

WHY COORDINATE COMPLEX CARE?

THE THEORY AND THE PERSON - GURSHAN

APRIL 29, 2019

CCC FOR OLDER ADULTS WORKSHOP

COORDINATING COMPLEX CARE FOR OLDER ADULTS

- Why are we here?
 - ❑ Working with CCC Initiative and PPhRR Initiative
 - ❑ Evaluations and Information support
- Complex Care – What to discuss?
 - ❑ The theory
 - What is complex care? - Defined
 - Coordinating Complex Care – Defined
 - What does the literature say?
 - ❑ A Person - Gurshan
- What information?
 - ❑ Summarize work done for PPhRR Initiative and CCC Initiative
 - PPhRR Initiative Evaluation
 - CCC Initiative Information Support Plan and Evaluation Plan

WHAT IS COMPLEX CARE?

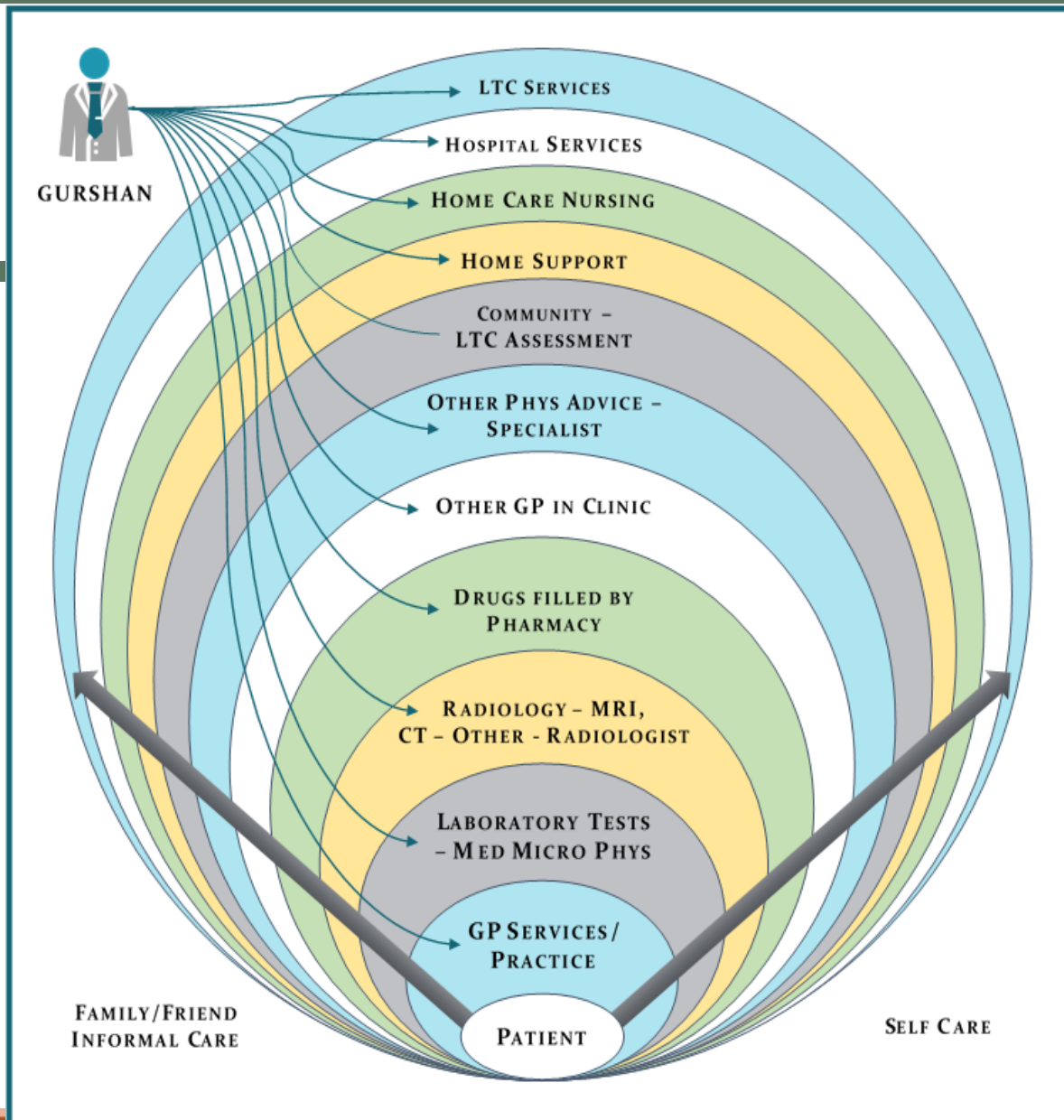
- Complex care in this case is referring to those patients that use/receive a complex array of health services over a period of time.
- The people using/receiving complex care:
 - ❑ Have an array of episodic, acute and/or chronic health/life problems that are being addressed through a combination of self-care, formal health services and informal care by family and friends
 - ❑ Have one, a few or many health conditions
 - ❑ Receive different bundles of services e.g.
 - GP, specialist physician services and a complex suite of drugs and tests
 - GP, specialist physician services in community and in hospital
 - GP, specialist physician services in community, drugs and tests as well as home care, home support services

