Kronkosky Charitable Foundation
San Antonio, Texas

Autism Prevalence Assessment San Antonio CBSA

March 23, 2016

CAPITAL
HEALTHCARE PLANNING

Introduction
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Introduction
Project Objectives

- Quantify the current and future Supply of subspecialists in the San Antonio area that diagnose and treat ASD
    - Determine which subspecialties constitute appropriated comprehensive care
    - Quantify existing and future Supply by subspecialty including impact of retirements
- Calculate the current and projected Demand for specialists working within the ASD field in the greater San Antonio market
- To determine the gap between Supply and Demand for ASD providers
    - Identify which subspecialties are either not provided or undersupplied in the greater San Antonio market thus requiring patients to seek care in other markets and/or reducing care
    - Estimate timing of required additions to Supply

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Introduction
Project Schedule

Task	November	December	January	February
1.0 Project Organization & Data Collection Worksession #1	▮▮▮			
2.0 Environmental Assessment – Demand Analysis Define ASD Market Assessment Demand Model Sub Populations		▮▮▮		
3.0 Market Demand Review Worksession #2		★		
4.0 Environmental Assessment – Supply Review Identify target specialties Validate data Perform Sensistivity Medical Teaching impacts		▮▮▮▮▮▮	▮▮▮▮▮	★
5.0 Gap Analysis Worksession #3			▮▮▮▮	
6.0 ASD Market Review Final Report				★
7.0 Integration				

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Introduction
KCF History with Autism

- The Kronkosky Charitable Foundation (KCF) has a history of supporting the treatment and research of autism. In addition to providing grants to organizations within the community KCF has organized a number of efforts as a foundation

- Recent projects include:
  - Organization of the Autism Community Network
  - Autism Roundtable initiative (April 2015)
    - Collective of "key stakeholders, service providers, and subject matter experts"
    - Work to increase the availability and ease of access of services for those with ASD.
  - Research brief on services for Adults with Autism in Texas and San Antonio (September 2015)
  - Research brief providing basic information about the disorder and as well as information on resources in San Antonio (December 2015)
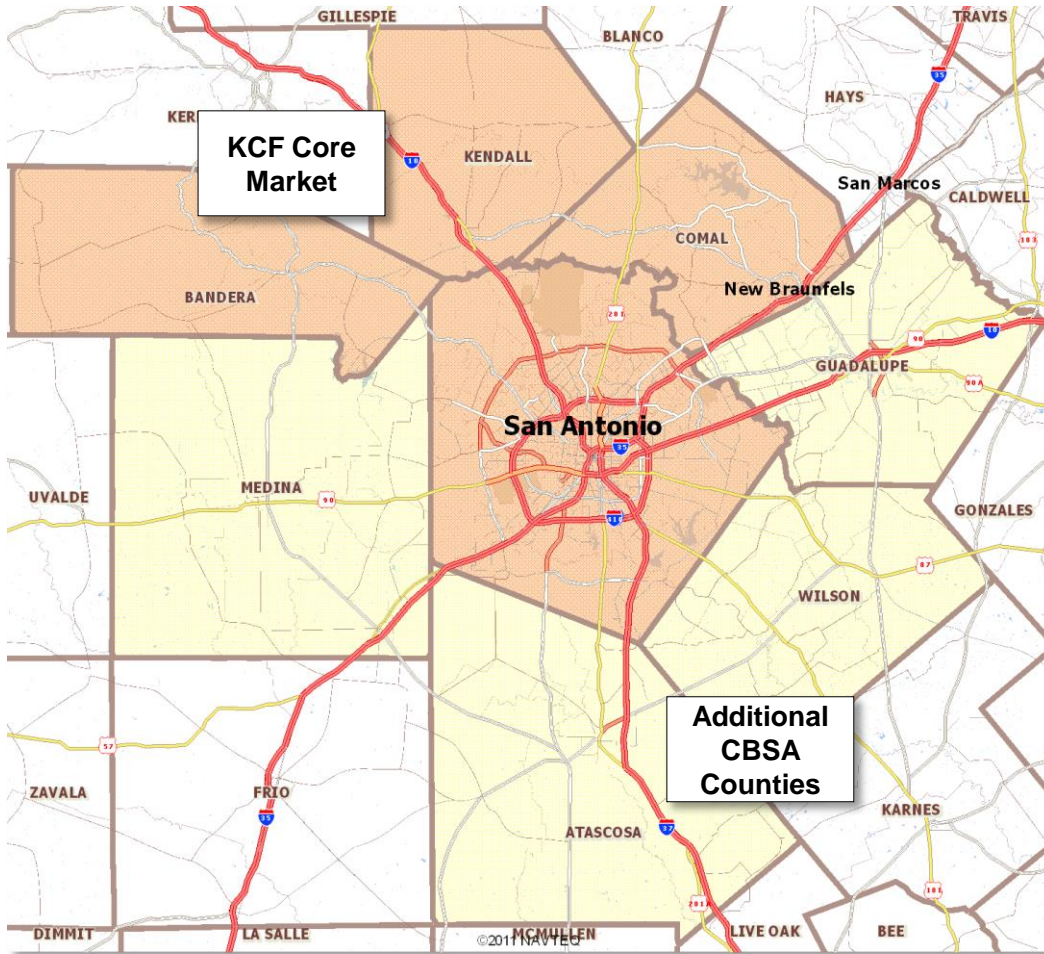
- The KCF core market as outlined in their charter includes Bexar, Bandera, Comal and Kendall Counties

- Given the centralized and urban nature of services for ASD, the Service Area for this project has been expanded to include the balance of the San Antonio CBSA (core based statistical area) adding Atascosa, Guadalupe, Medina and Wilson Counties
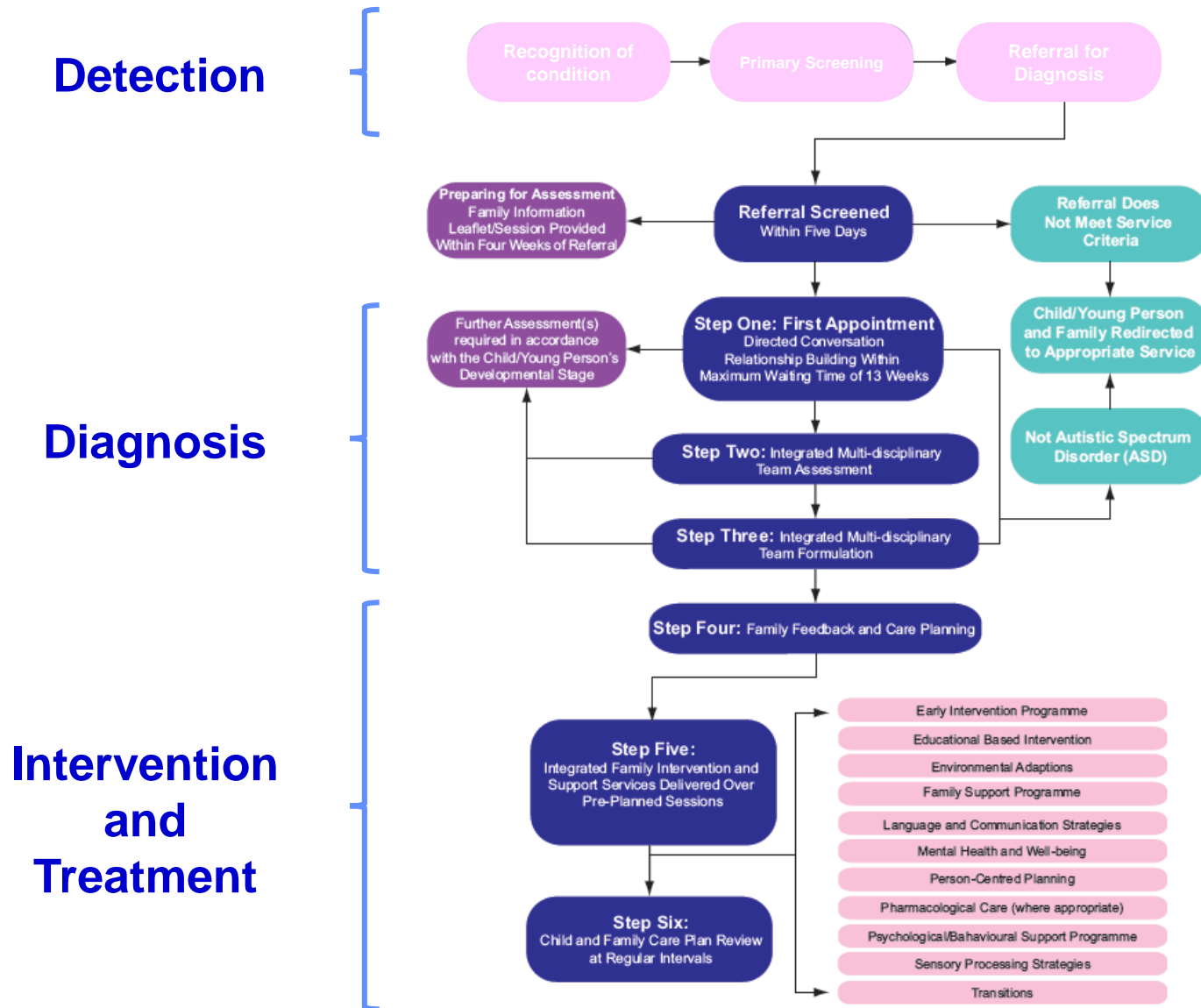
Review of Market Supply

To assess the Supply of providers involved with the care of individuals with ASD we have segmented the care pathway into three segments

Detection
- Recognition of condition
- Primary Screening
- Referral for Diagnosis

Preparing for Assessment Family Information Leaflet/Session Provided Within Four Weeks of Referral

Referral Screened Within Five Days

Referral Does Not Meet Service Criteria

Diagnosis

Further Assessment(s) required in accordance with the Child/Young Person's Developmental Stage

Step One: First Appointment Directed Conversation Relationship Building Within Maximum Waiting Time of 13 Weeks

Child/Young Person and Family Redirected to Appropriate Service

Step Two: Integrated Multi-disciplinary Team Assessment

Not Autistic Spectrum Disorder (ASD)

Step Three: Integrated Multi-disciplinary Team Formulation

Intervention and Treatment

Step Four: Family Feedback and Care Planning

Step Five: Integrated Family Intervention and Support Services Delivered Over Pre-Planned Sessions

- Early Intervention Programme
- Educational Based Intervention
- Environmental Adaptions
- Family Support Programme
- Language and Communication Strategies
- Mental Health and Well-being
- Person-Centred Planning
- Pharmacological Care (where appropriate)
- Psychological/Behavioural Support Programme
- Sensory Processing Strategies
- Transitions

Step Six: Child and Family Care Plan Review at Regular Intervals

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There is a wide range of professionals who make up the "Supply" of providers working with ASD patients across the care continuum

- Unlike many other medical conditions, there is not a distinct, well accepted care path from detection and diagnosis, intervention and treatment for ASD
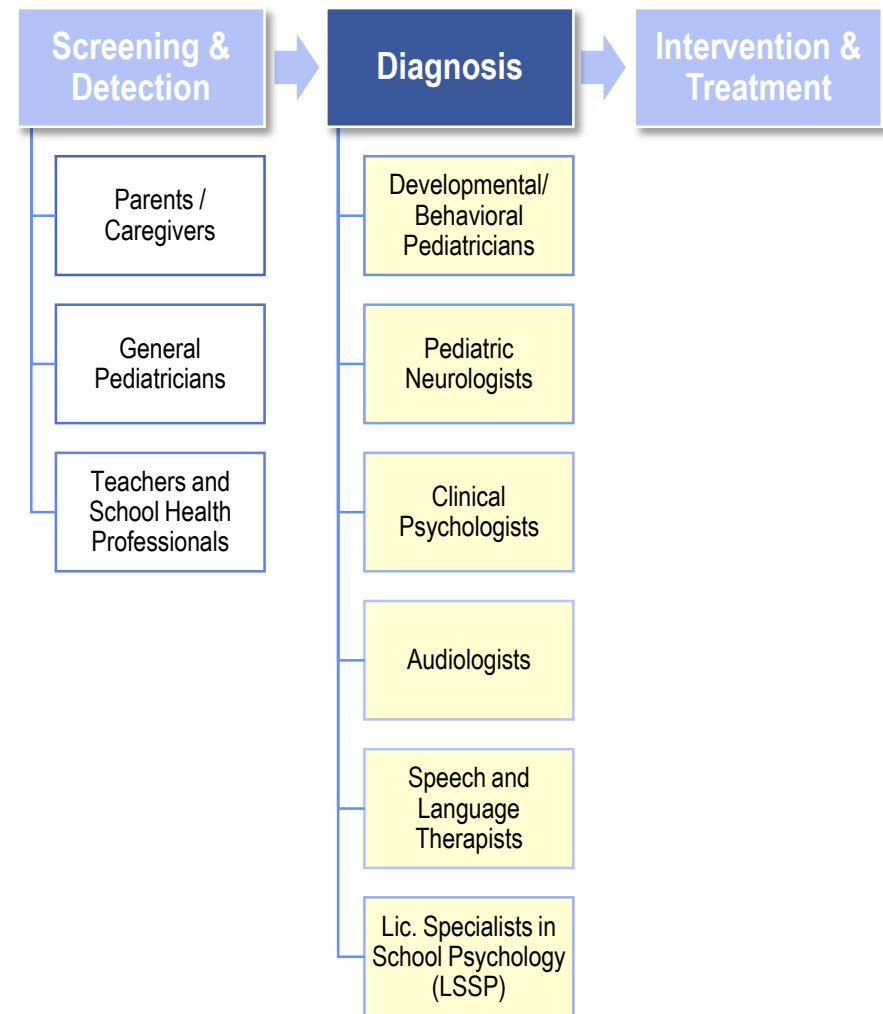
- Initial Screening and Detection

  - ASD can sometimes be detected at 18 months or younger. By age 2, a diagnosis by an experienced professional can be considered very reliable.[1] However, many children do not receive a final diagnosis until much older.

