

SmartIX EMPI – Taking It to the Next Level

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Capitol Ideas for
WHAT'S NEXT IN HEALTHCARE

Agenda

- Welcome
- Introduction
- History
- Next Level of MPI - Business Intelligence
- Research and Community Health
- Future Innovation
- Questions



General Introduction to Our Organization



Not-for-profit governed by providers, universities, health industry, community benefit organizations (steering committee chair for NTAHP Regional Health Information Exchange (HIE))

Information and Quality
Services Collaborative

Community Health
Collaborative

Board of Trustees

Research Collaborative

Workforce Development
Center

Mission and Vision

Mission

To serve as a catalyst for continual improvement in community health and healthcare delivery through education, research, communication, collaboration and coordination.

Vision

Act as a trusted community resource to expand knowledge and develop new insight for the continuous improvement of health and healthcare.

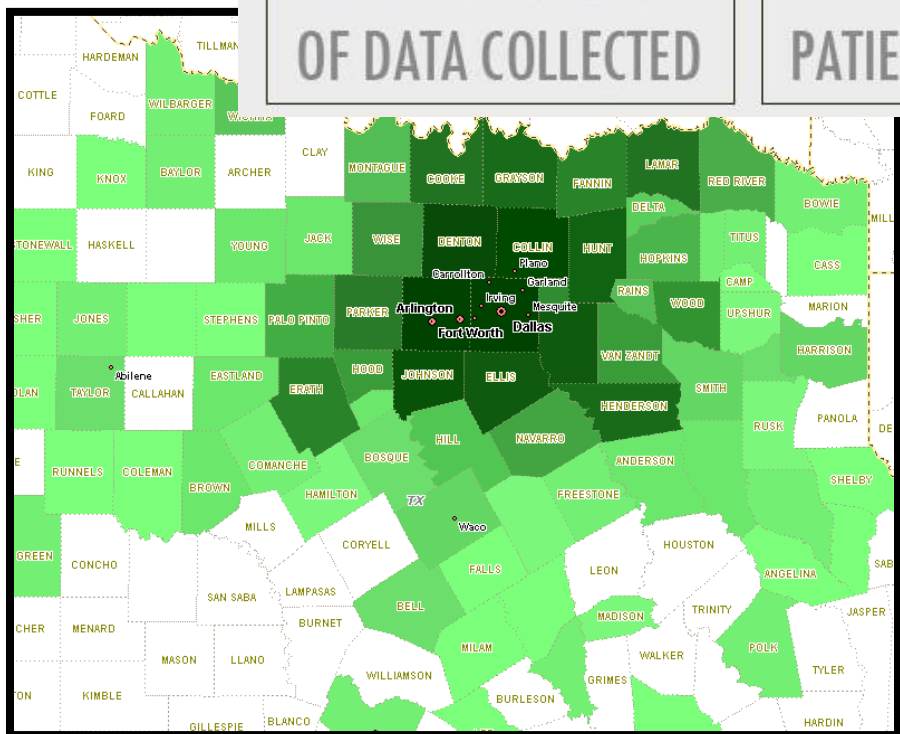
Data Content

WHERE WE STAND NOW.