GURSHAN

Gurshan is a real person in BC that used/received a complex array of services over time

His story was built from the MOH health service data during the PPhRR Initiative Evaluation work done for Drs of BC.

You will hear Gurshan's health service use story.... There are 76,000 people in BC like Gurshan...(Plx 3 /4)



CCC INITIATIVE

CARE COORDINATION - DEFINITION

- Care coordination is the organization of patient care activities between family physicians and specialist physicians to facilitate improved health care delivery to older adults.
- Care coordination also involves working with the patient, family, and informal caregivers

WHAT DOES THE LITERATURE SAY?

HIGH LEVEL LITERATURE REVIEW

➤ Questions

- ❑ What approaches are used to coordinate the care of GPs and specialist physicians for seniors with moderately complex conditions?
- ❑ What measures are used to research/evaluate/monitor the effectiveness of coordination of care for with moderately complex conditions?

➤ Method

- ❑ Searches were done on PubMed and Google using a combination of search terms including “primary care,” “general practitioner,” “specialist,” “seniors,” “communication,” “care coordination,” “coordination” and “referral.”

HIGH LEVEL LITERATURE REVIEW

➤ Definition of Care Coordination

- ❑ “Care coordination is the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient’s care to facilitate the appropriate delivery of health care services. Organizing care involves the marshalling of personnel and other resources needed to carry out all required patient care activities and is often managed by the exchange of information among participants responsible for different aspects of care.”

(Source: Agency for Health Care Research and Quality, USA)

HIGH LEVEL LITERATURE REVIEW

➤ Why is care coordination difficult?

- Incomplete referral requests
- Roles of specialists are unclear in the responsibility of care
- No response from specialist after referral request is initiated
- No feedback to family physician after patient consultation is completed
- Referrals are often faxed and get misplaced or lost
- No way of seeing how long wait list for specialist is
- Primary care providers don't know specialists
- Primary care providers submit referrals to multiple specialists

HIGH LEVEL LITERATURE REVIEW

- Issues identified by primary care providers
 - ❑ Difficulties in finding available specialists
 - ❑ Not getting acknowledge of referrals
 - ❑ Having it be their job to tell the patient about the appointment
 - ❑ Idiosyncratic referral processes
- Issues identified by specialists
 - ❑ Not enough supporting information
 - Lab tests
 - Unclear reasons for referral

HIGH LEVEL LITERATURE REVIEW

➤ Approaches to coordinate care

☐ Communication

- Improving communication between physicians and specialists

☐ Referrals

- Identifying minimum information required in referrals and consultation reports

☐ Electronic Consultation Systems

- Use of electronic systems to manage referrals

☐ Interoperable Computerized Records

- Allow specialist to view patient information electronically

HIGH LEVEL LITERATURE REVIEW

➤ Measures for effective care coordination

- Patient experience
- Harm reduction
- Quality of life
- Readmissions
- Wait list and wait times