  - According to the CDC all children should be screened should be screened specifically for ASD during regular well-child doctor visits at 18 and 24 months, however, *they are rarely the providers issuing a diagnosis*

  - Parents, other caregivers, teachers or other school health professionals are typically the individuals first detecting ASD in a child

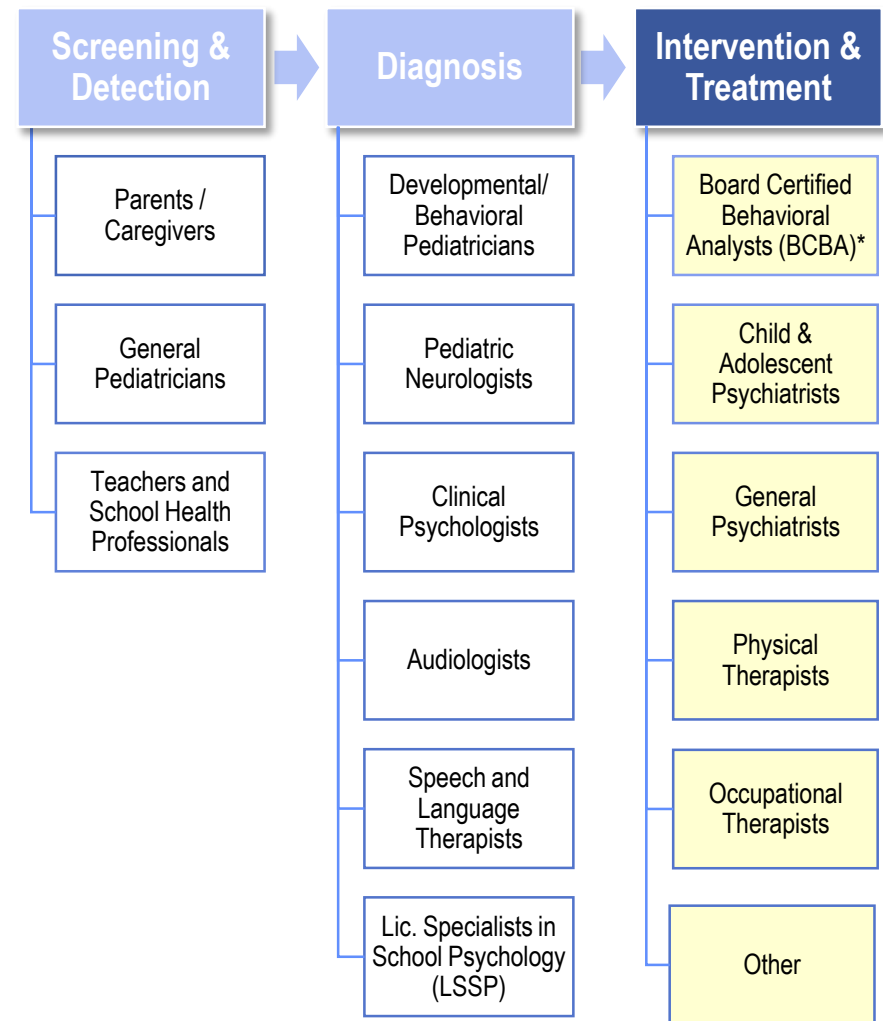   - Early Childhood Intervention (ECI)

    - Child Find
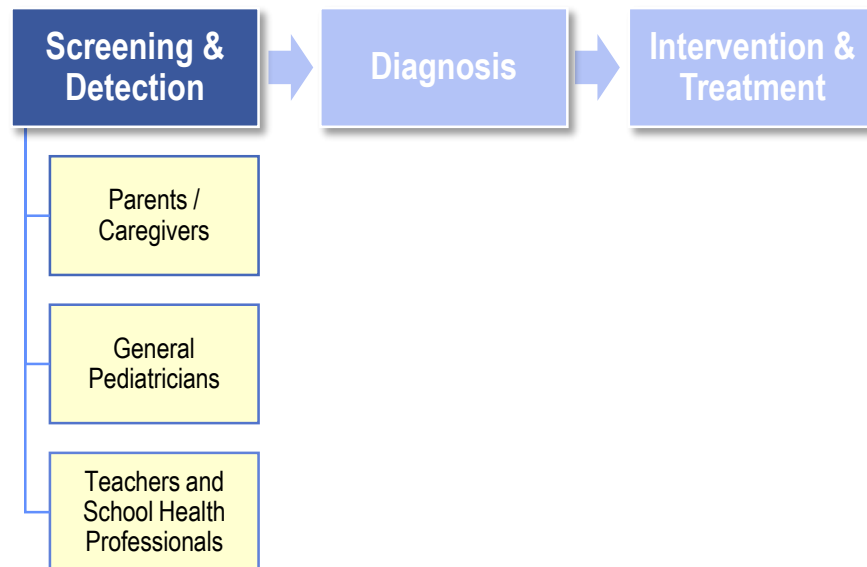
| Screening & Detection | → | Diagnosis | → | Intervention & Treatment |

- Parents / Caregivers
- General Pediatricians
- Teachers and School Health Professionals

CAPITAL HEALTHCARE PLANNING

There is a wide range of professionals who make up the "Supply" of providers working with ASD patients across the care continuum

- Parents often struggle with what resources are available for diagnosis of ASD and when to seek them

- General pediatricians will refer patients to specialists that will oversee the in-depth testing and observation required for an accurate diagnosis.

- Specialists who can do this type of evaluation include:
  - Developmental Pediatricians
  - Pediatric Neurologists
  - Child Psychologists

- Professionals supporting the diagnosis vary by need but generally include:
  - Audiologists
  - Speech and Language Therapists

- *Many if not all of these professionals are also involved in intervention and treatment to some degree*

Screening & Detection → Diagnosis → Intervention & Treatment

Screening & Detection
- Parents / Caregivers
- General Pediatricians
- Teachers and School Health Professionals

Diagnosis
- Developmental/ Behavioral Pediatricians
- Pediatric Neurologists
- Clinical Psychologists
- Audiologists
- Speech and Language Therapists
- Lic. Specialists in School Psychology (LSSP)

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CAPITAL HEALTHCARE PLANNING

There is a wide range of professionals who make up the "Supply" of providers working with ASD patients across the care continuum

- After a diagnosis, individuals may seek treatment from a number of sources. Because ASD effects people to different degrees and in different ways, care plans can vary widely case to case.

- Some of the more common treatment paths and related professionals include

  - *Behavioral training and management* often driven by BCBAs
    - Applied Behavioral Analysis (ABA)
    - Treatment and Education of Autistic and Related Communication Handicapped Children (TEACCH)
    - Sensory integration

  - *Medicine management* led by prescribing physicians

  - *Specialized therapies* – These include speech, occupational, and physical therapy.

- Additionally, area schools provide ongoing intervention with students

Screening & Detection	Diagnosis	Intervention & Treatment
Parents / Caregivers	Developmental/ Behavioral Pediatricians	Board Certified Behavioral Analysts (BCBA)*
General Pediatricians	Pediatric Neurologists	Child & Adolescent Psychiatrists
Teachers and School Health Professionals	Clinical Psychologists	General Psychiatrists
	Audiologists	Physical Therapists
	Speech and Language Therapists	Occupational Therapists
	Lic. Specialists in School Psychology (LSSP)	Other

Strategic Interviews

As part of the review process we interviewed people/programs involved with ASD to better understand strengths, weaknesses, opportunities and threats in the market

- The subjective information provided by these interviews supplements quantitative data and served as verification of Supply and provides greater understanding of some of the challenges providers are facing

- The following individuals were interviewed:

ASD Care Organizations /Resources

- Lynnette Aguilar, ABA Program Supervisor - Camino Real Community Services
- Joanie Cooksey, DARS
- Dawn Dixon, President/CEO, Any Baby Can
- Cynthia Hamilton, Development Director, The Autism Treatment Center
- > 330 providers contacted across the CBSA

Teaching Programs

- Alonzo Andrews, BCBA – Teacher Education: Autism Model (TEAM) Specialist, UTSA
- Michelle Barajaz - Pediatric Residency Program Director, Baylor College of Medicine / CHOSA
- Sandra Cedillio - Coordinator, UTHSCA Dept. of Pediatrics
- Leslie Neely, BCBA – UTSA
- Steven Pliszka, MD – Chairman, UTHSCA Dept. of Psychiatry

School Districts

- Vangie Aguilera, Special Education Director (SAISD)
- Janice Dames, Area Coordinator (Northside ISD)
- Janet Enriquez, Region 20 Autism Educational Specialist
- Krista Garcia, Special Education Director (Northside ISD)
- Rebecca Garcia, Specialist - Life Skills Autism (South San ISD)
- Beth Jones, Psychological Services and Behavioral Support Director (SAISD)
- Julie Silva, Special Education Coordinator (South San ISD)
- Paige Talley, Coordinator of Autism and Behavior Services (SCUCISD)
- Rosemary Walker, Grants Manager (Northside ISD)

Military

- Stephen Greefkens, MD – Developmental Peds

Strategic Interviews
What do you see as the major strengths of the market in terms of ASD?

- **The programs that do exist in the San Antonio market for ASD are considered very high quality**

  – "San Antonio is an "exceptional hub" for autism services

  – "There may seem to be a higher prevalence of Autism in San Antonio because people are seeking the great services we have available"

  – "The special education services at Northside schools are the gold standard"

- **Dedicated funding sources with keen interests in ASD**

- **Strong school system programs in some districts**

  – "From what I see, the schools are doing very in-depth and quality assessments"

Strategic Interviews
What do you see as the major weaknesses?

- **Demand for services related to individuals with ASD appears to far outstrip supply**
  - "Our waitlist for the ATC is 35. The waitlist for ABA services is 400"
  - "Waitlists are not uncommon. CHOSA has a waitlist of about a year."
  - "…at the ATC it can take six months to a year to get in. I know the waitlist for the Autism Community Network is 5 months"

- **Moving patients through the care process is difficult**
  - "General practitioners are not doing the diagnosing. They are hesitant to diagnose and quick to reassure parents. If anything, they're referring out to other specialties."
  - "I'm worried that pediatricians are not doing the 1st screen that they should be doing. They should also be doing the first diagnostic tests"
  - "For a pediatrician to screen a patient a lot of them look at that as 30 minutes of uncompensated time"
  - "Parents struggle most with the diagnostic process. Understanding and finding services is a big challenge."

- **In general, health insurance does not pay for ABA services limiting access**
  - "Texas Medicaid does not pay for ABA"
  - "TRICARE was the first insurance (and remained the only insurance for a while) that paid for ABA treatment. It pays for treatment from a BCBA with aides, which is unusual, but great because it allows for more children to be treated at once"
  - "Texas permitting ABA to be paid for through Medicaid is essential for the future."

Strategic Interviews
How do you view the adequacy of Supply of providers serving ASD in the market?

- **The Supply of providers is seen as insufficient, particularly those related to diagnosis of individuals with ASD**
  - "Developmental pediatricians and pediatric neurologists are probably doing the bulk of diagnosing (at least for a medical diagnosis)"
  - "We are having difficulty finding any providers in the area that we can hire."
  - "We really do not have many psychiatrists or psychologists working with ASD for diagnosis. I only know of one at the university"
  - "LSSPs are stretched thin in the market. They are shared across the school districts"
  - "Military is mostly self-contained. They have an exceptional child program but are not sharing/open to others"

- **There is little connection with / understanding of the activities of teaching programs in enhancing Supply**
  - "…don't really know much about teaching programs for ASD providers"
  - "UT has a program…don't think OLOL does or Incarnate Word"
  - "BCBAs and Occupational Therapists are in high demand and schools are not funneling them through fast enough"
  - "It is so sad to hear every time the new prevalence numbers come out. They just get higher and higher, yet there is no sign of an increase in providers"

Strategic Interviews
What are the key opportunities for improving ASD services going forward?