14 YEARS
OF DATA COLLECTED

8 MILLION
PATIENTS REPRESENTED

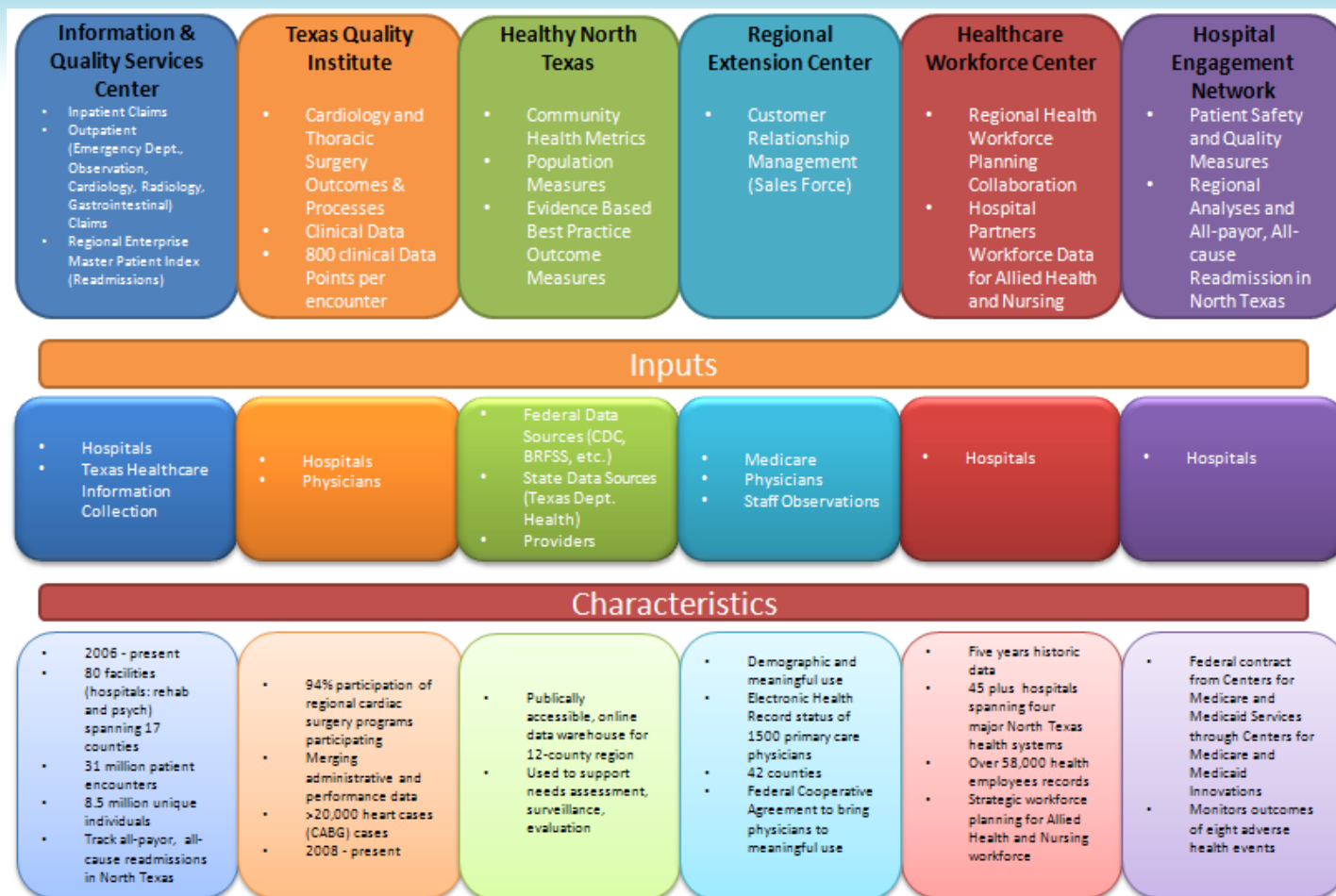
28 MILLION
HOSPITAL VISITS



95%

NORTH TEXAS INPATIENT MARKET

DFWHC Foundation Data Assets



History of Regional Enterprise Master Patient Index (REMPI)



Not the Typical Client

- Not a Hospital
- Not as focused on managing duplicate accounts
- Rely heavily on the auto-linking rules

FOCUSED ON:

- Data Analytics
- Data Visualization
- Research
- Patient Care & Community Health



Partnership is Formed

- Wanted to bring more value to collaborative
- RFP for Vendor
 - Criteria was a sophisticated matching algorithm
- Quadramed needed a beta site and willing to do a proof of concept in 2006.
- Started in 2007 as a beta site
- Cooperatively designed initial auto-linking process rules
 - 10 rules defined
- 2009 the Regional Enterprise Master Patient Index (REMPI) is released



Creating Knowledge through Business Intelligence



Business Intelligence

- ✓ Quality Metrics – Hospital Engagement Network and AHRQ Measures
- ✓ Improvement of Cardiovascular Services
- ✓ Readmission Analyses
- ✓ ER “Frequent Flyer” Reports
- ✓ Market segment assessments – by service line, physician and geography
- ✓ Community Health Needs Assessments and Regional Community Health Improvement Reporting
- ✓ Regional Health Information Exchange Support
- ✓ Grants/Research
- ✓ Compliance and Duplicates



REMPI DATABASE SUMMARY

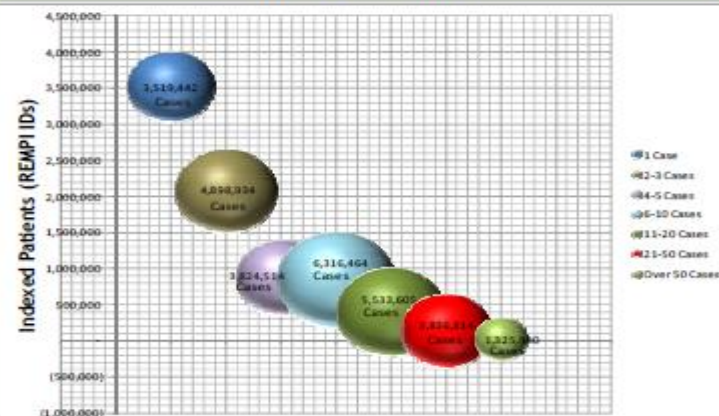
REMPI IDs	Cases	Cases/ID
8,290,600	30,597,082	3.69