HIGH LEVEL LITERATURE REVIEW

➤ Examples of Successful Care Coordination Programs

- ❑ Alberta: Gastroenterology Referrals
 - Defining clinical pathways
 - Group medical visits
 - Dedicated phone line for physicians to get advice from specialists
- ❑ British Columbia: Timely Access to Specialty Care
 - Online directory tool
 - Dedicated phone line for physicians to get advice from specialists
- ❑ Newfoundland and Labrador: Endoscopy Services
 - Developing standardized referral form
 - Central intake of referrals
- ❑ Ontario: The Champlain BASE
 - Online consultation platform
 - Case assigner

GURSHAN'S HEALTH SERVICE STORY

PPHRR INITIATIVE EVALUATION BASELINE ANALYSES
APRIL 2018

VIGNETTE 100249122 - PLX 4

GURSHAN VIGNETTE 100249122

- Gurshan lived in Fraser Health Authority area and was 90 years old in 2016.
- Over the 7 years 2010 to 2016, he had 596 medical services:
 - ❑ 480 Physician services (Plx 4), of which:
 - 187 were provided in hospital,
 - 293 were provided in community,
 - ❑ 97 Lab services that were claimed by 16 different providers,
 - ❑ 19 Other services.
- 718 drug fills.
- 17 ambulatory care services.
- 9 admissions to hospital that resulted in 132 days hospital stay.
- For home and community care services he had case management, home nursing, home support and residential care. He was assessed once for RAI-Home Care.
- Gurshan was admitted to residential care in 2016 at the age of 90.

GURSHAN – DIAGNOSES REPORTED BY DOCTORS

- Gurshan's most common diagnoses over the 7 years (are in top 5 each yr. and over 7 yrs.) included:
 - ❑ Other Bacterial Pneumonia (Reported 36 Times)
 - ❑ Cataract (20)
 - ❑ Chronic Sinusitis (18)
 - ❑ Essential Hypertension (18)
 - ❑ Hyperplasia of Prostrate (16)
 - ❑ Other Forms of Chronic Ischaemic Heart Disease (15)
 - ❑ Heart Failure - Congestive Heart Failure (12)
 - ❑ Affective Psychoses (9)
 - ❑ Symptoms Involving Skin and Other Integumentary Tissue (8)
 - ❑ Symptoms Involving Urinary System (7)
 - ❑ X-ray (7)
 - ❑ General Symptoms (7)

GURSHAN – DIAGNOSES REPORTED BY DOCTORS (CONT'D)

- ❑ Other Dermatoses (7)
- ❑ Anaesthetic (6)
- ❑ Other Retinal Disorders (6)
- ❑ Atopic Dermatitis and Related Conditions (6)
- ❑ Symptoms Involving Nervous and Musculoskeletal Systems (6)
- ❑ Other Nonorganic Psychoses - Unspecified Psychosis (5)
- ❑ Other Cerebral Degenerations (5)
- ❑ Fracture of Face Bones - Nasal Bones, Open (4)
- ❑ Other and Unspecified Disorders of Back (4)
- ❑ Other and Unspecified Disorder of Joint (4)
- ❑ Heart Failure (3)
- ❑ Glaucoma - Preglaucoma, Unspecified (3)
- ❑ Disorders of Refraction and Accommodation - Presbyopia (3)
- ❑ Superficial Injury of Hip, Thigh, Leg and Ankle (2)

GURSHAN – PHYSICIAN SERVICES

OVERALL

- Over the 7 years Gurshan had services provided by 106 physicians from 16 different specialties.
 - ❑ Physician specialties included 50 different GPs, 7 Internal Medicine, 6 Optometrists, 4 Emergency Medicine, 3 Cardiologists, 3 Anaesthetists, 3 Dermatologists, 2 Urologists and others.
 - ❑ Diagnostic specialties included Lab Medicine 10, Medical Microbiology 2 and Radiology 9 different physicians.
- In total over the 7 years there were 596 medical services. Services per year ranged from a low of 51 in 2010 to a high of 135 in 2012. The average was 85 services per year.

GURSHAN – GP SERVICES & CONTINUITY

➤ The number of General Practice physicians providing services changes over the years

Year	# of GPs
2010	5
2011	11
2012	14
2013	11
2014	17
2015	14
2016	8

- Gurshan's GPs involved in his care was the highest in 2014 at 17. Over the last seven years there was 1 GP that was his most responsible physician with a change in primary care physician in 2013 and 2016.
- In 2016, Gurshan had 34 GP services, 12 services from his GP that was his most responsible physician.