- **Support more ABA capacity/programs**
- **Expand capacity for diagnosis**
  - Developmental and Neurological Pediatricians
  - LSSPs
- **Adult Services**
  - "Training and vocational services are necessary because the job coaches are terrible. Autism comprises 90% of jobless DD individuals"
  - "Developing more vocational and social programs for older kids. Kids come out of school not ready to enter the community"

ASD Service Provider Supply
Process

- Determining the Supply of providers in the market is not straight forward and Mental health professionals are one of the hardest groups to pinpoint
  - Significant variability in sub-specialty definitions
  - Solo or small groups to a greater extent than other specialties
  - Heightened concerns for privacy
  - *The success rate in reaching mental health providers is generally lower than other specialties*

- To assess the Supply several data sources were combined and supplemented with direct research
  - Initial data source is the licensure board for each specialty
  - Cross referenced providers identified with the National Provider Identifier Database (NPI) to verify /identify discrepancies

- Providers were contacted to verify information
  - Validate practice address (licensure is often home address)
  - Identify those that offer services related to the diagnosis or treatment of autism (ideally estimating percentage FTE)
  - Determine provider age or retirement plans
  - For specialties with a large number of providers a sample group was contacted and findings imputed to the total

San Antonio CBSA

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Provider Databases

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Providers in Market

↓

Verification / Interview Calls

↓

Estimated Market Supply Offering Autism Services
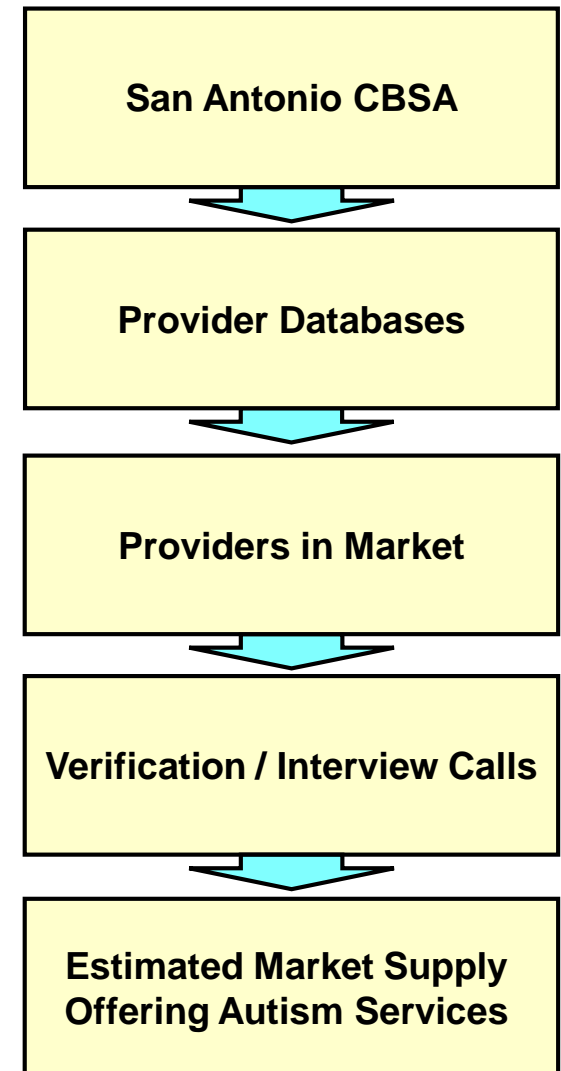
Screening and Detection

Spectrum of Care – Screening and Detection
General Pediatricians

- General pediatricians are doctors who work with babies, children and adolescents
  - Medical doctors who have completed:
    - 4 years of medical school
    - 3 to 8 years of residency training in pediatrics
- According to a recent study there is a demand for ~ 270 pediatricians in the San Antonio MSA and a Supply of 305
  - Bexar County   276
  - Comal   12
  - Guadalupe   10
  - Kendal   4
  - Atascosa   3
- Interview Findings:
  - Pediatricians are sometimes hesitant to suggest that a child has ASD
  - Pediatricians are not compensated for the time they spend on screenings, leading to concerns that screenings are not thorough enough
  - Concern pediatricians are not educated enough on signs/symptoms of ASD

Screening & Detection → **Diagnosis** → **Intervention & Treatment**

- Parents / Caregivers
- **General Pediatricians**
- Teachers and School Health Professionals
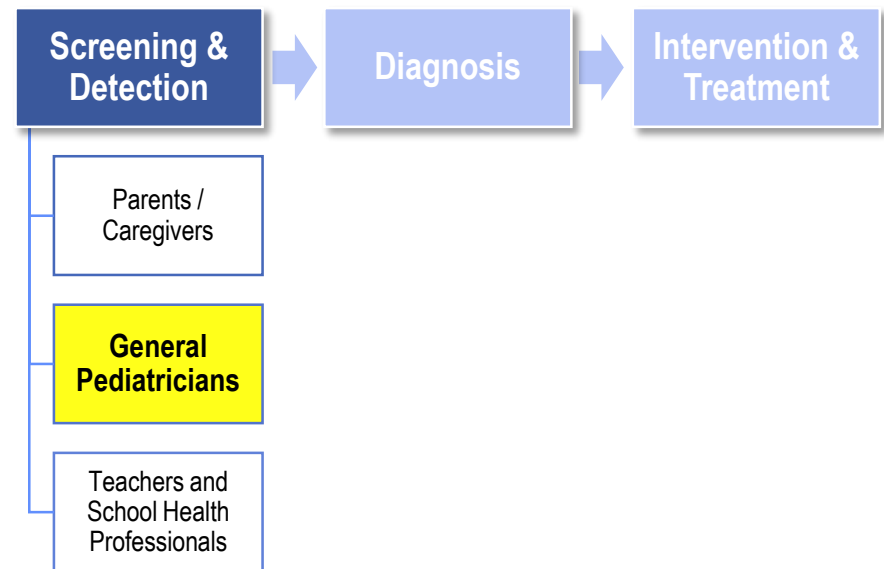
General pediatricians in the CBSA are heavily weighted in northwest San Antonio with areas that have very limited coverage
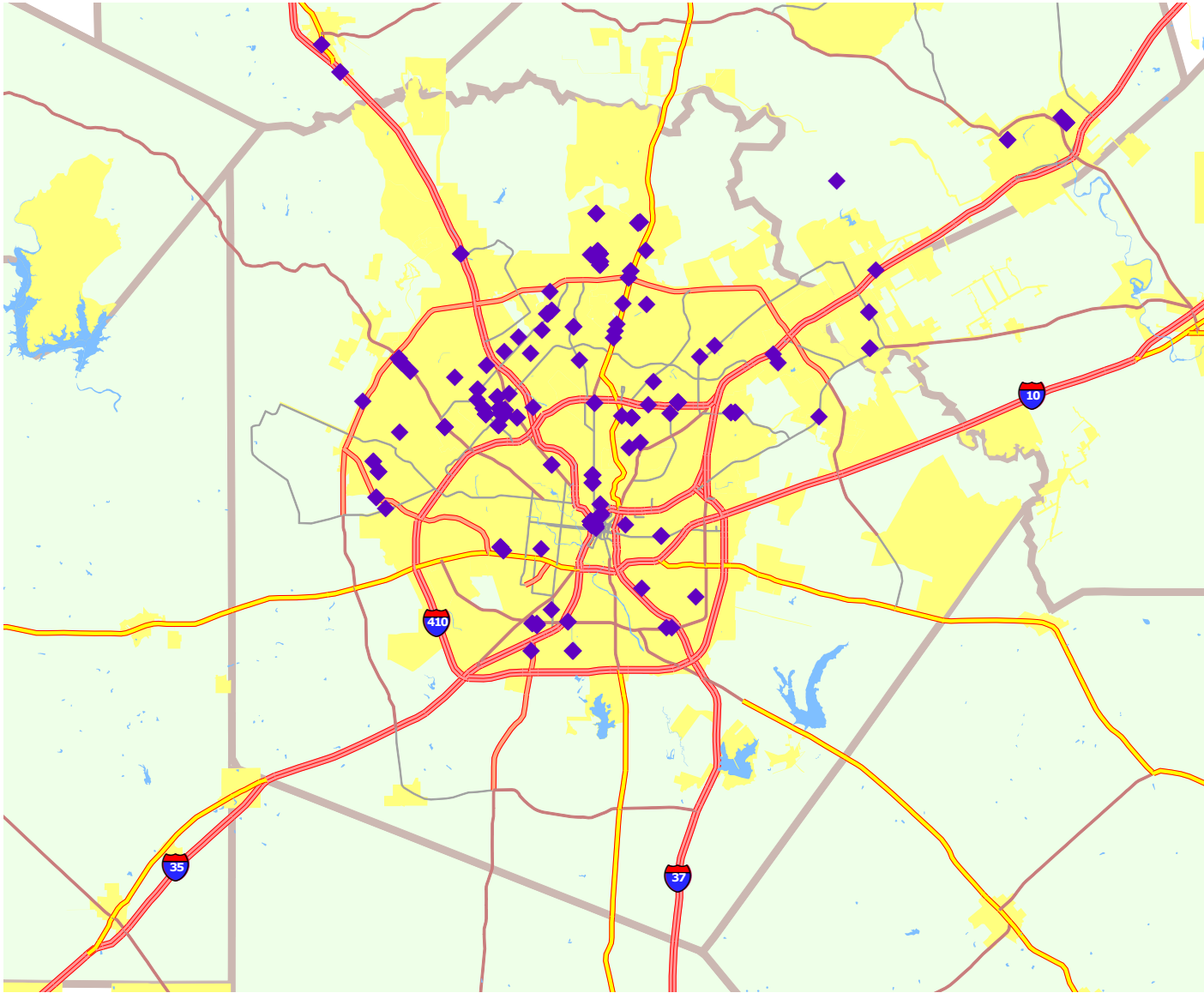
Diagnosis

Spectrum of Care – Diagnosis
Developmental Behavioral Pediatricians

- Developmental Behavioral Pediatricians (DBP's) are one of the physician specialties that typically diagnose ASD
  - Medical doctors who have completed:
    - Four years of medical school and three years of residency training in pediatrics
    - Board certification in pediatrics
    - Additional subspecialty training
  - Training / experience to consider the medical and psychosocial aspects of developmental and behavioral problems including:
    - Autism spectrum disorders
    - Attention and behavioral disorders
    - Learning disorders
    - Delayed development
    - Habit and Regulatory disorders
    - Behavioral and developmental problems
- Licensure data for Developmental Behavioral Pediatricians comes from the Texas Board of Medical Examiners

Screening & Detection → **Diagnosis** → **Intervention & Treatment**

Screening & Detection:
- Parents / Caregivers
- General Pediatricians
- Teachers and School Health Professionals

Diagnosis:
- **Developmental/ Behavioral Pediatricians**
- Pediatric Neurologists
- Clinical Psychologists
- Audiologists
- Speech and Language Therapists
- Lic. Specialists in School Psychology (LSSP)

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The majority of the Developmental / Behavioral Pediatricians in the market do provide ASD services. However, the supply of these providers is limited
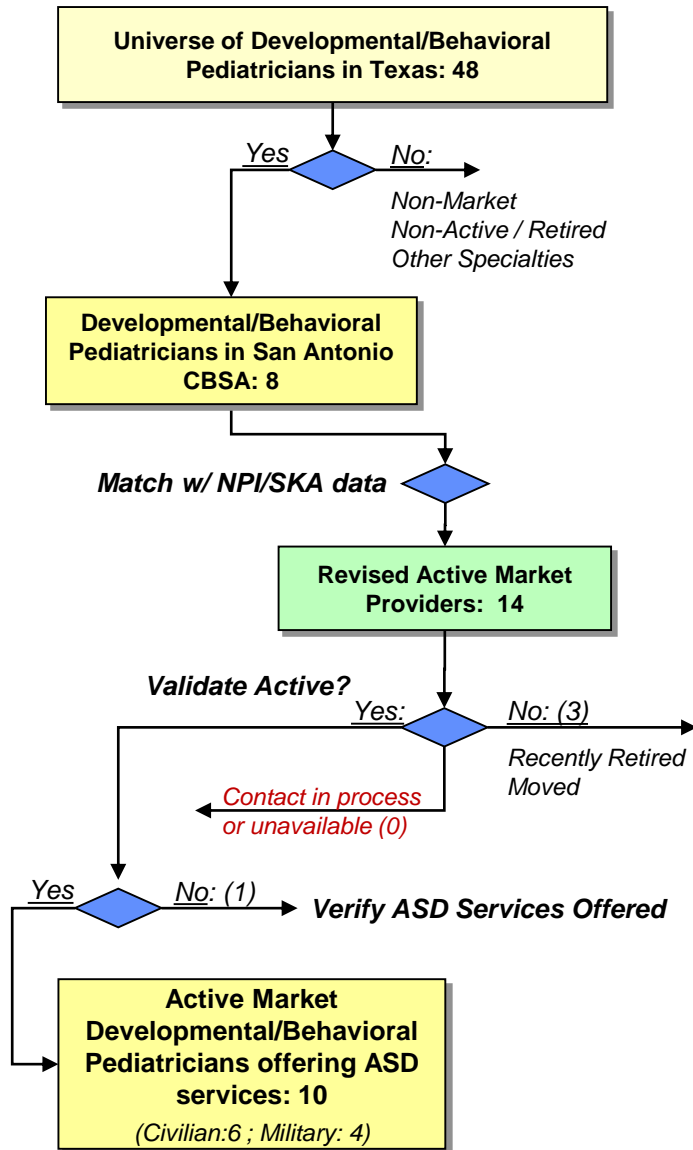
- There are a very limited number of Developmental Behavioral Pediatricians statewide (62 active DBP's in BOMEX)

- San Antonio CBSA

  - There are 14 active DBP's in the market according to licensure and NPI data
    - Found to be Not practicing / Retired   -3
    - Not providing ASD services   -1

  - DBP's / 100K population[1]   ~0.25
    - Although the number appears small, the San Antonio CBSA actually has more DBP's per capita than Houston (0.21), Dallas (0.14) or Austin (0.15)

- Autism Spectrum Disorder focused

  - Of the 10 DBP's providing services for ASD 4 are military providers (one soon to relocate/retire)

  - Of those providing services, ASD makes up only a percentage of their workload
    - Few appear to specialize in Autism (2)
    - Generally DBPs treat a full spectrum of patients