As of November 6, 2012

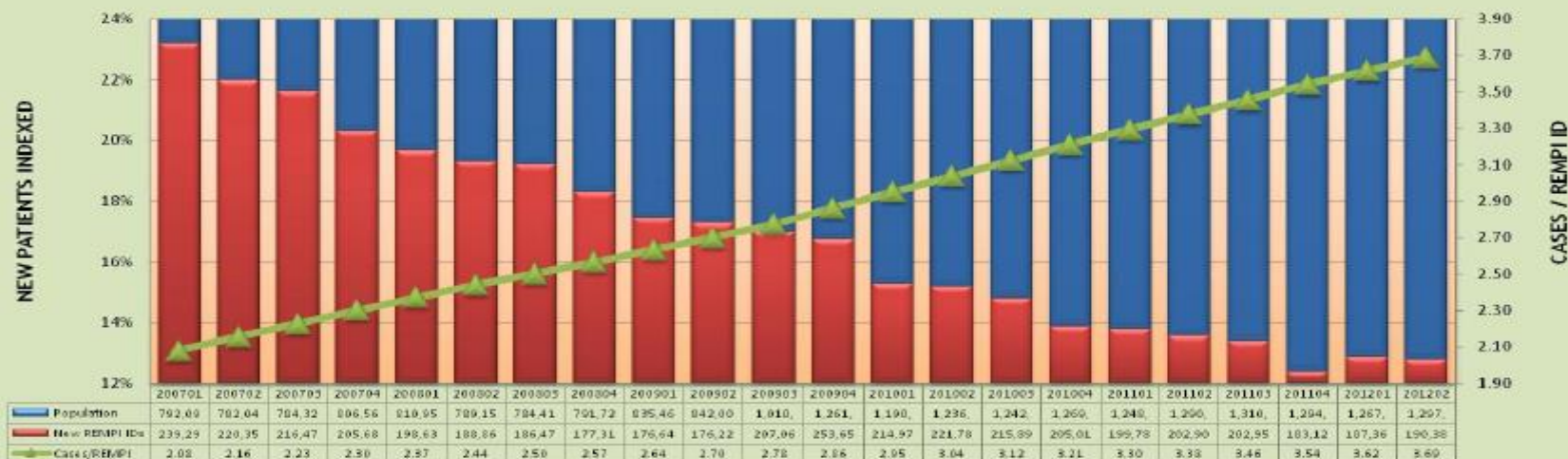
Case Population



VISITS PER REMPI ID

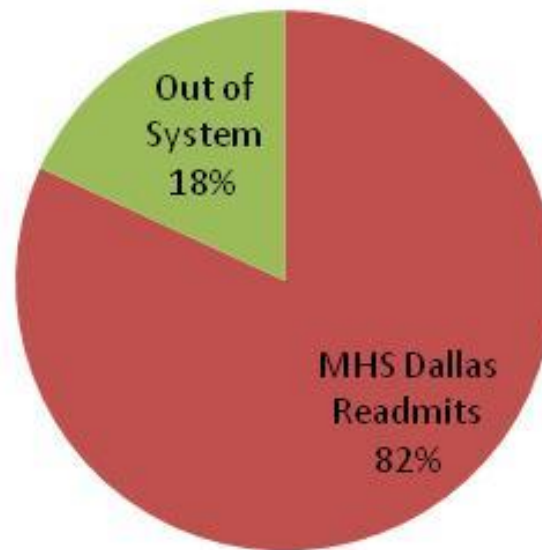


REMPI Population



How Much Data Can Be Gained?

Out of System Readmits



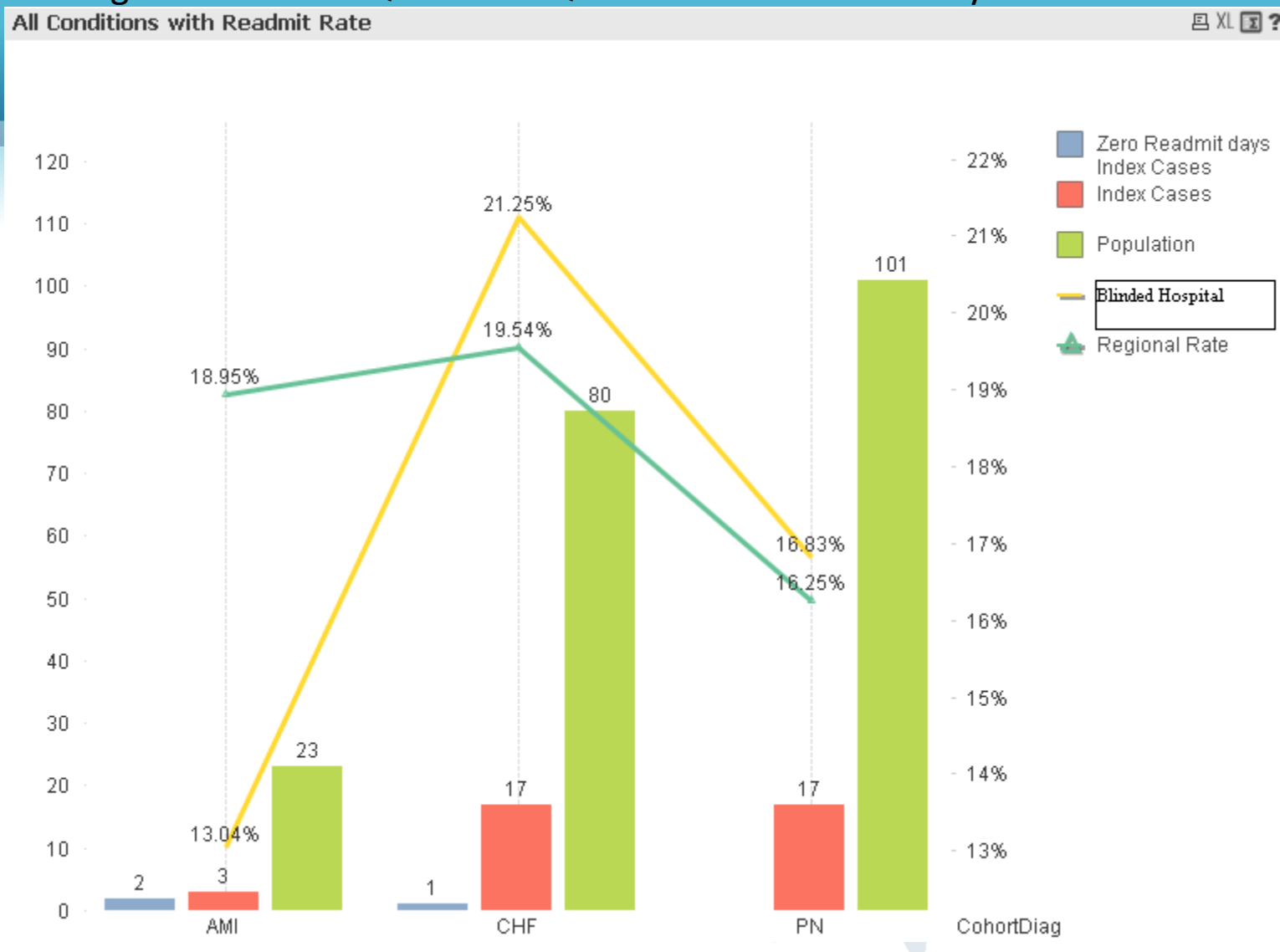
REMPI Value

- Provide hospitals with data currently only available to Medicare and private health insurers such as Aetna and United. Seeing the whole episode of care.
- Explore characteristics of those patients who demonstrated more than the average frequency of re-admission pattern.

count	REMPI	Hospital Affected	Top DRG				Avg days between hospitalizations
37	1972280	Baylor Plano = 5, Medical Center Plano = 2, Methodist Dallas = 2, Presbyterian Dallas = 6, Presbyterian Plano = 6, Richardson Regional = 6, Trinity Medical Center = 7	Red blood cell disorders w/o MCC	Red blood cell disorders w MCC	Other disorders of nervous system w MCC	Menstrual & other female reproductive system disorders w/o CC/MCC	3
36	2758797	Baylor All Saints FW=8, Baylor Southwest FW=3, Dallas Regional = 4, Harris Methodist SW = 4, Harris Methodist FW = 3, Huguley = 11, JPS = 1, Parkland = 1, Med Center Arlington = 1	Cranial & peripheral nerve disorders w/o MCC	Chest pain	Cardiac arrhythmia & conduction disorders w/o CC/MCC	Cardiac arrhythmia & conduction disorders w CC	9