GURSHAN – SERVICES REPORTED BY DOCTORS

- Gurshan's most common services reported by physicians (are in top 5 each yr. and over 7 yrs.) included:
 - ❑ Visit in Office (Age 80+) (Reported 157 Times)
 - ❑ Hospital Visit (47)
 - ❑ Community Based GP: Hospital Visit (17)
 - ❑ Psychotherapy Individ.(Hosp or Institut) Per 1/2 Hr (9)
 - ❑ Visit - Out of Office (Age 80+) (9)
 - ❑ Advice About a Patient in Community Care (9)
 - ❑ Full Optometric Diagnostic Examination of The Eyes (6)
 - ❑ Level III Emergency Care - Night (6)
 - ❑ Skin Disorders/Lesions - Special Therapy (4)

GURSHAN – SERVICES REPORTED BY DOCTORS

- Visit, Hospital, Urology (4)
- Level II Emergency Care - Day (4)
- Major Tray (4)
- Visit Nursing Home One or Multiple Patients (3)
- Patients 80 Years of Age and Over-anaesthesia (3)
- No Charge Referral (3)
- Critical Care (ICU) - 2nd To 7th Day (Incl.) (3)
- Consultation, Dermatology (2)
- Computer-assisted Quantitative Visual Fields (2)
- Tomography-head Scan Without Contrast (2)
- Level III Emergency Care - Evening (2)

GURSHAN - HOME AND COMMUNITY CARE SERVICES

- The data shows Gurshan being in residential care starting in March, 2016.
- Home Support services were provided in 2011
- Case Management services were provided in 2011 for about 6 months and again 2012 onward.
- Some Home Nursing was provided for a short-period starting in February 2014 for about 2 and a half months
- A RAI-CC (Community Care) assessment was completed in March of 2016.
- There were no other RAI assessments reported.

GURSHAN – NUMBER OF PRESCRIBERS

- Over seven years there were 35 prescribers overall.
 - ❑ 21 General Practitioners
 - ❑ 7 Specialists
 - ❑ 7 Unknown
- There were 5 prescribers in the 2016 calendar year.
 - ❑ 3 General Practitioner
 - ❑ 1 Specialist
 - ❑ 1 Unknown

Prescriber type	Over 7 years	2016 calendar
General practitioner	21	3
Specialists	7	1
Other physicians	0	0
Unknown	7	1
Total	35	5

GURSHAN – DRUGS, FILLS AND CHANGES

➤ Gurshan had 718 drug fills over the 7 years.

Year	# of Drug Types (AHFS 3 level)
2010	10
2011	12
2012	17
2013	11
2014	14
2015	16
2016	18

- This is 103 fills per year or almost 1 fill every 3 days for 7 years.
- These fills spanned a broad range of drug types.
- Gurshan received a high of 18 drug types in 2016 to the low of 10 drug types in 2010.
- 5 of these drugs were taken across all 7 years.

GURSHAN – PRESCRIBERS & FILLS

Year	# of prescribers/year	# of fills/year
2010	4	25
2011	10	90
2012	8	155
2013	6	111
2014	12	110
2015	6	119
2016	5	108

- The most fills/year was from 8 prescribers that claimed a total of 155 fills in 2012.
- The least fills/year was from 4 prescribers that claimed a total of 25 fills in 2010.

GURSHAN – GP PRESCRIBERS

# years prescribed	#GP prescribing across # years
7 years	0
6 years	0
5 years	0
4 years	1
3 years	3
2 years	3
1 year	14

- Overall there were 21 GP prescribers across 7 years.
- There was 1 GP that prescribed across 4 years.
- The most GPs prescribing across multiple years was 3 GPs across 3 and 2 years.
- There were 14 GPs that prescribed in one year only.

