Focusing SNOMED CT for Primary Care David A. Rocha



Leading healthcare terminology, worldwide

Acknowledgements

- SNOMED International
 - ► Ian Green, Clinical Engagement Business Manager
 - ▶ Peter Hendler, MD Head of Clinical Engagement for the Americas



Current State of Primary Care

- Care plans are being created but data needs to be captured
- Providers have an opportunity to prioritize care plan elements
- Primary care clinicians want a true solution to streamline quality

(using one standard)

SNOMED CT is the answer to optimal documentation for structured data capturing

Presentation Outline

- Primary Care and Accountable Care Organizations
- Creation of Custom Templates
- Current Point of Care and Population Health Analytics
- Examples of Patient Care Plans
 - > 2020 Updates on Studies for Extremities and Behavioral Health

Custom Templates as Short Term Solution

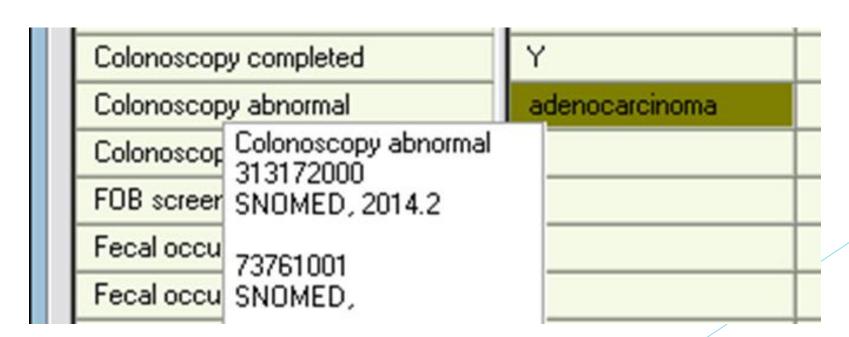
- ► Tailor to Providers Needs
 - Quality Measures
 - ▶ Patient Care Plans

Modify templates to match clinical guidelines and standards

Provided a streamlined solution for insurance reporting

Tracking Measures for Medicare Patients

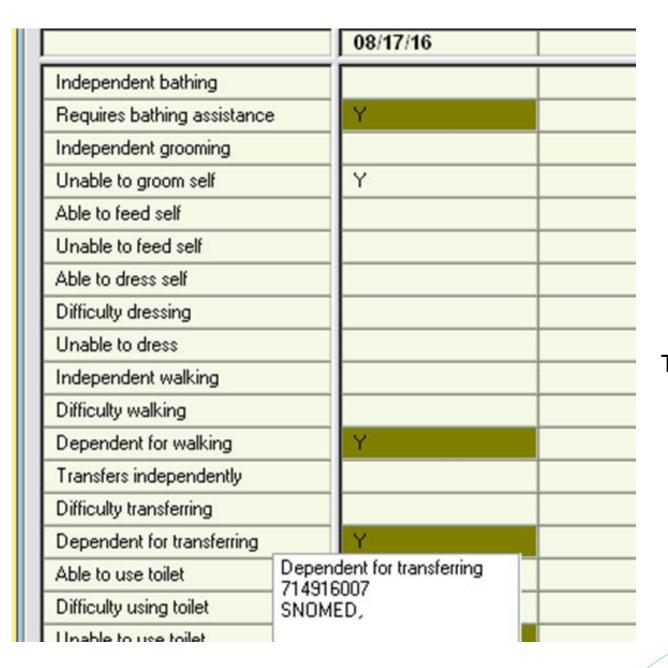
- Procedures
 - Mammogram (completed, benign, negative)
 - Colonoscopy (completed, normal, abnormal)
 - Diabetic Eye Exam (no retinopathy, retinopathy by severity)



Tracking Measures for Commercial Insurance

Some Similarities with Medicare (except):

- Care of Older Adults
 - Activities of daily living- creation of custom template to match answers (dependent or independent assistance)
 - ► Use of SNOMED detailed coding to provide a complete functional assessment: (i.e. <u>grooming-</u> independent (704437004) or dependent on assistance (704440004))



Clinical elements
custom template
The software came from
Lytec MD (software
founded by McKesson
and now owned by
eMDs)