All Payer Readmissions - CHF, AMI, PN

Ages 65+ – 2010Q3 to 2011Q2 Data – All Cause 30 Day Readmission

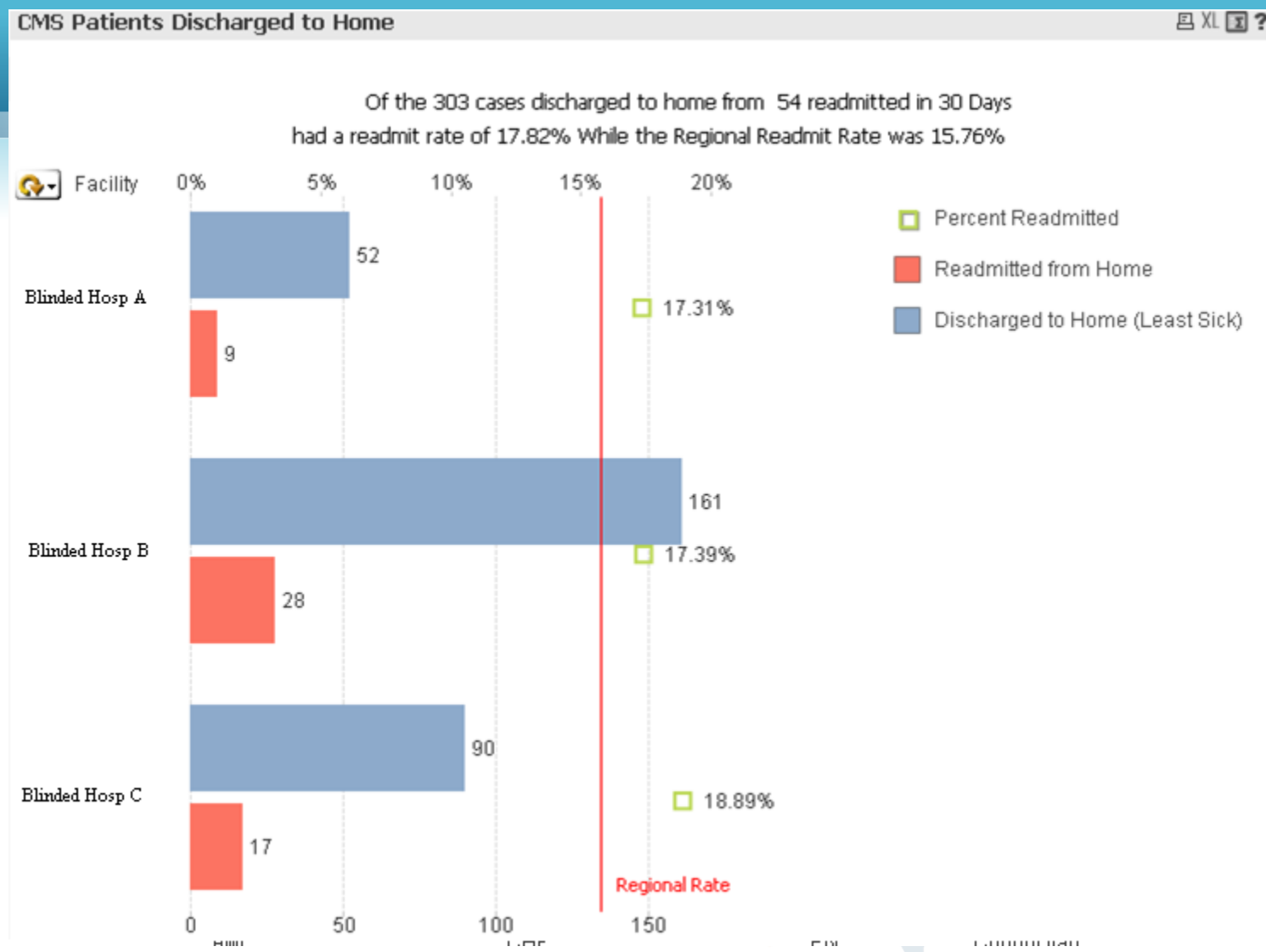


National Rate
AMI
19.8%
CHF
24.8%
PN
18.4%

CMS Readmission Results for CHF, AMI, PN