GURSHAN – PRESCRIBER, FILLS & LOCATION

- Across 7 years from 2010 to 2016 prescribers' most common service location listed was:
 - ❑ Prescribers from the 'Community' service location type had the most claimed:
 - Prescribers (18)
 - AHFS3 types (28),
 - Drug types (73),
 - Fills (617).
 - ❑ Prescribers from the 'Hospital' service location type had the lowest drug types/AHFS3 types.
 - ❑ Prescribers from the 'Unknown' service location type had the lowest prescribers/claims .

Over 7 years	# of prescribers	# of AHFS3 types	# of drug (DINs)	# of fills
Community	18	28	73	617
Hospital	9	14	21	51
Unknown	8	15	29	50

**Location is unspecified for this practice study ID.*

GURSHAN – DRUGS, FILLS AND CHANGES

Drug (AHFS 3 Groups)	# of Years Taken	Taken in 2016
Angiotensin-converting Enzyme Inhibitors	All 7 Years	Yes
Antigout Agents	All 7 Years	Yes
Beta-adrenergic Blocking Agents	All 7 Years	Yes
Loop Diuretics	All 7 Years	Yes
Platelet-aggregation Inhibitors	6 Years	Yes
Null	6 Years	Yes
HMG-COA Reductase Inhibitors	6 Years	No
Opiate Agonists	6 Years	Yes
Nonsteroidal Anti-inflammatory Agents	5 Years	Yes
Cephalosporin Antibiotics	4 Years	Yes
Histamine H2-antagonists	4 Years	No

GURSHAN – DRUGS, FILLS AND CHANGES (CONT'D)

Drug (AHFS 3 Groups)	# of Years Taken	Taken in 2016
Penicillin Antibiotics	4 Years	No
5-alpha-reductase Inhibitors	3 Years	Yes
Antibacterials (EENT)	3 Years	No
Anti-inflammatory Agents (Skin, Mucous)	3 Years	No
Corticosteroids (EENT)	3 Years	No
Proton-pump Inhibitors	3 Years	Yes
Quinolone Antibiotics	3 Years	Yes
Antibacterials (Skin, Mucous Membrane)	2 Years	No
Antifungals (Skin And Mucous Membrane)	2 Years	No
Nitrates and Nitrites	2 Years	No

HOW MANY PEOPLE ARE THERE LIKE GURSHAN?

➤ 2016 Complexity groups:

CX Group Number	Physician Service Range – 7 Years	# of Patients	% of Patients
1.1	0 - 46	80,165	10.3%
1.2	47 - 93	205,504	26.4%
1.3	94 – 139	176,161	22.6%
1.4	140 – 185	119,891	15.4%
2	185 – 275	119,485	15.4%
3	275 – 395	53,277	6.8%
4	395+	23,455	3.0%

PPhRR Cohort in 2016: 777,938

#Patients with insufficient history, and not assigned a CX Group as above (ie. CX=0): 278,624

DATA/DATA QUALITY QUESTIONS

- Home support file may not have been closed – the Home support is showing as ongoing into 2017, however he was in residential care starting in 2016 and appears to have died in early 2017.

GENERAL NOTES (CONT'D)

- To better represent real life – most of the vignette data is presented in calendar year.
- All data is organized by calendar year except for the top 5 diagnoses and top 5 services tables are organized by fiscal year.
- Primary prescriber - using fills as indication of prescribing.
- Age is at fiscal year end.
- Data Visualizations may not be final versions.



DATA VISUALIZATIONS

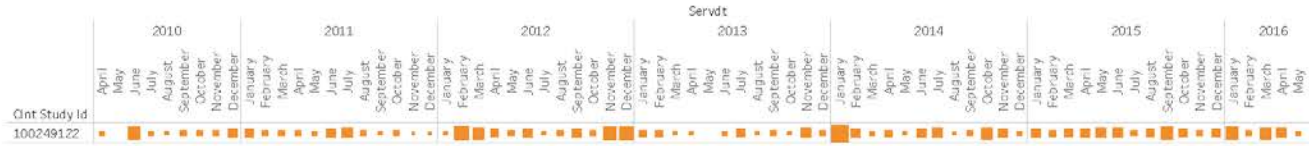
Tableau Outputs



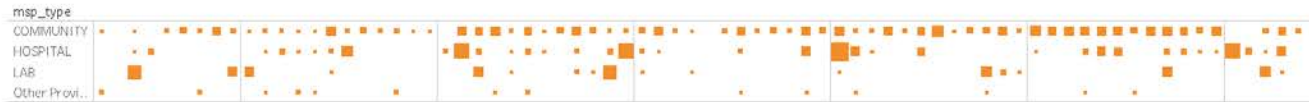
DEMOGRAPHICS

Cnt Study Id	Age At Fy End	Cnt Gender	Cnt Ha	CX	DoD	# MSP	# Fills	# HCC	# CCD LTC	# RAI-CCRS	# RAI-HCRS
100249122	90	M	02 FHA	4		596	738	5	2	1	