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ASD Service Provider Supply
Total Developmental/Behavioral Pediatricians
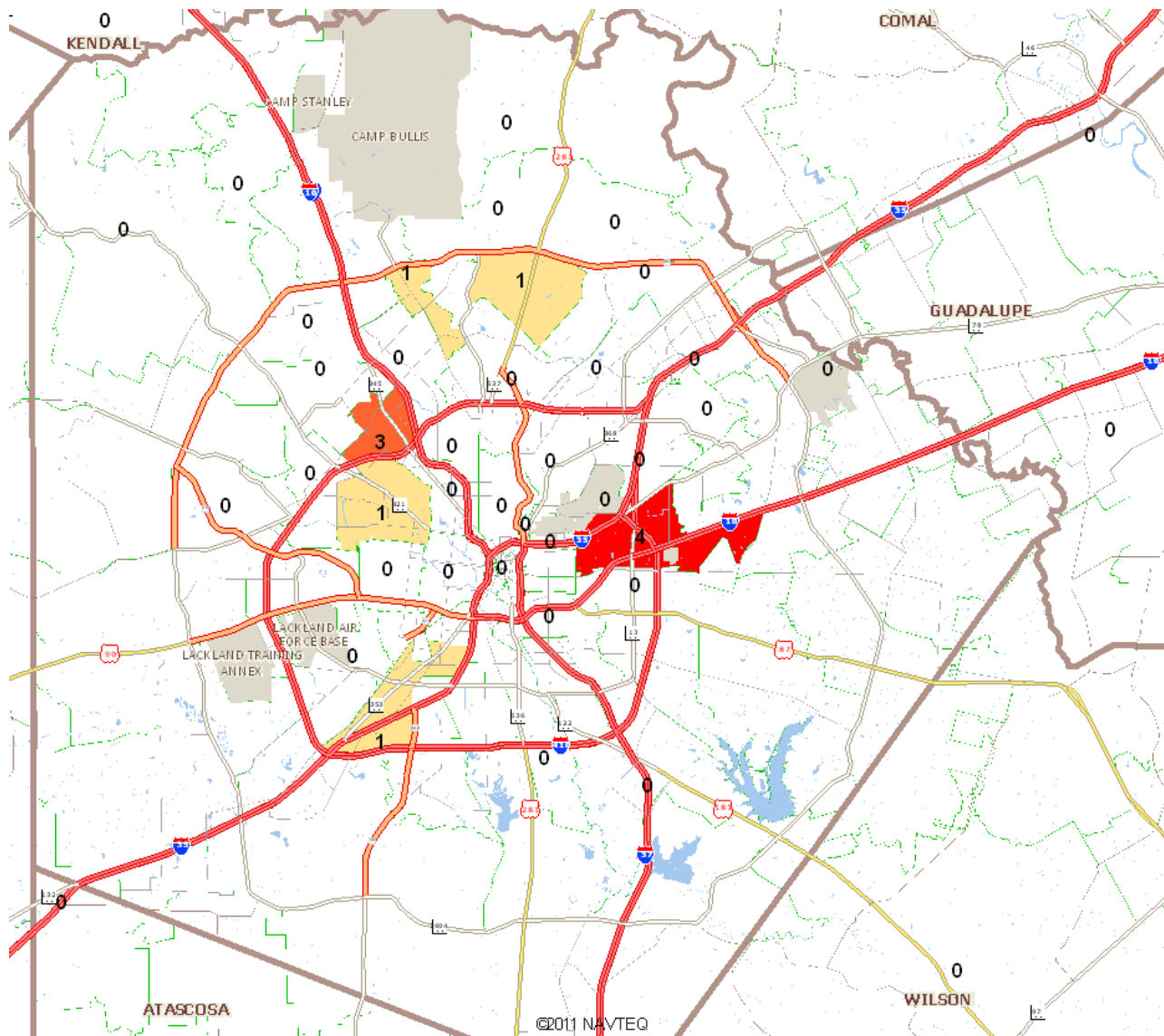
- Developmental Behavioral Pediatricians are concentrated in the San Antonio Medical Center and SAMMC

- Secondary office locations at CHOSA for several

- Not a specialty that necessarily should be widely distributed

ASD Service Provider Supply
Developmental/Behavioral Pediatricians offering services for ASD
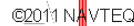
- The "FTE" involved with ASD patients has been allocated to existing providers to outline the "true" resources available
  - Low number of providers to begin with are further reduced
  - Not particularly relevant with DBP's

ASD Service Provider Supply
Market Developmental/Behavioral Pediatricians

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Del Angel	Alma Patricia	59	ACN	Yes	100%		Diagnosis team lead at the ACN
Yes	Penkava	Jeri L	64	ADHD Plus Inc	Yes			
Yes	Burns	Katherine Haynes	38	SA Pedi Devel. Services Clinic	Yes	5%		Primarily NICU. Sees limited patients w/ASD from gen peds
Yes	Fierro	Mario Alberto	45	SA Pedi Devel. Services Clinic	Yes	5%		Primarily NICU. Sees limited patients w/ASD from gen peds
Yes	Trevino	Beth A	42	SA Pedi Devel. Services Clinic	Yes	5%		Primarily NICU. Sees limited patients w/ASD from gen peds
Yes	Greefkens	Stephen		SAMMC ASD Clinic	Yes	75%		Additional location: SAMMC - Peds Dept.
Yes	Military	1		SAMMC ASD Clinic	Yes	50%		Additional location: SAMMC - Peds Dept.
Yes	Military	2		SAMMC ASD Clinic	Yes	50%		Additional location: Wilford Hall
Yes	Military	3		SAMMC ASD Clinic	Yes	50%		Additional location: Wilford Hall
Yes	Harkins	Patricia Mary	59		Yes	50%	Yes	Diagnosis and case mgmt. New patients if under age 8
Yes	Penon	Daniel Gomez	67	Children's Night Clinic	No			Acute care only
Yes	Homan	Susan Elizabeth	64		Retired			
Yes	Marx	Nola	78		Retired			Likely retired (Age 77)
Yes	Zernzach	Randall Curtis	54		Retired			

Note: Providers were asked to estimate the percentage of their FTE that is spent caring for ASD. Some could not supply this information. For those providers, an estimate was used in the following analysis.

Spectrum of Care – Diagnosis
Pediatric Neurologists

- A pediatric neurologist deals with diseases and conditions that affect the nervous system.

  - Medical doctors who have completed:

    - 4 years of medical school

    - 1-2 years of pediatric residency

    - 3+ years residency in adult and child neurology

  - Focused on disorders appearing in childhood:

    - Seizure disorders, including seizures in newborns, febrile convulsions, and epilepsy

    - Medical aspects of head injuries or brain tumors

    - Weakness, including cerebral palsy, muscular dystrophy, and nerve muscle disorders

    - Headaches, including migraines

    - Behavioral disorders, including attention-deficit/hyperactivity disorder (ADHD), school failure, autism, and sleep problems

    - Developmental disorders, including delayed speech, motor milestones, coordination issues

    - Intellectual disability

- Licensure data for pediatric neurologists comes from the Texas Board of Medical Examiners

Screening & Detection	Diagnosis	Intervention & Treatment
Parents / Caregivers	Developmental/ Behavioral Pediatricians	
General Pediatricians	**Pediatric Neurologists**	
Teachers and School Health Professionals	Clinical Psychologists	
	Audiologists	
	Speech and Language Therapists	
	Lic. Specialists in School Psychology (LSSP)	
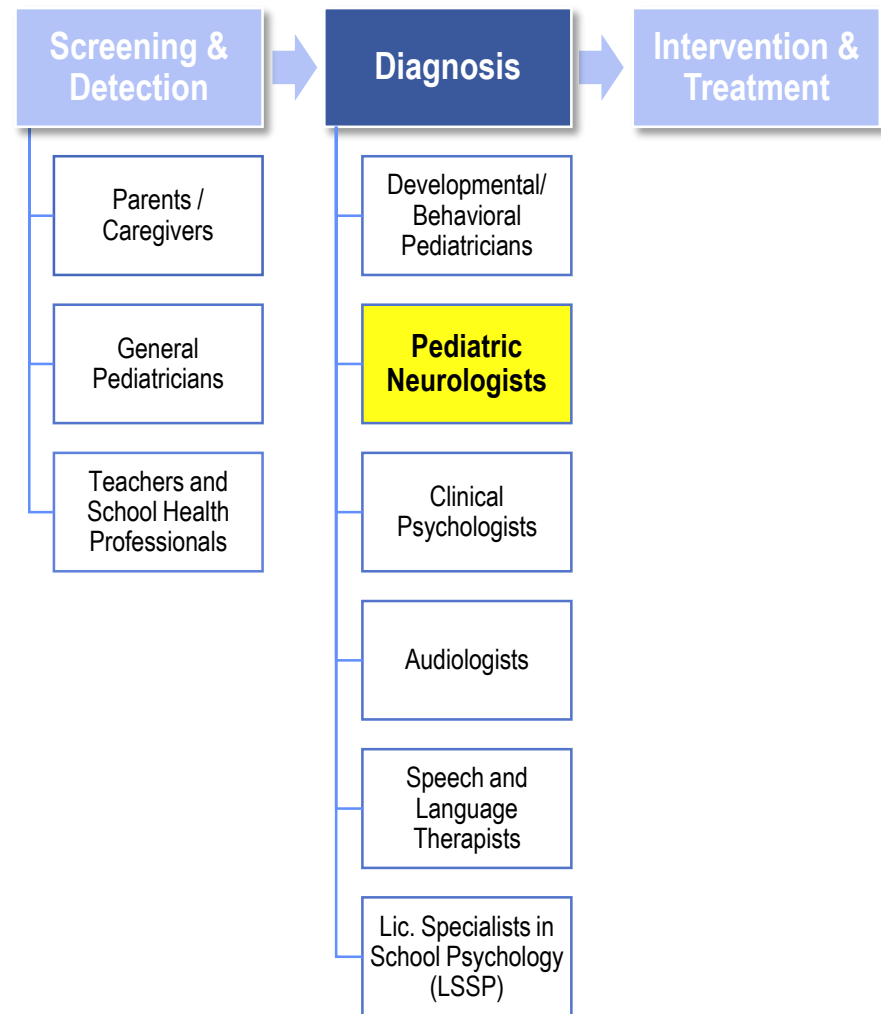
Pediatric Neurologists are more readily available but fewer are working in the ASD field

Universe of Pediatric Neurologists in Texas: 204

Yes — *No:*
Non-Market
Non-Active / Retired
Other Specialties

Pediatric Neurologists in San Antonio CBSA: 17

Match w/ NPI/SKA data

Revised Active Market Providers: 17

Validate Active?
Yes — *No: (0)*
Recently Retired
Moved

Contact in process or unavailable (1)

Yes — *No: (11)* — **Verify ASD Services Offered**

Active Market Pediatric Neurologists offering ASD services: 4
(Civilian:4 ; Military: 0)

- There are a limited number of Pediatric Neurologists statewide (204 active in TX)

- San Antonio CBSA

  - There are 17 active Pedi Neurologists in the market according to licensure and NPI data

    - Not practicing / Retired   0

    - *Not providing ASD services   -11*

  - Pedi Neurologists / 100K population[1]   ~0.63

    - San Antonio CBSA trails other major markets - Houston (1.18), Dallas (0.81) or Austin (0.79)

- Autism Spectrum Disorder focused

  - Most market pediatric neurologists do not offer services related to ASD

    - Additionally found 3 Neuro Psych (adult) providers, none of whom provide ASD services

  - Majority work for large systems

    - CHOSA has a highly rated Autism Clinic which many providers mentioned as their primary referral destination

      - Six Pedi Neuro but only one working with ASD

    - UTHSCSA has 4 providers but refers all cases to CHOSA

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Note: The provider that could not be contacted is not likely to be providing services for ASD. He works for the military where DBPs lead autism diagnosis teams.