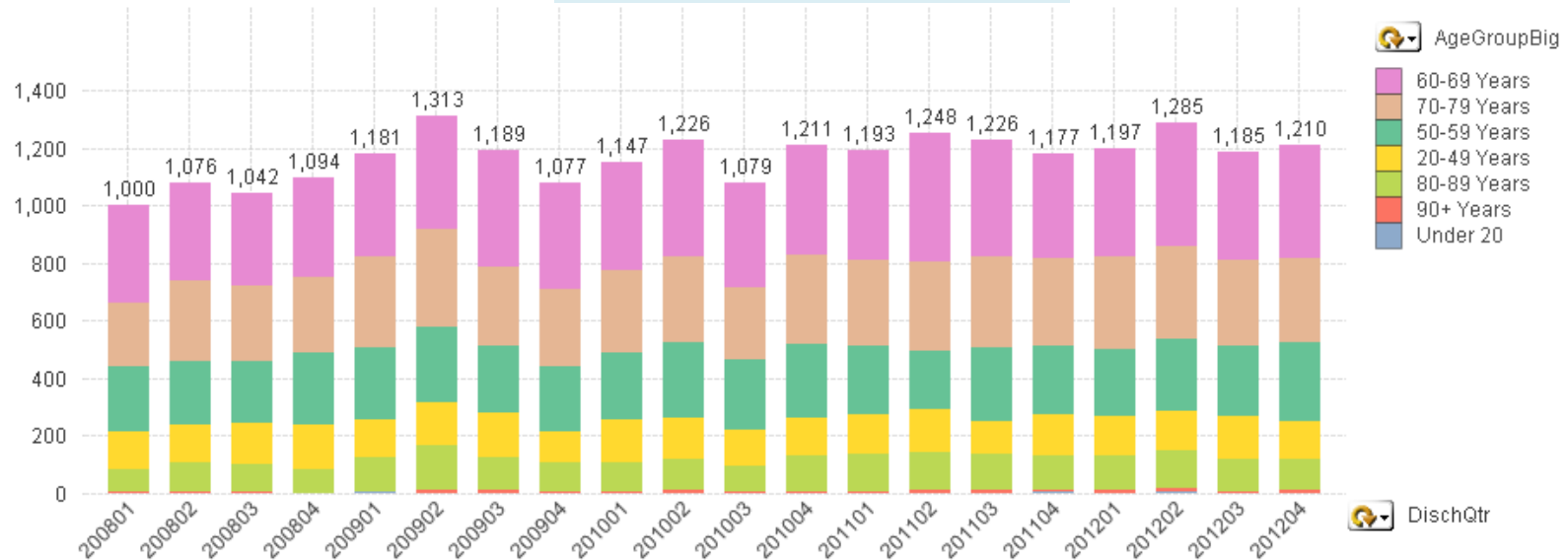
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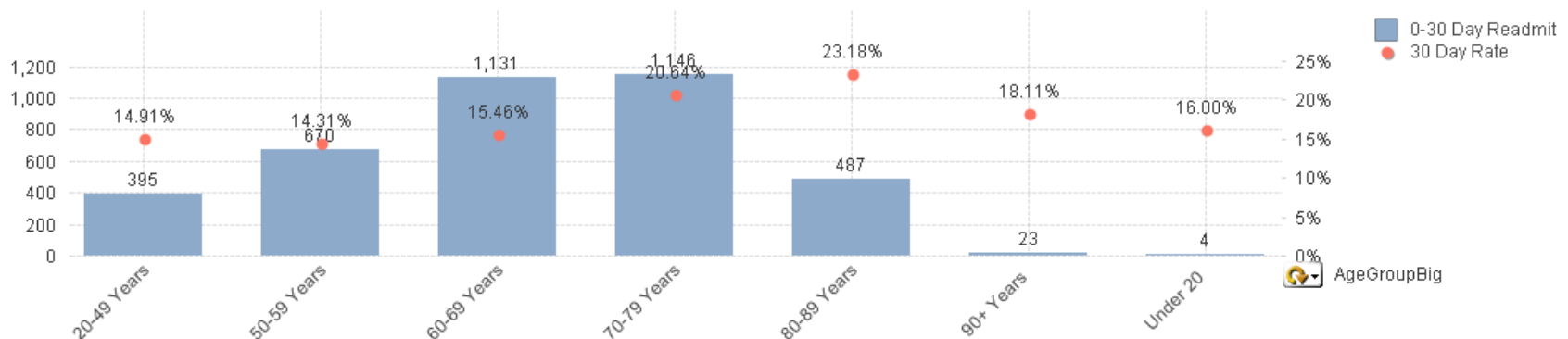


Blending Clinical Data Registry with Hospital Discharge Data for Readmission Analysis