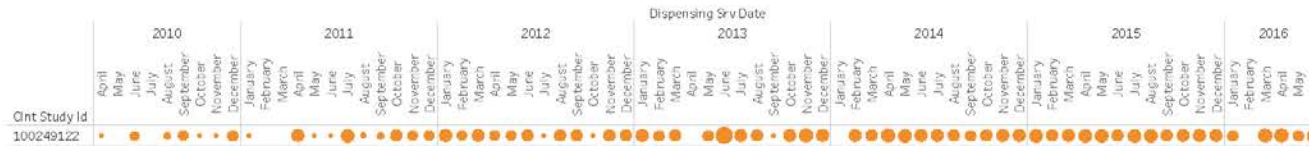
MSP



MSP Claim Type



PNET



NACRS



DAD



CX
■ 4

Cnt Study Id

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- 100042543
- 100043593
- 100050035
- 100051521
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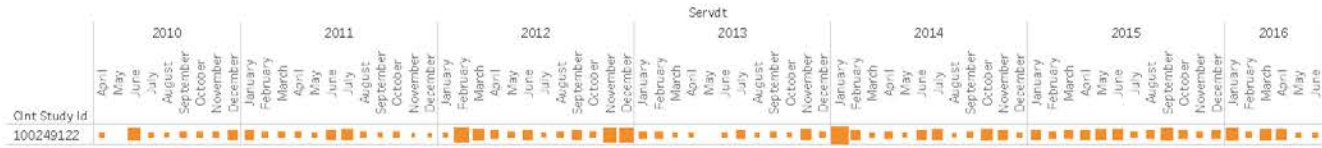
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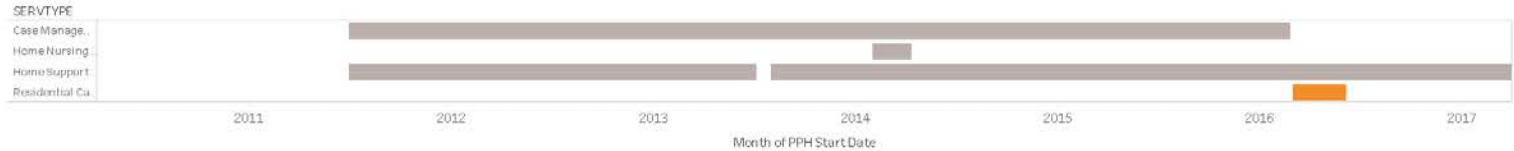
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- 5
- 10
- 16

MSP



HCC



CCD LTC



RAI-HCRS

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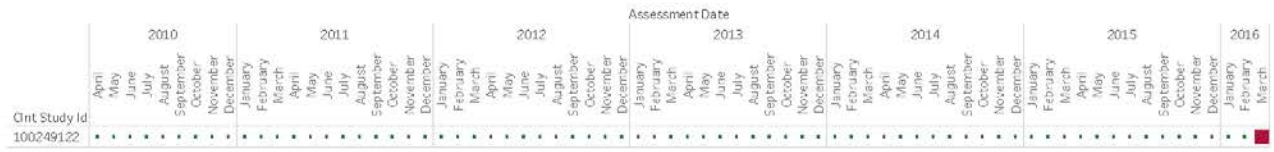
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RAI-CCRS