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ASD Service Provider Supply
Total Pediatric Neurologists
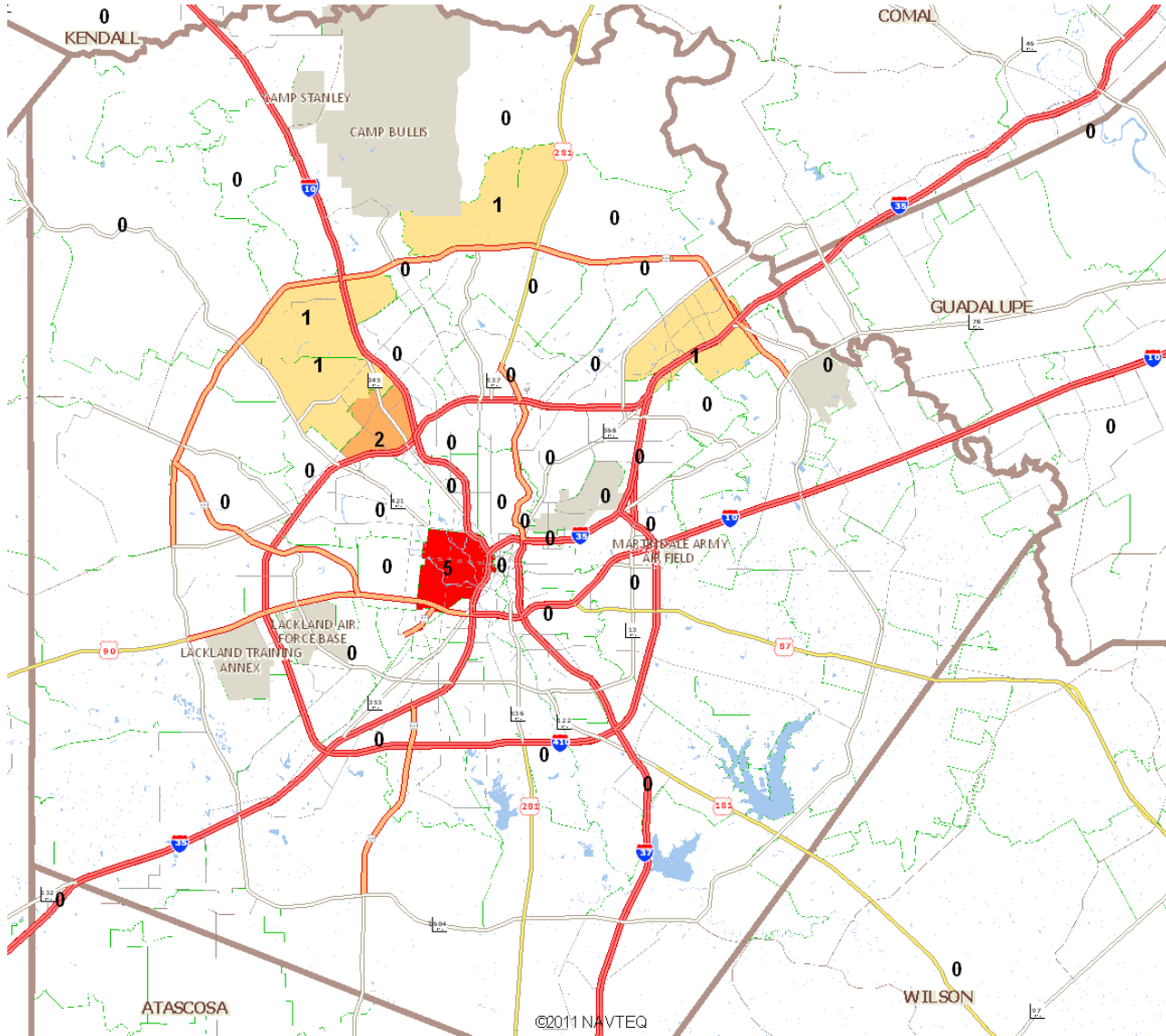
- Pediatric Neurologists are concentrated at CHOSA and in the San Antonio Medical Center

- Not a specialty that necessarily should be widely distributed

ASD Service Provider Supply
Pediatric Neurologists offering services for ASD
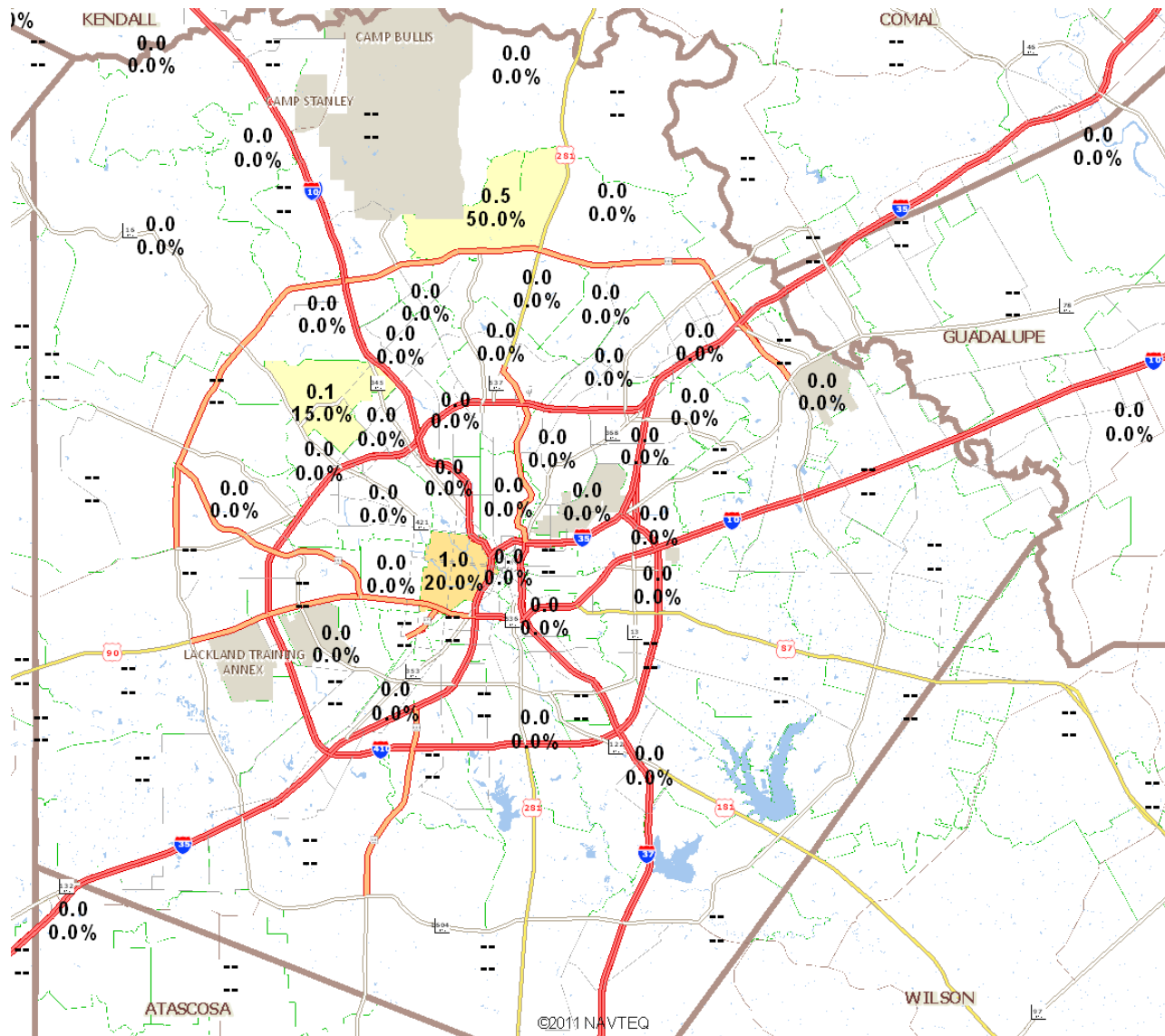
- The "FTE" involved with ASD patients has been allocated to existing providers to outline the "true" resources available
  - Low number of providers to begin with are further reduced
  - Not particularly relevant with Pediatric Neurologists

ASD Service Provider Supply
Market Pediatric Neurologists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Urizar	Juan Carlos	47	Alamo MH Group	No			Neuro Psych
Yes	Faber	Raymond Andrew	69	Laurel Ridge Treatment Cntr	No			Neuro Psych - Substance abuse only
Yes	Jimenez	Robert Leo	76		No			Neuro Psych
Yes	Svoboda	Melissa Dziuk	37	CHOSA	Yes	90%	No	Diagnosis team lead - CHOSA Autism Clinic
Yes	Chincanchan	Carol Ann	61	Communicare W. Campus	Yes		Yes	Working in gen peds but deals with ASD for Communicare
Yes	Tomasovic	Jerry J	76		Yes	50%	Yes	Diagnoses & prescribes treatment
Yes	Saravia	Jorge Antonio	74		Yes			Will see patients w/ASD if they have other complications (ie. migraines/seizures)
Yes	Ahmad	Samiya Fatima	38	CHOSA	No			
Yes	Bobele	Gary Bruce	63	CHOSA	No			
Yes	Eksioglu	Yaman	53	CHOSA	No			
Yes	Ng	Yu-Tze	48	CHOSA	No			
Yes	Zhang	Guojun	53	CHOSA	No			
Yes	Cowan	Kelly G	50	Cowan Campos & Quinn	No			Refers to Dr. Patricia Heartmans
Yes	Aceves	Jose Luis	58	UT Medicine	No			UT Med refers patients to CHOSA
Yes	Atkinson	Sidney Wright	65	UT Medicine	No			UT Med refers patients to CHOSA
Yes	Averill	Kelly Anne	39	UT Medicine	No			UT Med refers patients to CHOSA
Yes	Leary	Linda Diane	48	UT Medicine	No			UT Med refers patients to CHOSA
Yes	Gross	Sheldon Golenternek	64		No			Only see children with Autism if having serious seizures
Yes	Seals	John Raymond	76		No			"Does not believe in autism"
Yes	Faux	Brian	43	Brooke Army Med Cntr	Message left			

Note: Providers were asked to estimate the percentage of their FTE that is spent caring for ASD. Some could not supply this information. For those providers, an estimate was used in the following analysis.

Spectrum of Care – Diagnosis
Clinical Psychologists

- There are a wide variety of psychology practices with over 20 sub-specialties

- Those often involved in the diagnosis of ASD include:
  - Child Psychologist
  - Clinical Psychologist
  - Developmental Psychologist
  - Educational Psychologist

- Psychologists can also be heavily involved in the Intervention and treatment processes

- Licensure data for Psychologists in Texas comes from Texas State Board of Examiners of Psychologists

Screening & Detection	Diagnosis	Intervention & Treatment
Parents / Caregivers	Developmental/ Behavioral Pediatricians	
General Pediatricians	Pediatric Neurologists	
Teachers and School Health Professionals	**Clinical Psychologists**	
	Audiologists	
	Speech and Language Therapists	
	Lic. Specialists in School Psychology (LSSP)	
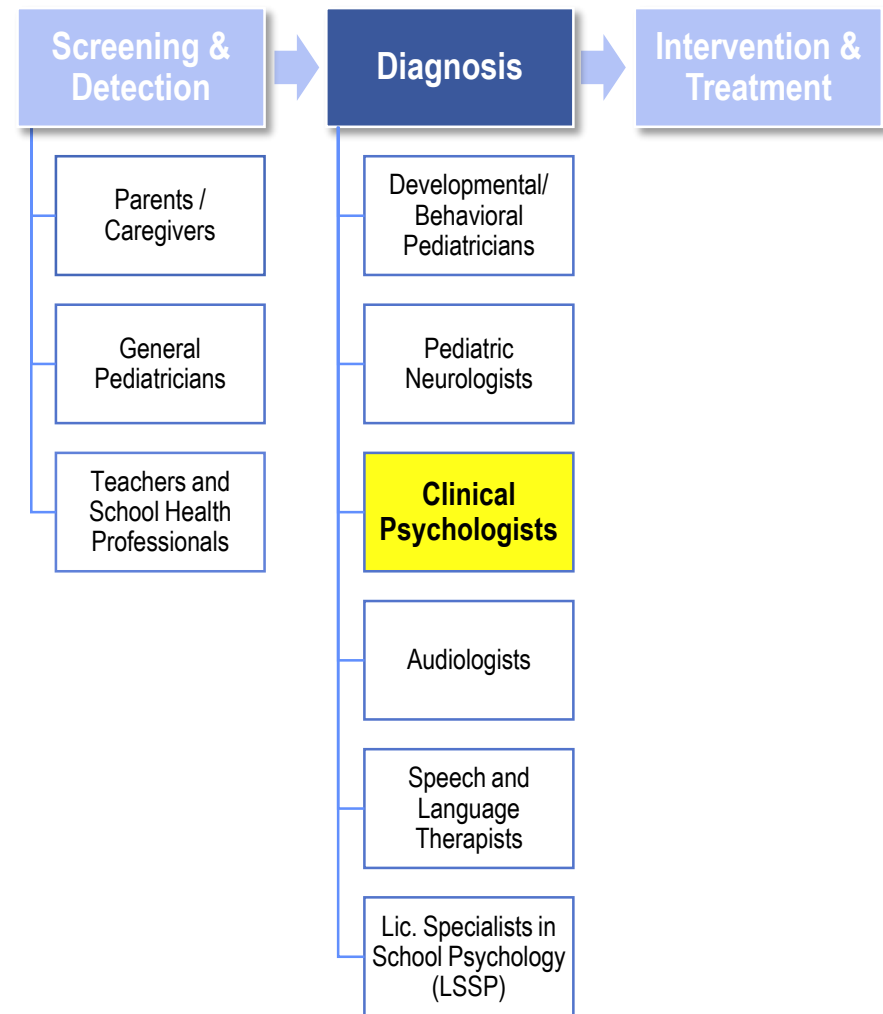
There is a large supply of Clinical Psychologists but few focus specifically on ASD

Universe of Clinical Psychologists in Texas: 4,668

Yes → ◆ ← *No:*

Non-Market
Non-Active / Retired
Other Specialties

Clinical Psychologists in San Antonio CBSA: 426

Random Sample Selection (50% of total providers)

Sample of Clinical Psychologists in San Antonio CBSA: 213

Validate Active?
Yes → ◆ *No: (9)*

Recently Retired
Moved

Contact in process or unavailable (133)

Yes → ◆ *No: (46)* → *Verify ASD Services Offered*

Market Total Imputed from Sample

Active Market Clinical Psychologists offering ASD services: 25
(Civilian:25 ; Military: 0)

→ **Est. Market Clinical Psychologists offering ASD services: 133**

- Clinical Psychology is a very large and diverse specialty. In Texas there are a total of 4,668 providers holding active licenses

- San Antonio CBSA

  - There are 426 active Clinical Psychologists in the market according to licensure data. A sample size of 213[1] was use to impute the estimated total number of providers caring for ASD in the San Antonio CBSA

    - Not practicing / Retired   9
    - *Not providing ASD services   -46*

  - Market totals were estimated based on the above sample

  - Clinical Psychologists / 100K population[1]   ~11.1

    - Austin (23.5) has the largest supply of psychologists / 100k population in Texas. San Antonio (11.1) and Dallas (11.6) follow, with Houston (9.9) trailing.

