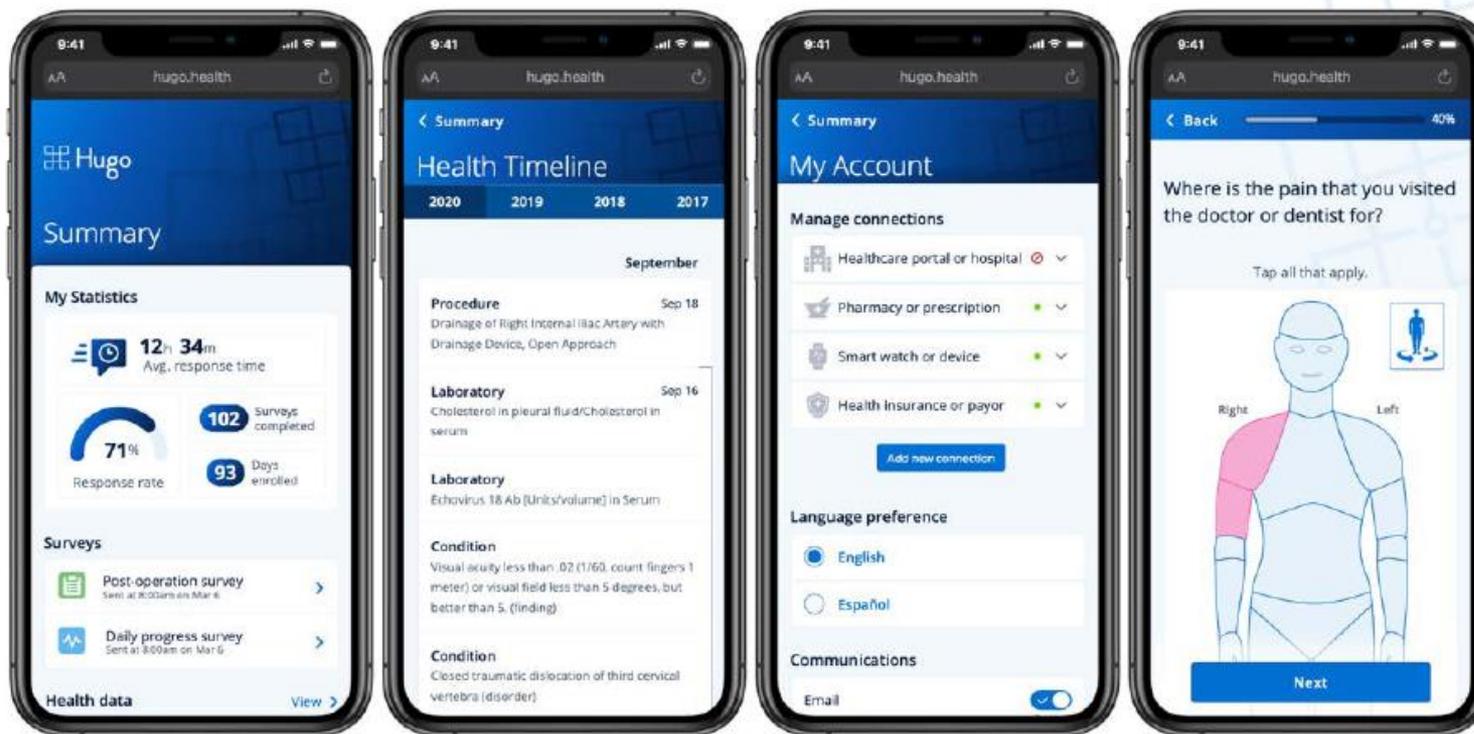


EXAMPLES

Quantifying physical function in cancer patients undergoing chemotherapy using clinician-reported, patient-reported, and wearable device data sources

FDA OCE CERSI PROJECT

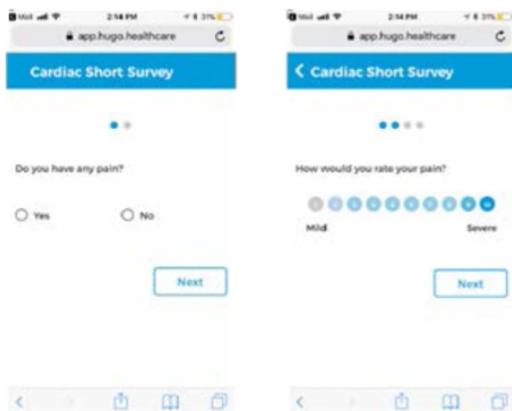
HUGO PLATFORM



Data Aggregated using Hugo Platform

Patient Reported Outcome Measures (PROMs)

- Short, post-procedure, mobile-friendly questionnaire emailed twice weekly for 10 total times immediately post-procedure
- Longer, disease-specific, questionnaires emailed at baseline, 1, 4, and 8 weeks post-procedure
- Email reminder instituted during study