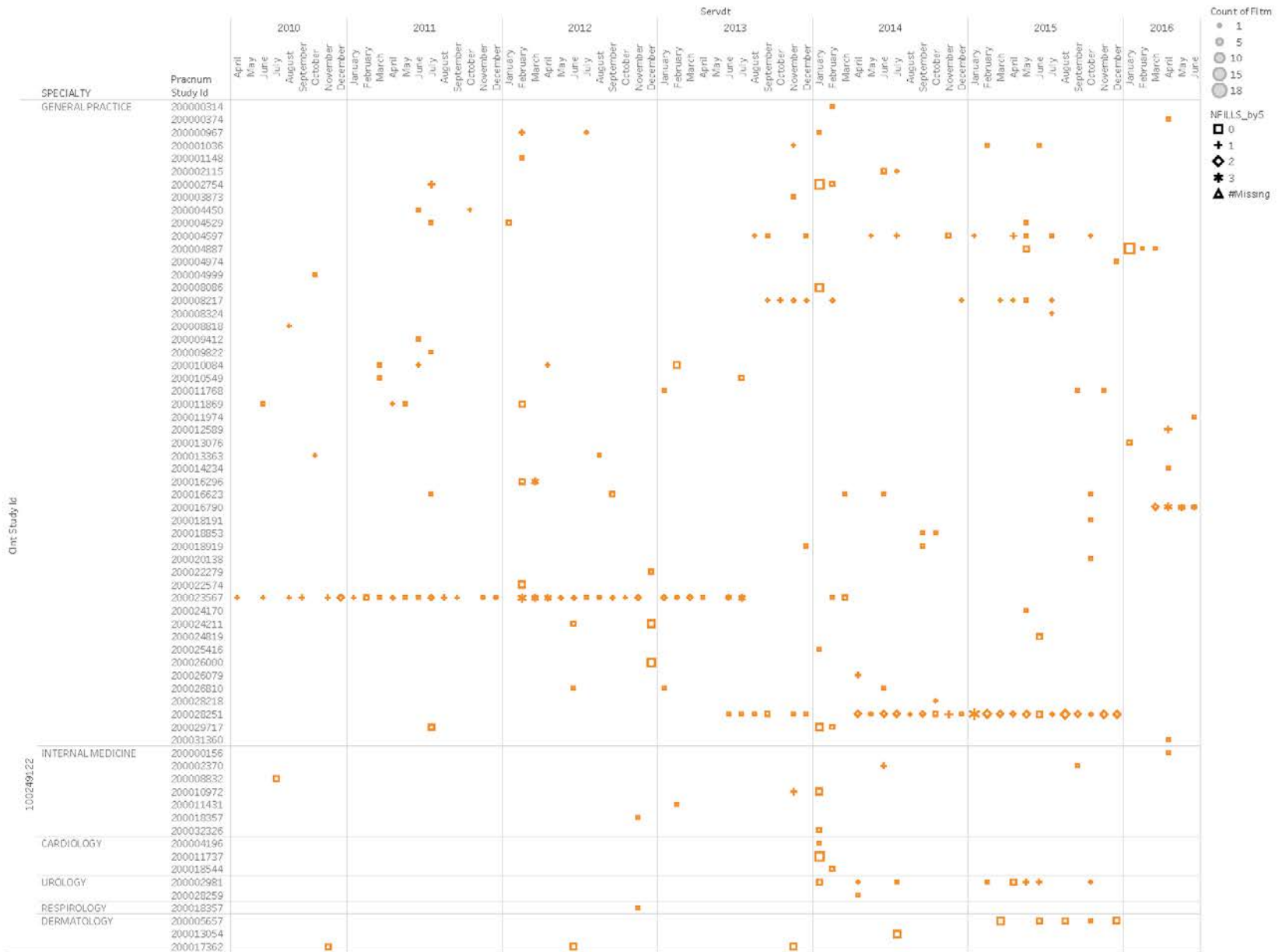
MSP TOP 5 Services - Client: 100249122

2010	2011	2012	YEAR 2013	2014	2015	2016
VISIT IN OFFICE (AGE 80+) 15	VISIT IN OFFICE (AGE 80+) 19	VISIT IN OFFICE (AGE 80+) 10	VISIT IN OFFICE (AGE 80+) 20	VISIT IN OFFICE (AGE 80+) 34	VISIT IN OFFICE (AGE 80+) 43	COMMUNITY BASED GP: HOSPITAL VISIT 12
COMPUTER-ASSISTED QUANTITATIVE VISUAL FIELDS 2	HOSPITAL VISIT 6	HOSPITAL VISIT 14	LEVEL III EMERGENCY CARE - NIGHT 3	HOSPITAL VISIT 22	VISIT - OUT OF OFFICE (AGE 80+) 9	ADVICE ABOUT A PATIENT IN COMMUNITY CARE 9
LEVEL III EMERGENCY CARE - NIGHT 1	FULL OPTOMETRIC DIAGNOSTIC EXAMINATION OF THE EYES 4	LEVEL II EMERGENCY CARE - DAY 4	CONSULTATION, DERMATOLOGY 2	CRITICAL CARE (ICU) - 2ND TO 7TH DAY (INCL) 3	COMMUNITY BASED GP: HOSPITAL VISIT 5	PSYCHOTHERAPY INDIV. (HOSP OR INSTITUT) PER 1/2 HR 9
RE-EXAMINATION OR MINOR EXAMINATION 1	TOMOGRAPHY HEAD SCAN WITHOUT CONTRAST 2	MAJOR TRAY 4	FULL OPTOMETRIC DIAGNOSTIC EXAMINATION OF THE EYES 2	NO CHARGE REFERRAL 3	SKIN DISORDERS/LESIONS - SPECIAL THERAPY 4	HOSPITAL VISIT 5
GRADED EXERCISE TEST-TECHNICAL FEE 1	LEVEL III EMERGENCY CARE - EVENING 7	PATIENTS 80 YEARS OF AGE AND OVER-ANAESTHESIA 1	MINOR TRAY 1	LEVEL III EMERGENCY CARE - NIGHT 7	VISIT, HOSPITAL, UROLOGY 4	VISIT NURSING HOME ONE OR MULTIPLE PATIENTS 1