- Autism Spectrum Disorder focused

  - Most market clinical psychologists concentrate on areas unrelated to ASD

    - Two providers found to be 100% autism-focused

  - Those that provide ASD services generally are involved in diagnosis or screening

ASD Service Provider Supply
Total Clinical Psychologists
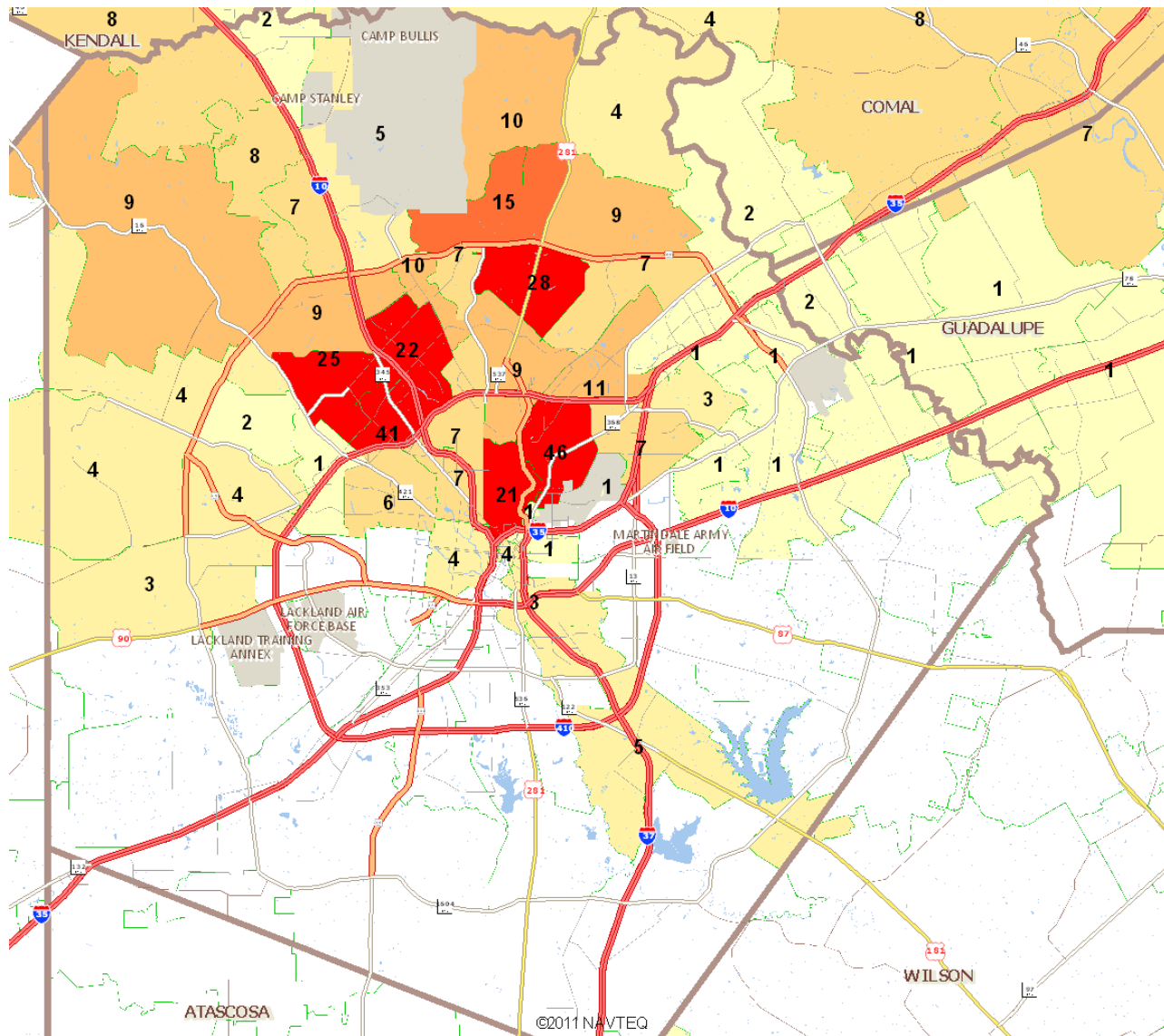
- Clinical Psychologists are heavily concentrated in North Bexar County

- ***Note: The distribution of psychologists is approximate. State licensure data provides a mixture of practice and home addresses.***

ASD Service Provider Supply
Clinical Psychologists offering services for ASD
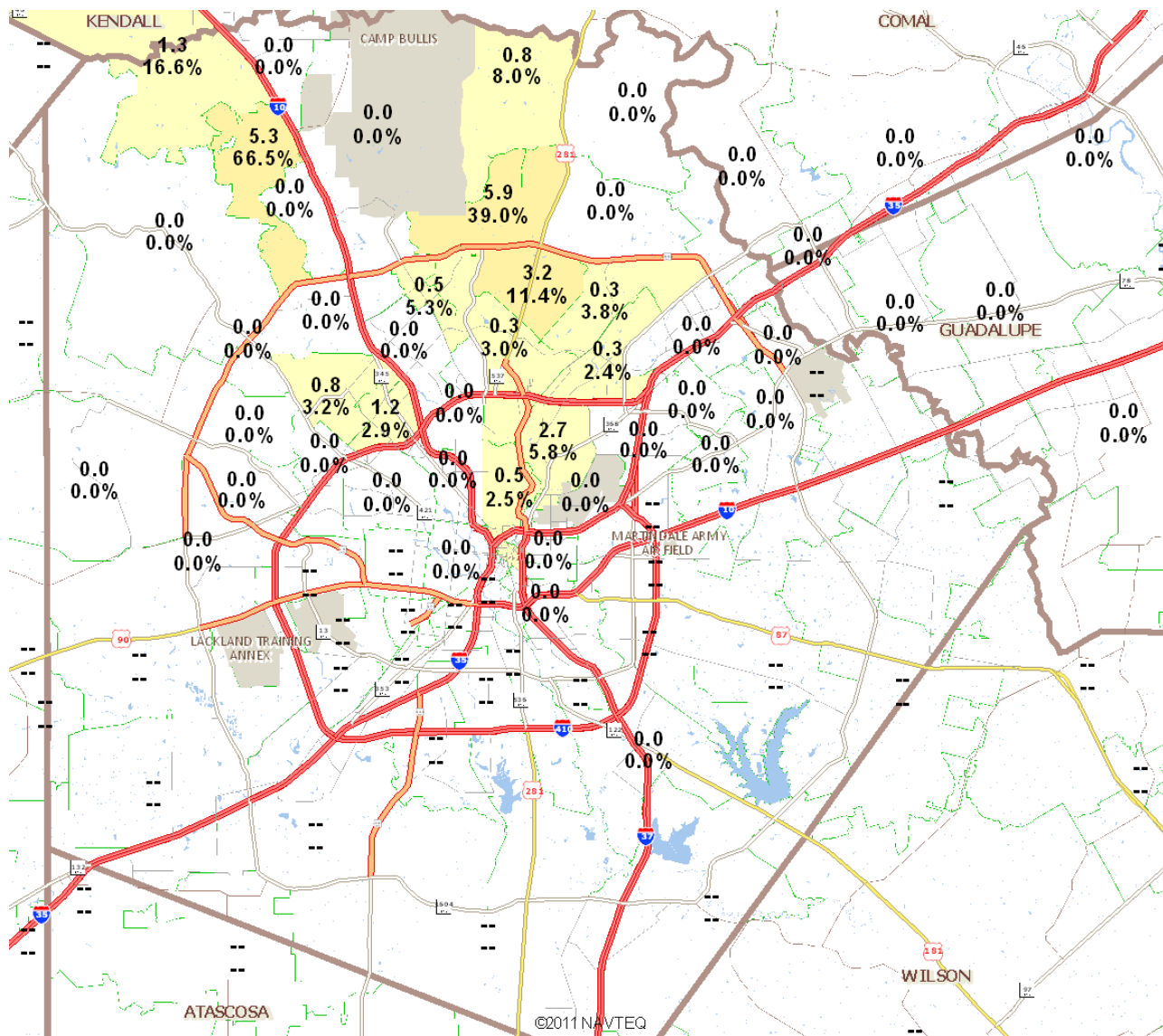
- The "FTE" involved with ASD patients has been allocated to existing providers to outline the "true" resources available

- The limited number of Clinical Psychologists serving ASD patients becomes obvious

- ***Note: The distribution of psychologists is approximate. State licensure data provides a mixture of practice and home addresses***

ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Martinez Jr Andrew	Called	CHOSA Autism Clinic	Yes	100%	Team Lead: CHOSA Autism Clinic
Vazquez Gia Nicole	Called	Blossom Center	Yes	100%	ABA Therapy focus. Currently no diagnosis services. She plans to expand
Ratliff Nancy Deel	Called		Yes	50%	Provides ASD services for adults. 2 child psychiatrists that work w/her to provide med mgmt
Vela Vanessa	Called		Yes	25%	Service offered: Psychiatric care
Aranda-Cano Jesus	Called	Russel Thompson & Assoc.	Yes	15%	Service offered: diagnosis
Grimes Jeffrey Scott	Called	Clarity	Yes	10%	Service offered: testing for high functioning kids. 14 psychologists there but not treat ASD
Hill Gretchen Jones	Called		Yes	10%	Provides all services, but autism is usually a 2nd reason for coming in
Jacobs Claire Ellen	Called		Yes	10%	
Koch Karl David	Called	Clarity - Bagcock Campus	Yes	10%	Service offered: psychotherapy for high functioning kids. 14 psychologists there but not treat ASD
Serrano Cristina Valencia	Called		Yes	10%	Services: initial screening, behavioral mgmt, social skills. Perceives huge shortage of psychologists
Barnard Gary M	Called		Yes	5%	Accepting private pay only
Brake Richard Gerald	Called		Yes	5%	Provides initial screenings
Maddox Katherine Castillo	Called	Algos Behavioral Health Svcs	Yes	5%	Service offered: diagnosis
Murphey Elizabeth Joann	Called		Yes	5%	Service offered: therapy
Zumwalt Karri Ann	Called	Algos Behavioral Health Svcs	Yes	5%	Service offered: diagnosis
Arnold Jodi Gonzalez	Called		Yes	1%	Dr. Arnold serves adults with Asperger's. Services offered: diagnosis/treatment
Obledo Fernando Jorge	Called		Yes	1%	Will treat patients who have already received a diagnosis of autism. Pedi only.
Brooks Franklin Ramon	Called		Yes		Confirmed by Dr. Jacobs. Message left for more information
Esparza Fernando Jesus	Called		Yes		Confirmed by Dr. Jacobs. Message left for more information
Flato Claudia Graciela	Called	Stonebridge Behavioral Health	Yes		Service offered: diagnosis
Larsen Todd Scott	Called	Own Practice	Yes		All autism services provided, but the practice is not autism focused
Mccollum Paul Sterling	Called		Yes		Serves those applying for disability
Newman Benjamin Jacob	Called		Yes		Service offered: screening
Yates William Spencer	Called	Counseling Center	Yes		
Gutierrez Charles	Called		Yes		Confirmed by Dr. Samaniego who refers patients here
Berler Michael H	Called		No		
Aniol Karen Marie	Called		No		
Archuleta Debra Jean	Called		No		
Bizzell Laurie Ann	Called		No		
Cannell John E	Called		No		
Celmer Virginia	Called		No		

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ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Costello Raymond M	Called	VA	No		
Crostley Jeremy Tad	Called	VA	No		
De Jesus Kerry Lynn	Called		No		
Dunn Dianne Elizabeth	Called		No		
Embry Leanne Marie	Called	University Health System	No		
Feigin-Pfau Merryl	Called		No		
Garver Richard B	Called	Richard Garver And Nancy Logan	No		
George Carrie Anne	Called		No		Focused on Cancer
Gerwell Edwin L	Called	VA	No		Focused on Cancer
Hernandez Ann Marie	Called		No		
Hernandez Julia Marie	Called	VA	No		
Holliday Stephen L	Called	VA	No		
Kennedy Jan Elizabeth	Called		No		
Logan Nancy Allen	Called	Richard Garver And Nancy Logan	No		
Maas Marilyn Loren	Called		No		
Martinez Raul	Called	Russel Thompson and Associate	No		Service offered :diagnosis
Martinez Richard Aaron	Called		No		
Mata-Galan Emma Laura	Called	VA	No		
Matherne Lynn Mary	Called		No		
Mccoy Karin J M	Called	VA	No		
Mcdonald Rose Ann	Called		No		
Mengden Susan Collette	Called	Eating Recovery Center of SA	No		Focused on Eating Disorders
Mick Michele Annette	Called	VA	No		
Nofziger Debra Lynn	Called		No		
Orozco Lauren Michel	Called	VA	No		
Peterson Alan L	Called		No		
Probber Shelley R	Called		No		
Pujol Lynette A	Called	UT Health Science Center	No		
Richter Carl Xavier	Called		No		
Rodarte-Luna Bertha Elia	Called	Russel Thompson & Assoc.	No		Service offered :diagnosis
Samano Italo	Called	Alamo Mental Health Group	No		

ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Sanders Braun Sharon Marie	Called		No		
Sanderson Ursula R	Called	Russel Thompson & Assoc.	No		Service offered :diagnosis
Scott Leigh Sharine	Called		No		
Sharma Poonam	Called		No		
Willis Pamelia Fowler	Called		No		Military Medical
Worsham John William Jr	Called		No		
Wyrick Richard Arthur	Called		No		
Yanover Amie Catherine	Called	Alamo Mental Health Group	No		
Zuelzer Margot Bayer	Called		No		
Abbott David W	Message Left				
Aguilar Clarissa Marie	Message Left				
Aniol Larry J	Message Left				
Armstrong Tamara E	Message Left	CHOSA			
Avina Vanessa	Message Left				
Becker Carolyn Black	Message Left				
Bencomo-Rivera Margaret	Message Left				
Berkowitz Karen S	Message Left				
Blader Joseph Charles	Message Left				
Blankmeyer Bonnie Lou	Message Left				Psychiatrist
Blask Richard Alan	Message Left				Student Counsel UTSA
Bonnefil Virginia Lee	Message Left				
Brown Timothy P	Message Left				
Brune Betty Jean	Message Left				
Burrows Fiona Barbra	Message Left				
Cardin-Abney Denise Ann	Message Left				
Cardwell Everett Rollie	Message Left				
Castano Maria Teresa	Message Left				
Chappell Richard T	Message Left				
Chatillon Alice Cave	Message Left				
Collins Mary Handschiegel	Message Left				
Connolly Sean Gerard	Message Left	Algos Behavioral Health Svcs			

ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Cooper Douglas B	Message Left				
Craig Judith Evers	Message Left				
Creasy Brian August	Message Left				
Daniel Stacia Marie	Message Left				
Davis Beverly M	Message Left				
Diaz Daniel Padilla	Message Left				
Diaz Deleon Cynthia Denise	Message Left				
Drozdick Lisa Whipple	Message Left	Pearson Publishing			
Ehrisman Wayne Joseph	Message Left	Clarity			
Elias Yvonne Briones	Message Left				
Emmett Frank Erwin Jr	Message Left				
Felsl Anna Adelgunde	Message Left				
Freeman Richard Kelley	Message Left				
Gilbert Douglas Craig	Message Left				
Gilbert Patricia Fidler	Message Left				
Gordon Jayne	Message Left				
Gordon Shalanda Nichelle	Message Left				
Grill Dennis J	Message Left				
Grosskopf Larry Giles	Message Left				
Hess Sherry M	Message Left				
Hoine Haskel	Message Left				
Holguin Gabriel	Message Left				
Hollis James Neil	Message Left				Lawyer + Psychologist
Howitt Harry	Message Left				
Ilic Catherine Cameron	Message Left				
Ingram Heather Ann	Message Left				
Jackson Eboney Patrice	Message Left	San Antonio State Hospital			
Jennings Susan R	Message Left				
Koranek Margaret Elizabeth	Message Left				
Lavin Dianne S	Message Left				
Lockhart Ann-Louise Theresa	Message Left				

ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Loeffler Judith Rae	Message Left				
Logsdon Steven Alan	Message Left				
Lopez Ana Alicia	Message Left				
Lopez Salvador Jr	Message Left				
Mancini Anita Rose	Message Left				
Mcgeary Cindy Ann	Message Left				
Mckown Shawn	Message Left				
Mcqueen Katherine	Message Left				
Mercado Janyna Marie	Message Left				
Monnig Gayle D	Message Left				
Moore Bret Andrew	Message Left				
Moring John Clayton	Message Left				
Narvaez Alice	Message Left				
Nicewander Joy Grace	Message Left				
Noel Polly Hitchcock	Message Left				
O'Donnell Louise	Message Left		Psychiatry		
Orozco Sergio	Message Left				
Ortiz Shawne Stacie	Message Left				
Parisher Darrel W	Message Left				
Patterson John C	Message Left				
Perotti Laurence Peter	Message Left				
Pickard Jacob P	Message Left				
Prifitera Aurelio	Message Left				
Reams Richard Henry	Message Left	Trinity Counseling			
Reichert Andrew Douglas	Message Left				
Reichert Madeleine Ruth	Message Left				
Reid John Kenneth	Message Left				
Richie David Michael	Message Left				
Rogers Anthony Jerome	Message Left				
Ryan Stacy Renee	Message Left		Psychiatrist		
Sanchez Lira Diana	Message Left				

ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Sanders April D	Message Left				
Santos Veronica Michelle	Message Left				
Scarnato Samantha Joy	Message Left				
Schmidt Linda M	Message Left				
Schroeder James Ernest	Message Left				
Shaker Rosanne Turner	Message Left				
Shan Tanya	Message Left				
Shane David Silas	Message Left				
Shapiro Erica Rosentraub	Message Left				
Sloan Tracy Beth	Message Left				
Smith John H	Message Left				
Stauber Rosemary Jane	Message Left				
Sterling Rebecca Smith	Message Left				
Stoks Suzette Marie	Message Left				
Thomas Anne Carson	Message Left				
Thomas Carrie Christine	Message Left				
Thompson Daniel J	Message Left				
Triana Stephanie Michelle	Message Left				
Villarreal Nichole Wicker	Message Left				
Walch Martha Schramm	Message Left				
Wilson Donna Catherine	Message Left				
Wingfield Cecil Wood	Message Left				
Worsham Murray Evans	Message Left				
Yates Deanna Felber	Message Left				
Ybarra Miguel Antonio	Message Left	Villa Serena			
Yurcheshen Richard Paul	Message Left				
Zaplac Trudi Kaye	Message Left				
Zgourides George Dean	Message Left				
Griffith Lucy Fowlkes	Out of Market				Moved to Austin, TX
Keeton Kathryn Elizabeth	Out of Market				Moved to Houston
Mccormick Jana C	Out of Market				Moved to Houston

ASD Service Provider Supply
Market Clinical Psychologists

Last Name, First Name	Status	Practice Name	See Patients w/ASD?	% ASD	Notes
Pai Anushka Vasudeva	Out of Market				Moved to Dallas
Aaron Harry Michael	Retired				
Arnold J Steven	Retired				
Dewlen Barry Eugene	Retired				
Penk Walter Erich	Retired				
Sutton James D	Retired				
Westermeier Carol Bass Hailes	Retired				
Wheatley Richard Duncan Sr	Retired				
Bacorn Christopher N	Can't Contact				
Banning Lindsey Berkelman	Can't Contact				
Carr Mary Jane	Can't Contact				
Chadwick Terri Skinner	Can't Contact				
Cox Jim Larkin Holston	Can't Contact				
Crowe Kellie Courtney	Can't Contact				
Feldstone Charles S	Can't Contact				
Fuentes Raymond Jorge Jr	Can't Contact				
Garcia Hector A	Can't Contact	VA			
James Billy Joe	Can't Contact				
Janke Scott Alan	Can't Contact	Texas State Counseling Cntr			
Loeffler Henry Kenneth	Can't Contact				
Parton Heather Lynn	Can't Contact				
Ritch Janice Lorraine	Can't Contact				
Robertson Eleanor Terhune	Can't Contact				
Rose Mark R	Can't Contact				
Schoenfeld Lawrence S	Can't Contact				
Schroeder Betty Lou	Can't Contact				
Trevino Mary L	Can't Contact				

ASD Service Provider Supply
Market Clinical Psychologists – Providers not in Sample

Last Name, First Name				
Abney Marvin Daniel	Collado Rika N	Garza Darren Pete	Ingmundson Paul Thoma	Martin Wayne Frederick
Adams Kenneth Paul	Corcoran Colleen M	Gentry Geoffrey Royce	Jackson Margaret Anne	Martinez Gilbert
Aguilar Benjamin	Coverstone Kirk L	Germer William Andreas	Jackson Vickie Wood	Mccann Donald Charles
Amodei Nancy	Critchfield Edan Andrew	Gershenhorn Susan Linda	Johnson Karen Kuhne	Mcgavern Maureen Lynn
Arata-Maiers Teresa Lynne	Cruz Maria Concepcion	Gerwell Kristine Johnston	Kalmbach Karen Christina	Mcgeary Donald Douglas
Arnemann Kelly Gene	Curtis Christine Lynn	Glywasky Kate Elizabeth	Kanzler Kathryn Elizabeth	Mckay William Clifford
Arredondo-Holden Josephine	Davids Bridget Mary	Goethe Katherine Elizabeth	Karcher Sara Lynn	Mcmains Michael J
Baez Thomas	Davis Regina Gay	Gonzalez Blanca N	Karoly Jean Caples	Mcnaughton-Cassill Mary Ellen
Bajorek Ellen Marie	Dersh Jeffrey J	Gonzalez David Andres	Kashyap Deborah Wendland	Meade Kathryn Adcox
Balldin Valerie Hobson	Donahoe Clyde Pershing Jr	Gonzalez Josue R	Katko Nicholas John	Mendoza-Bonewits Alicia Patricia
Baroffio James Richard	Down Melinda Maguire	Gordon Sheryle Diane	Kearney Lisa Kathryn	Meyering Kelly Ann
Bateman John I	Dreeben Samuel J	Gragg Jerry	Kennedy Sheri Friedrich	Mikalsen Elena
Beach John Wickliff	Dunlap Sally M	Graham Melissa Michelle	Kern Paul Allan	Milam Daneen A
Berton Margaret Wright	Dvorkin Janice M	Graves Kenneth Jerome	Kessler Walker Dawn Elizabeth	Miller Monte Christopher
Bess Jennifer Alison	Edmonds Brenda Harris	Gunzburger David Wile	Kimball Timothy David	Mitchell Jennifer A
Biever Joan Leslie	Edwards Annette G	Gutierrez Bibiana M	Kimbell Anne-Marie	Moran Michelle P
Blancarte Ana Lilia	Edwards David Lynn	Gutierrez Charles	King Maureen Sullivan	Morrow Debra Celina
Blount Tabatha Hope	Eisenhauer Kristin Elizabeth	Hale Teresa J	Lair V J	Neal Gary William
Bobele Robert Monte	Erickson Susan Southard	Hallmark Katrina Lee	Landry Lisa Pinkenburg	Odom Susan Dean
Boskind Paul Alan	Erwin William Mack	Hamel Daniel A	Lane Hazel Lavern	Ogbeide Stacy A
Bowlin Caitlin Anne	Espinosa Rosa Ana	Hardin Barbara Marie	Laven Hans	O'Rourke Justin John Francis
Bujanda-Moore Ruth	Esquivel Anne Michelle	Henderson Karen Sue	Leary Cathy	Owen Patricia R
Burque Brandi Elizabeth	Essery Joshua David	Henry Gary L	Livingston Lee Ashley	Palmer Pamla
Carter Stephanie Bogenschutz	Favorite Sara Ruth	Higgins Marian Hess	Lopez Daniel Lee	Pelzer Susan Gail
Castillo Michael George	Ferrell Jack G Jr	Hill Thomas Weems	Love-Clark Peggy	Pence Brenda Jean
Cayton Tommie G	Finnigan Eiryth Anne	Holder Heather Liapis	Macias Daniel Eugene	Perry John William Jr
Cepeda Judith Patricia	Flores Arthur Anthony	Hopkins Patrick James	Maiers Alan John	Ponce Mary Zoila
Chapa Beatrice Marie	Folensbee Rowland Wickes Jr	Howard Kasi Bowles	Malach Steffany Lynn	Porter Mary Josephine
Chauvin Philip James	Frank Rex Allen	Hughes Teresa Mead	Maldonado Liza Yvette	Powell Ashley Elizabeth
Chauvin Tamera Kyna	Gaines Thomas Jr	Hull Susan Hannah	Mangelsdorff A David	Price John Stephen
Clements-Thompson Michele	Garcia Rocio Villarreal	Hunter Lana Vy	Marquez Beneza	Raiford Susan Engi

ASD Service Provider Supply
Market Clinical Psychologists – Providers not in Sample

Last Name, First Name	
Raj Jeslina Jayanti	Tate David Franklin
Ramos Jenel Sanchez	Theis Richard R
Rivera Krystle Janelle	Thomas Dolly
Roberts David Leland	Thompson Russel L
Robinson Dianne Tracy	Thurber Jill Renee
Rogers Timothy E	Torres Mary T
Roman Michael A	Trevino Dina T
Romero Josue Javier	Truesdell-Bierman Karen Christine
Rubin Bracha Tova	Van Nhi Alexandra
Ruha Allyson Leigh	Velasquez John Martin
Salmeron Carmen Elizabeth	Velligan Dawn Irene
Sander Douglas Weldon	Veve Mia
Sanders Randolph Kent	Villanueva Javier Gerardo
Sawyer Kathleen Glash	Villarreal Victor
Schraer Ronald Gene	Vonstultz Jeannine Marlene
Scott Shannon E	Vriend Catherine A Y
Seale Kathrine Anne	Waters Julie Elizabeth
Seawell Mistie Dawn	Whiting Gary S
Shannon Kelly	Wiernik Julie Lynn
Sharma Geetanjali	Wilks Edward George
Shibazaki Kozue	Williams Lorraine Caroline
Shrouf Ellen Marie	Willis Max H
Stange Judy Lynne	Wood Raleigh Davis
Stedman James M	Zachary Robert Anthony
Sterling John	Zalot Alecia Anne
Stewart Allison Marie	Zitlin Mark Renald
Stone Douglas Thomas Jr	
Stone Linda M	
Storm Scott Camburn	
Sullivan Jeremy R	
Talcott Gerald Wayne	

Note: Detailed information available in accompanying database

Kronkosky Charitable Foundation

CAPITAL HEALTHCARE PLANNING

Spectrum of Care – Diagnosis
Licensed Specialists in School Psychology (LSSP)

- Licensed Specialist in School Psychology (LSSP) provide school psychological services in Texas public schools.

- The requirements for the LSSP credential include:

  – Completion of a graduate degree in school psychology or closely related field

  – The national exam for school psychology and eligibility for certification as a National Certified School Psychologist (NCSP) or educational equivalent.