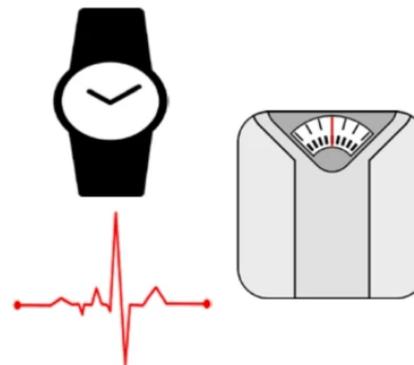
Electronic Health Record Data

- Encounters
- Encounter location
- Encounter diagnoses
- Labs and lab results
- Imaging tests
- Medications
- Procedures
- Problem List

Rx

Pharmacy Data

- Prescription names
- Prescription source
- Formulations and dosages
- National Drug Code (NDC)
- Start and end date
- Number of refills available
- Prescriber



Personal Digital Device Data

- Activity, including ambulation and sleep (Fitbit™)
- Weight (Withings Body Scale)
- Single Lead ECG (Kardia Mobile)



Objectives

- **Capture FDA's core PRO set and wearable device data on Hugo Platform**

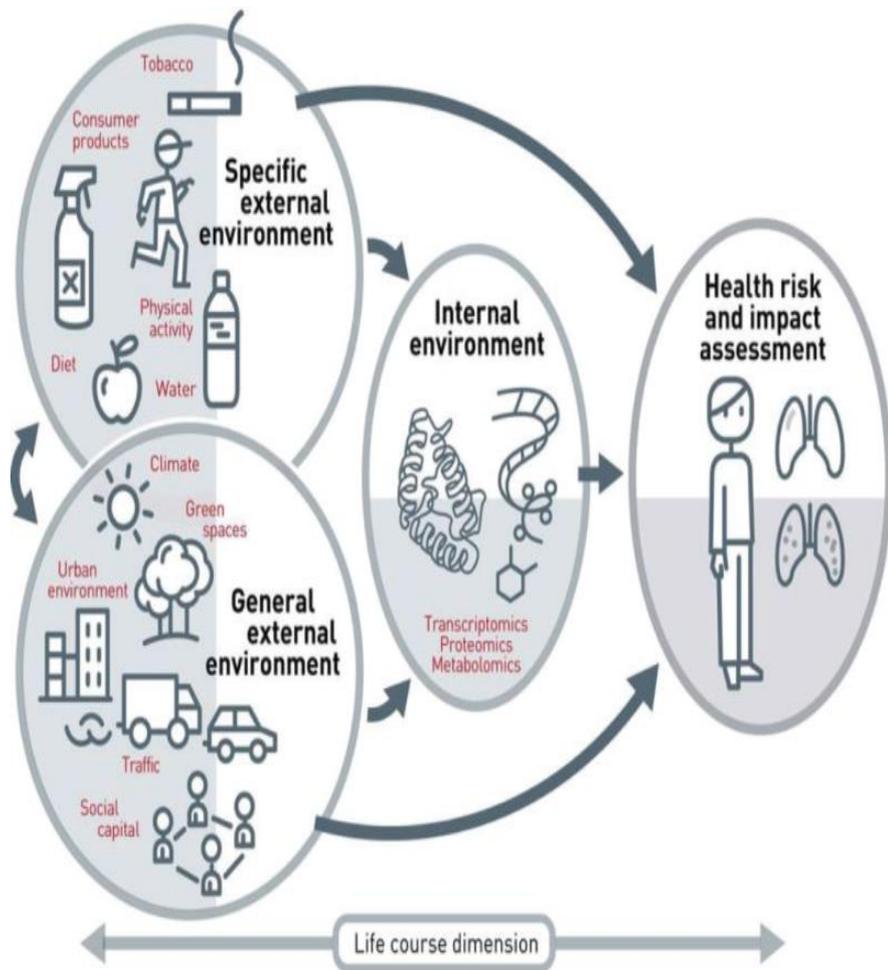


- **Explore associations between various sources of physical function data**
- **Compare physical function change with likelihood of SAE or hospitalization / ED visit (also captured on Hugo)**
- **Conduct structured exit interview to assess burden and usability**

Applying Big Data to Address the Social Determinants of Health in Oncology

**PROCEEDINGS OF A WORKSHOP
NATIONAL CANCER POLICY FORUM, IN COLLABORATION
WITH THE COMMITTEE ON APPLIED AND THEORETICAL
STATISTICS**

Exposome and sources of SDOH Data



Sources of SDOH data



The road ahead....

- **Multiple ongoing initiatives in this space**
- **Continued collaboration to advance value based care**
- **Focus on affordability and accessibility**
- **Flexible and simplified regulatory requirements and adequate reimbursement**



Questions??