MSP TOP 5 Diagnoses - Client: 100249122

2010	2011	2012	YEAR 2013	2014	2015	2016
ESSENTIAL HYPERTENSION 4	ESSENTIAL HYPERTENSION 0	CATARACT 15	SYMPTOMS INVOLVING NERVOUS AND MUSCULOSKELETAL SYSTEMS 6	OTHER BACTERIAL PNEUMONIA 25	HYPERPLASIA OF PROSTATE 11	HEART FAILURE - CONGESTIVE HEART FAILURE 12
OTHER AND UNSPECIFIED DISORDER OF JOINT 4	GENERAL SYMPTOMS 7	CHRONIC SINUSITIS 15	ESSENTIAL HYPERTENSION 6	OTHER FORMS OF CHRONIC ISCHAEMIC HEART DISEASE 11	SYMPTOMS INVOLVING URINARY SYSTEM 7	AFFECTIVE PSYCHOSES 9
OTHER DERMATOSES 3	CATARACT 5	X-RAY 7	OTHER FORMS OF CHRONIC ISCHAEMIC HEART DISEASE 4	SYMPTOMS INVOLVING SKIN AND OTHER INTEGUMENTARY TISSUE 6	ATOPIC DERMATITIS AND RELATED CONDITIONS 6	OTHER BACTERIAL PNEUMONIA 5
GLAUCOMA - PREGLAUCOMA, UNSPECIFIED 3	CHRONIC SINUSITIS 3	ANAESTHETIC ANAESTHETIC 6	FRACTURE OF FACE BONES - NASAL BONES, OPEN 4	HYPERPLASIA OF PROSTATE 5	OTHER RETINAL DISORDERS 6	OTHER CEREBRAL DEGENERATIONS 5
SUPERFICIAL INJURY OF HIP, THIGH, LEG AND ANKLE 2	DISORDERS OF REFRACTION AND ACCOMMODATION - PRESBYOPIA 3	OTHER BACTERIAL PNEUMONIA 6	OTHER DERMATOSES 4	OTHER AND UNSPECIFIED DISORDERS OF BACK 4	OTHER NONORGANIC PSYCHOSES - UNSPECIFIED PSYCHOSIS 5	HEART FAILURE 3

MSP and Fills by Provider - Client: 100249122



PNET by AHFS3 - Client: 100249122