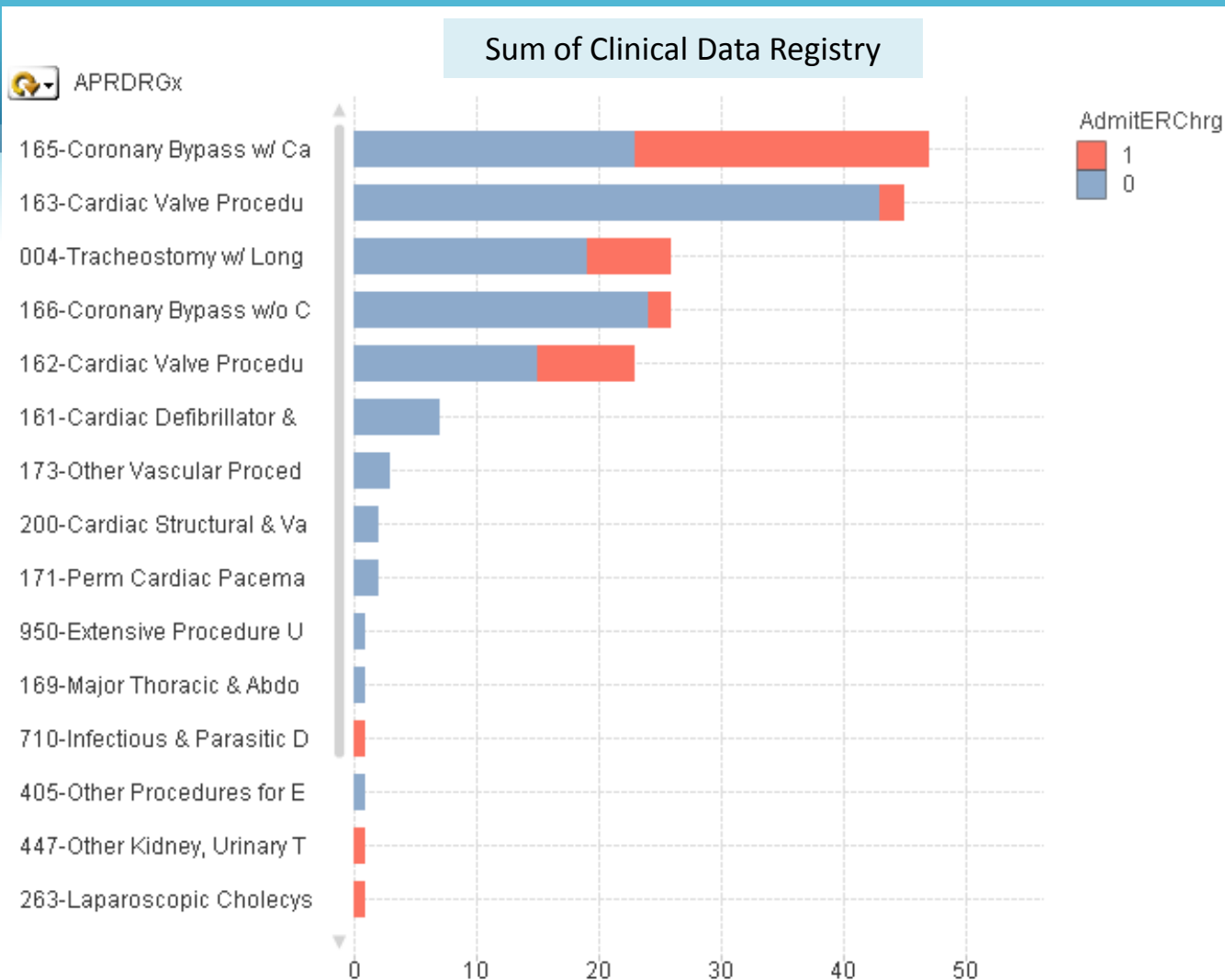
Sum of Clinical Data



30 Day Rate as % of Clinical Data that did not die during encounter



Death Master Integration



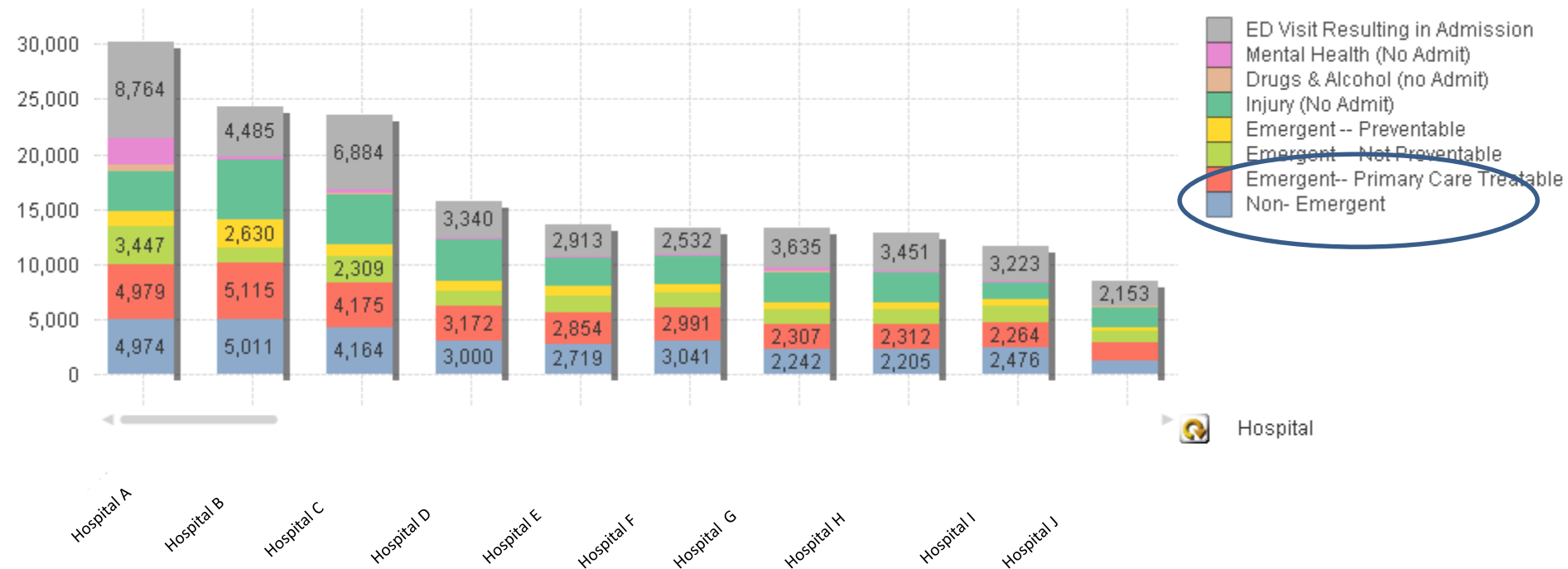
70+ Age Group

Slide shows people that died within 60 days post discharge by APR DRG and number admitted via the ED

Total Case Count
190

ED Analysis Q2 2012

Tarrant County



Patients with at least 1 case at Facility during Q2 2012 with NYU Primary Care Treatable Flag – Showing any visit over 3 years

Summary ED Data by REMPI -- Frequent Flyers

REMPI	Outpatient ER Visits	Inpatient ER Visits	Unique Hosp count	Preventable	Not Preventable	Primary Care Treatable	Non- Emergent	Injury	OP ED Uninsured	OP ED Medicaid	OP ED Medicare	OP ED Insured
4410848	409	0	43	3	31	71	41	229	409	0	0	0
849938	258	1	39	7	31	64	37	90	258	0	0	0
8260331	441	10	37	100	49	127	40	89	441	0	0	0
2726908	180	2	35	1	12	24	24	109	175	5	0	0
3572609	170	72	34	3	49	61	18	28	126	0	0	44
6595609	163	6	34	2	30	67	40	7	0	0	163	0
2621811	361	16	32	3	119	76	35	5	140	208	0	13
531402	242	13	29	4	40	56	59	59	233	0	1	8
2396383	160	4	28	2	43	65	16	6	157	3	0	0
1495682	477	49	25	8	74	148	83	29	42	375	0	60
986694	323	61	22	43	78	68	61	4	85	62	170	6
2565699	225	10	20	9	59	84	30	9	222	1	0	2
986894	206	3	20	10	20	36	58	35	6	0	199	1
3625123	316	20	20	35	35	61	44	43	47	164	10	95
1160634	473	1	20	13	37	74	71	222	462	0	0	11
1727550	386	6	20	20	36	76	104	121	379	0	0	7
185727	548	29	19	7	148	182	70	67	427	92	0	29
1960583	195	30	18	2	64	76	6	21	195	0	0	0
2828422	186	8	18	2	8	14	22	124	171	0	0	25