Point of Care Analytics

- Created quality measures template in electronic health record (EHR)
- ► Able to Display:
 - **Labs**
 - Procedure findings
 - ► Provider education counseling for patients
 - Insulin administration education counseling
 - Glucose and blood pressure monitoring education counseling

Population Health Analytics

- Query the practice by primary insurance
 - Medicare patients
 - Medicare replacement plans (i.e. Humana Medicare Advantage)
- Query the practice by disease
 - Congestive heart failure patients
 - Diabetic patients
 - ► Hemoglobin A1C less than 9 percent
 - ► Eye exam screening

Patient Care Plans

- Medications
- Referrals
- Lab Tests
- Procedures
- ► Health Education Counseling

Congestive Heart Failure Care Plan

- Echocardiogram- track ejection fraction percentages
- Medications tracked to SNOMED CT codes
 - Cardio-selective beta blockers
 - i.e. Bisoprolol, Carvedilol, Metoprolol Succinate
- New York Heart Association CHF Class
- ► The combination of the ejection fraction tracking and medication adherence helps to reduce repeated hospital visits

Echo abnormal:

169241000

Echo normal:

169240004

LVEF 40 and above normal

LVEF under 40 abnormal

25 %

Chronic Obstructive Pulmonary Disease Care Plan

- Spirometry Testing (pre and post rescue inhaler)
 - ► Forced expiratory volume- forced air volume after one second
 - Forced vital capacity- amount of air exhaled after one deep breath
 - ► FEV1/FVC- size of air lungs exhaled in one second
- Classify COPD Severity
 - Mild, Moderate, Severe, End Stage

Pre rescue inhaler	Post rescue inhaler
FEV1 % pre	FEV1 % post
FVC % pre	FVC % post
FEV1/FVC % pre	FEV1/FVC % post

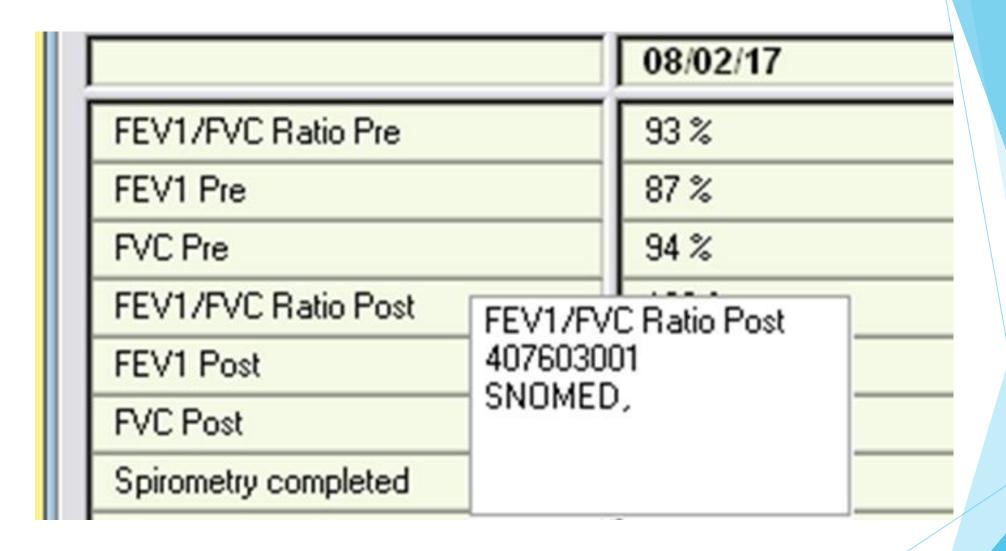
 Tracking the Spirometry Percentages: reduces excess emergency room and hospital visits

Chronic Obstructive Pulmonary Disease Care Plan

COPD Assessment Test (CAT) Score

	1/1/2018
COPD Assessment Test Score: 446660005	32

- Medical Research Council (MRC) Breathlessness Scale
 - ▶ i.e. patient has MRC Breathlessness grade 4 (finding): 391125004
- Education for self management of respiratory health: 427625003