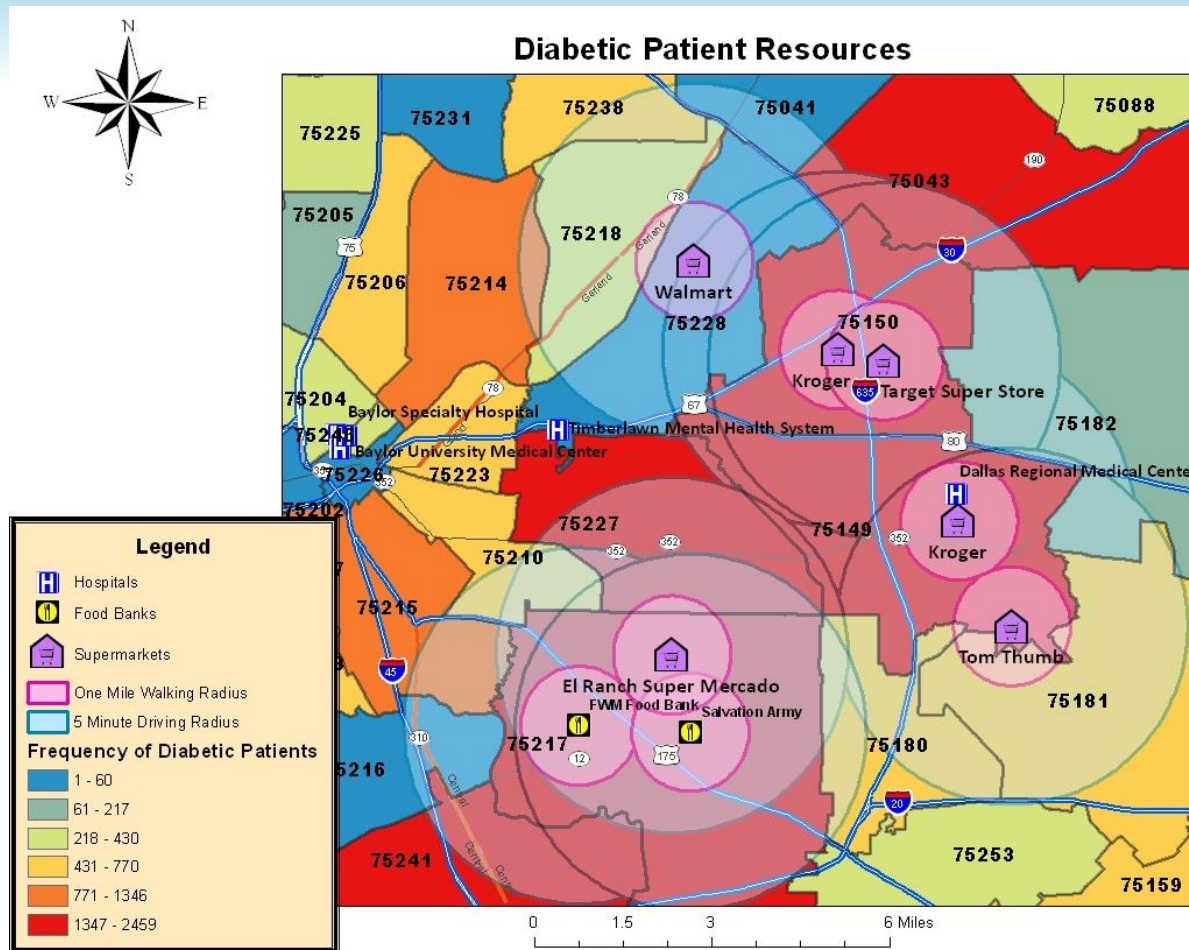
Research and Community Health



Grants and Research – Partial List

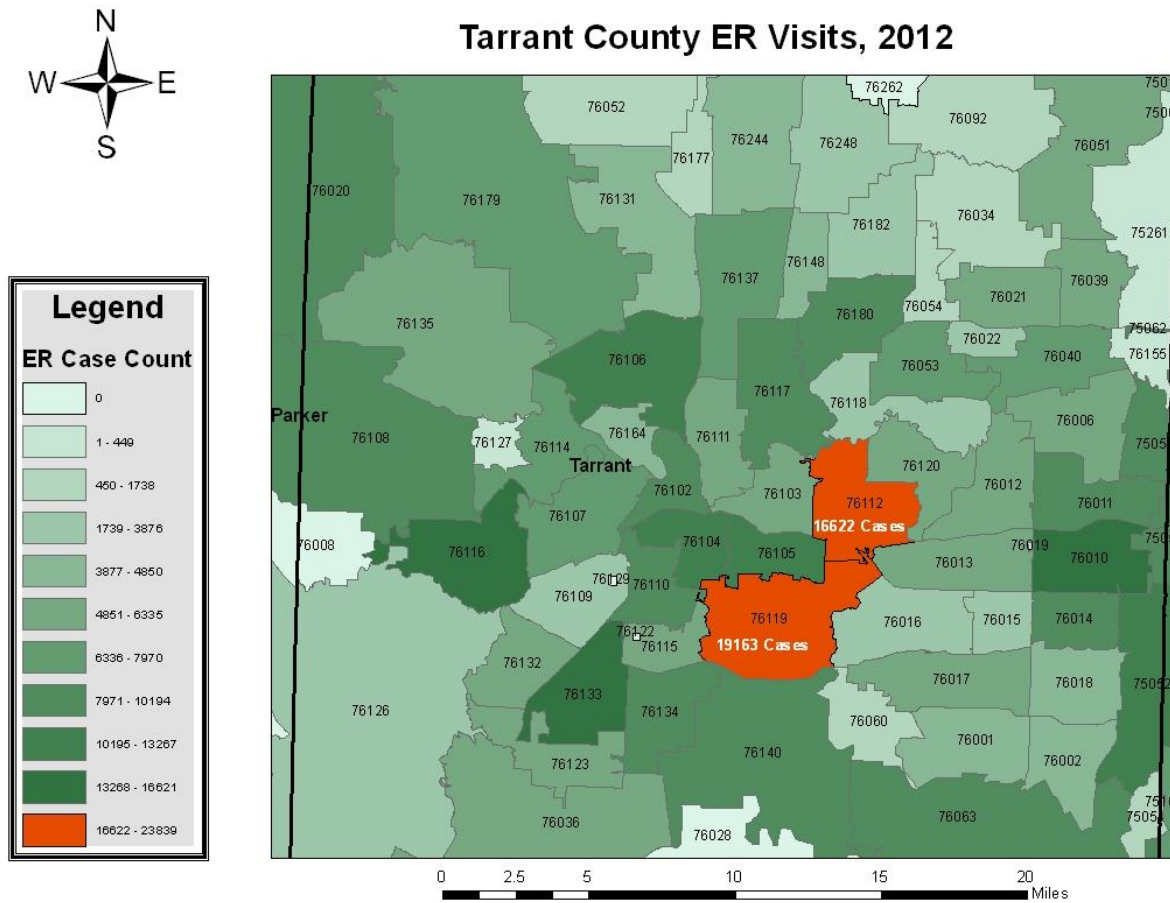
- Cardiac Research- UTSW Heart Study
- VTE – Baylor and Sanofi Aventis
- Injury Prevention Center and Genesis – Domestic Abuse and Child Endangerment
- Breastfeeding Initiative in the Workplace
- Abdominal Aortic Aneurysms Registry – Baylor Research Institute
- Tarrant County United Way Aging Study
- EPA and ER Admission Study – Emory and Georgia Tech
- Readmission Studies (multiple with local partners)
- Trauma studies – Parkland/UTSW
- Cardiovascular Surgery Research (3 projects) – Baylor Research Institute
- Multiple submitted studies through UNTHSC
- Hospital Engagement Network CMS Contractor

Community and Population Health Management Diabetes Example



- 1115 Waiver Analysis
- Patient Migration Analysis
- Form 990 Analysis
- ER Frequent Flyer

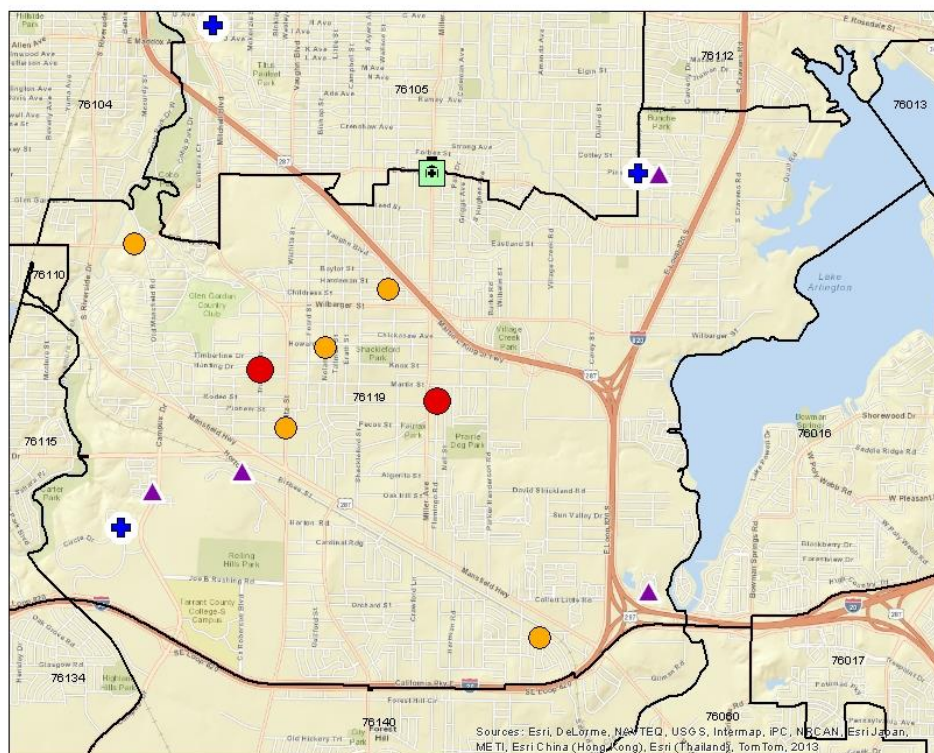
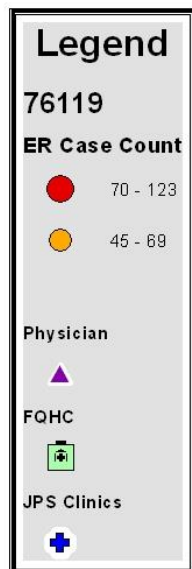
Tarrant County ER Frequency Analysis



Hot Block Analysis in Zip 76119



76119 Block Analysis - Available Healthcare Options



Sources: Esri, DeLorme, NavTEQ, USGS, Intermap, IPC, NCCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

Analyzing the availability of providers in the hot block areas.

These are a lower income areas. Major highways isolate them from easy access.

76119 Top Ten Diagnoses in 2012

Top Ten Diagnosis	Number of Cases
Acute upper respiratory infections of unspecified site	628
Urinary tract infection, site not specified	433
Chest pain, unspecified	414
Asthma, unspecified, with (acute) exacerbation	394
Unspecified otitis media	370
Abdominal pain, unspecified site	352
Headache	351
Chest pain, other	294
Other current maternal conditions classifiable elsewhere, antepartum	271
Acute pharyngitis	270

Payer	# Cases
Insured	3014
Medicaid	7408
Medicare	1979
Uninsured	6605

2108 or 11% of all cases had pre-existing diagnosis of diabetes.

FUTURE VISION



ACO Alignment Information

- Physician Patterns
- “Leakage” to non-ACO aligned providers
- Patient Analyses by geography, payer mix, migration, readmission, ER visits and co-morbidities, APR-DRG risk categories
- Combined clinical and claims warehouses and business intelligence across all providers within the continuum of care
- Privacy Issues**

Regional Health Information Exchange Support

- Using REMPI to support HIE Master Patient Index
- HIE Analytics for Regional Exchange of patient information



2013 Launch of Physician Services through the North Texas Regional Extension Center

Pilot:

- Physician Claims Warehouse April-June 2013
- Official Offering August 2013

Combined Regional Physician EHR Analytics – Late 2013



QUESTIONS & Contact Information

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