Vascular Screening

- Ankle Brachial Index screening to rule out
 Peripheral Vascular Disease
- ► Ankle brachial index (observable entity): 446841001
- Left dorsalis pedis ankle brachial index (procedure):401222009
- Right dorsalis pedis ankle brachial index (procedure) :401223004

Neuropathy Screening

Sensory nerve conduction study done to rule out
 Neuropathies (Polyneuropathy or Autonomic Neuropathy)

Sensory nerve conduction (observable entity): 278223003

Sensory nerve conduction study (procedure): 252745008

Behavioral Health

- Depression
 - Patient health questionnaire 9
 - ► Major depressive disorder specific to SNOMED CT
 - ► Moderately Severe
 - ► Minimal Depression
- Seen by social worker (finding)
- Referral to psychiatrist (procedure)

Behavioral Health

- Anxiety
 - Assessment using generalized anxiety disorder7 item score (procedure)
 - Generalized anxiety disorder 7 item score (observable entity)
 - Assessment using generalized anxiety disorder 7 item scale declined (situation)

- Bipolar Disorder
 - Mood Disorder Questionnaire assessment scale (MDQ)
 - ► Mood Disorder Questionnaire Score

Improved Outcomes: Financial Reimbursement

▶ Dr. Guillermo Rocha was ranked #1 in quality care in medicine for the San Antonio clinics in RGV ACO in 2015, 2017 and 2019

Dr. Rocha was a recipient of the Humana Gold STAR rating for high and improved performance in patient quality care measures

Improved Outcomes: Medical Risk Score

Diagnose patients more accurately with SNOMED CT terms that are not in ICD-10

- Stable Angina
- Dependence on continuous positive airway pressure (CPAP) ventilation
- Bare Metal and Drug Coated Cardiac Stent
- Clinically Significant Macular Edema
- Diverticulosis of Sigmoid Colon

- Adverse reaction caused by Atorvastatin
- Wong-Baker FACES pain assessment scale
- ► Referral to cardiologist refused (721111001)
- Referral to respiratory physician declined by subject (726698006)

Wong-Baker FACES® Pain Rating Scale



- ► PHQ-9 score (depression score)
- ► Minimal depression (719512004)
- ► Moderately severe depression (720455008)

	Previous year	Current year
PHQ-9 Score (720433000)	18	3
Major Depression Disorder (severity)	Moderately Severe Major Depression	Minimal Major Depression

- ► US Edition Examples:
- Assessment using Montreal Cognitive Assessment (MOCA)
- Chronic care management minutes (71981009)

Month 1	Month 2
Chronic Care Management (CCM) minutes	CCM minutes
60	90

Apply to Behavioral Health:

- Opioid Risk Tool
- Mood disorder questionnaire

Apply to insulin pumps and glucose meters:

- Basal insulin infusion rate
- Bolus insulin infusion rate

Authored Content while involved in Diabetes CRG

Centrally involved macular edema due to diabetes mellitus (disorder): 871778008

Non centrally involved macular edema due to diabetes mellitus (disorder): 871781003

SNOMED CT social distancing content to be published for the next US release

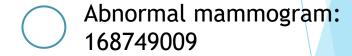
- Performs social distancing (finding)
- Education about social distancing (procedure)
- Subject advised to avoid crowds (situation)
- Subject advised to avoid foreign travel (situation)

Benefits of SNOMED CT for the Healthcare Industry

- Most accurate clinical terminology to track events across databases
 - ► History of surgeries
 - Radiology findings
- SNOMED CT terms were created by doctors, for all patients

Future of SNOMED CT for Providers

- More software will import SNOMED CT release files into databases
 - Query by quality measures
- Continue structured data with SNOMED CT codes behind options below:
 - Check boxes
 - ► Radio buttons



Normal mammogram: 168750009



Spirometry completed



Blood pressure monitoring education

Summary- SNOMED CT Focus on Primary Care

- Track care plan elements closer to "real time"
- Link SNOMED CT codes to dates of service
- Analyze point of care and population health for disease prevention and screenings, and care plans
- Updates on Behavioral Health and COVID-19 screening future concepts
- ► Author content via a national request web based system

Questions or Comments?

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