- In Texas, the title of School Psychologist is limited to those licensed psychologists with a doctorate in school psychology

- Supply data for market LSSPs was provided by the Texas Education Agency and the Texas State Board of Examiners of Psychologists

Screening & Detection	Diagnosis	Intervention & Treatment
Parents / Caregivers	Developmental/ Behavioral Pediatricians	
General Pediatricians	Pediatric Neurologists	
Teachers and School Health Professionals	Clinical Psychologists	
	Audiologists	
	Speech and Language Therapists	
	Lic. Specialists in School Psychology (LSSP)	

Kronkosky Charitable Foundation

CAPITAL HEALTHCARE PLANNING
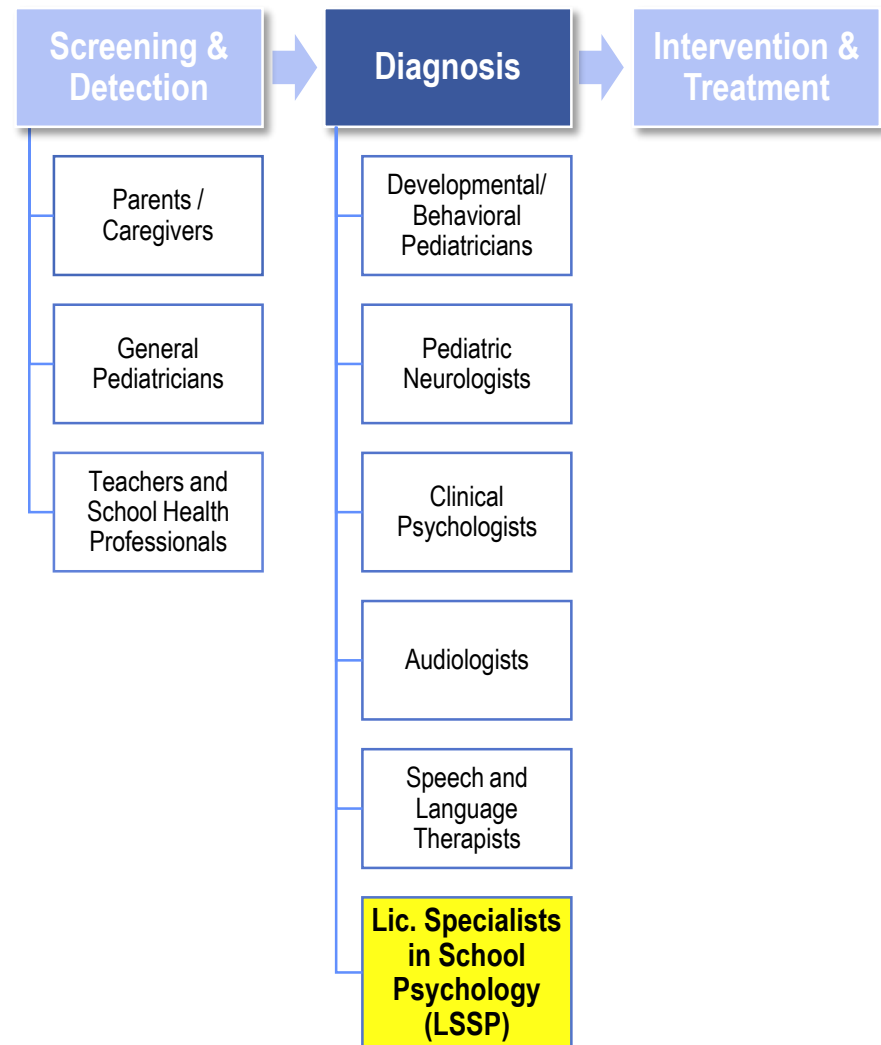
Strategic Interviews - School Districts
What does treatment of ASD look like in your district?

- **School districts strive to provide children with an inclusive environment**
  - "We try to provide in-class support if at all possible, however special education classrooms are used in the more severe cases"
  - "Early childhood intervention is primarily inclusive because you're trying to get to know the child and observe"
- **Speech therapy was reported as a key element in the care of autism**
  - "Speech therapy is the most utilized service, not only among children with autism but among the entire special education program"
  - "I have seen instances where students that were given a triple dose of speech therapy when they were young can make incredible gains. I'd love to really enhance our program so that we could provide these services instead of the basics / emergency only"
  - "All speech therapy and occupational therapy programs are specific to school districts"
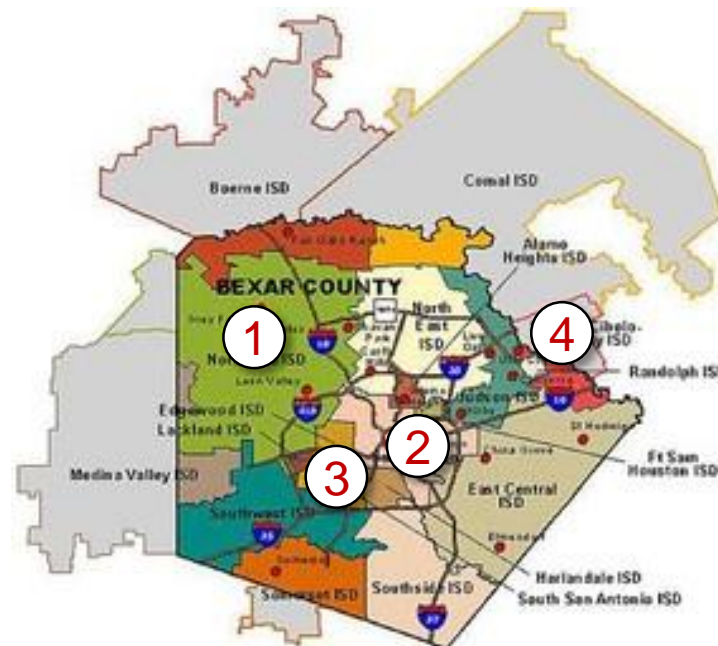
1. Northside ISD
2. San Antonio ISD
3. South San Antonio ISD
4. Schertz-Cibolo-Universal City ISD

Strategic Interviews - School Districts

What do you see as the major strengths and weaknesses in your district?

Strengths

- Evaluation Teams
  - "Thorough, complete, and fast"
- Teacher dedication
  - "The teachers that are staying are 100% committed to the work they are doing"
  - "Our teachers have a great passion for these children and their needs"

Weaknesses

- Staffing
  - High turnover
  - Persistent vacancies
- Teacher training
  - "There needs to be ABA training for our teachers"
  - "We need to be equipped to deal with this at all levels: general education to special education"
- Care for severe cases
  - "You begin to ask yourself 'How many resources can you put in?"
- Technology
  - "We would like to incorporate RoboKind technology but it is expensive"
  - "Data reporting"

Strategic Interviews - School Districts
Which specialties are in shortage or are difficult to recruit or retain?

- **Difficulty hiring providers varies district to district**

  - "We are mostly happy with staffing. However, I would like to have a BCBA and would like to start integrating LSSPs in a treatment capacity"

  - "Staffing can sometimes be tough, but we are an attractive district (big city, good reputation, etc.). I know of a posting in a nearby district that has been up for a year without being filled"

  - "Speech therapy is an area of great need for us… We have 9 speech vacancies that have been open for the last 10 years. The number of vacancies varies, but has reached upwards of 30"

- **The primary staffing concerns among districts are high turnover rates and competition with the private sector**

  - "The providers available for hire are typically new to the field."

  - "...turnover is high as they either realize that special education is not for them or realize that they have the opportunity to make far more money in the private sector"

  - "We struggle with finding people to fill speech, OT, PT, and BCBA positions because they know they can make a lot more money in the private sector."

  - "Often times we will have to contract providers to fill temporary needs. When we go to hire them we can't keep them because there is a disconnect between the contracted hourly rate and the salary we can offer"

Strategic Interviews - School Districts
Are you successfully diagnosing the students with ASD? At the right time?

- **Most districts feel they have strong Child Find and ECI programs. The majority of the children being diagnosed in higher grade levels are new students from other districts.**

  - "Our first resource is a Child Find representative"

  - "Most districts are picking children up before 2nd grade. Those students that are considered to be higher functioning are the ones being picked up in higher grade levels"

  - "There has been a recent Increase in the number of 3 year olds we're diagnosing. There are still quite a few we're catching in Kindergarten… mostly students that have not been in a school settings"

  - "We rarely are identifying autism in kindergarten or first grade unless they are from another district. Child Find is working very well in out district"

  - "I'd say we are catching 80% to 90% of children in before 1st grade. However, we are a district with a high migration rate so we cannot catch all children early"

  - "Diagnosis is very different from "educational eligibility". You can have a child with a medical diagnosis of autism and not qualify for an educational diagnosis"

  - "The rub is that there is an "educational model" versus a "clinical model" in the diagnosis and care for these kids and they don't always track"

Strategic Interviews - School Districts
Medical vs Educational Diagnosis

- It is important to note the difference between medical and educational diagnoses of autism

- Schools evaluate students on the basis of "educational need". If a child presents symptoms that interfere with their ability to learn, they will receive a diagnosis and special education services

- One diagnosis can, and frequently does exist without the other
  - Most often in the case that a child has a medical diagnosis but educational need is not found

- While some schools provide additional services, they are ultimately required to accomplish educational goals. As a result, they are limited on the amount of extra time / money they are able to devote to non-education related services

Medical Diagnosis

- Determined from results of a series of evaluations and assessment of symptoms
- Typically led by a physician
- Diagnosis typically one on one

Educational Diagnosis

- Made by a team of typically containing at least one LSSP
- Often evaluated in "arena-based" or "play-based" settings
- Based off of a presence of "educational need"

Strategic Interviews - School Districts
What do you see as the primary opportunities for improving outcomes for ASD?

- When asked where they would focus resources going forward the Districts would target investment in the following areas:

  - Hiring – LSSPs SLP's, and OT's   4 / 100%

  - Teacher Training (Special & Gen. Ed)   3 / 75%

  - Resources for most severe cases   2 / 50%

  - Technology improvements   1 / 25%

  - Parent Education   1 / 25%

  - Secondary school social programs   1 / 25%

ASD Service Provider Supply - School Districts
Total Special Education FTEs

- Special education programs can vary widely by district
  - Each district can approach special education with varying mixes of programs and providers
- Specialists can include but are not limited to:
  - Audiologists
  - Corrective Therapists
  - Counselors
  - Educational Diagnosticians
  - LSSP/Psychologists
  - Music Therapists
  - Occupational Therapists
  - Physical Therapists
  - Psychological Associates
  - Social Workers
  - Speech Therapists / Speech-Lang Pathologists

Providers / Student with ASD

Chart x-axis: 0.00, 0.50, 1.00, 1.50, 2.00

Y-axis (School District), top to bottom:
Pleasanton, Poteet, Southside, Lytle, Brooks Acad (Ch), Edgewood, Hondo, Poth, Bandera, San Antonio, Somerset, Southwest, Seguin, Medina Valley, Floresville, New Braunfels, South SA, Harlandale, Devine, Randolph Field, John H Wood (Ch), La Vernia, Natalia, Ft Sam Houston, Comal, Navarro, East Central, Lackland, North East, Judson, Alamo Heights, Northside, Boerne, Jourdanton, Schertz-Cibolo-U, Sch Of Sci & Tech (Ch), Stockdale, Kipp (Ch), Comfort, Marion, Harmony Sci Acad (Ch), Jubilee (Ch), Great Hearts TX (Ch)

Median 0.46

Source: Texas Education Agency

Kronkosky Charitable Foundation

CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply - School Districts
Licensed Specialist in School Psychology (LSSP)

- LSSPs are the primary provider responsible for issuing an "educational" autism diagnosis

- In general, LSSPs are not actively involved in day to day intervention/ teaching

- On average, a school district in Bexar county staffs 0.06 LSSPs per child with autism

- Many districts feel they are understaffed in LSSPs…Even those with higher provider to ASD student ratios noted a need for more

  - South SA ISD, which is above the median, reported a need for 2 additional LSSPs

- Northside which was highlighted as a "best practice" site falls below the median

Providers / Student with ASD

0.00   0.05   0.10   0.15   0.20   0.25   0.30   0.35

School District

Poth
John H Wood (Ch)
Pleasanton
Southside
Edgewood
Bandera
Seguin
Somerset
Randolph Field
Great Hearts TX (Ch)
South SA
Ft Sam Houston
New Braunfels
Southwest
Boerne
East Central
San Antonio
Lackland
La Vernia
Navarro
Harlandale
Judson
Northside
Comal
Schertz-Cibolo-U
North East
Medina Valley
Floresville
Alamo Heights
Poteet
Lytle
Brooks Acad (Ch)
Hondo
Devine
Natalia
Jourdanton
Sch Of Sci & Tech (Ch)
Stockdale
Kipp (Ch)
Comfort
Marion
Harmony Sci Acad (Ch)
Jubilee (Ch)

Median 0.06

CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply - School Districts
Speech Therapist / Speech Language Pathologist

- Although often part of a district's assessment team, Speech Language Therapists are primarily involved in day to day intervention/teaching activities

  - SLP's /SLP-A's work with special education students with varying needs

  - Speech is often a key component of care plans for children with ASD

- There is a clear difference in the ratio of speech providers to ASD students in charter schools and ISD's

  - All 7 Charter Schools fall below the median (.07)

- Higher provider to ASD student ratios do not necessarily mean appropriate staffing

  - Ex.) San Antonio ISD

    - "We have 9 speech vacancies that have been open for the last 10 years"

    - "The number of vacancies fluctuates… it has reached up to 30 at one point"

Source: Texas Education Agency

54
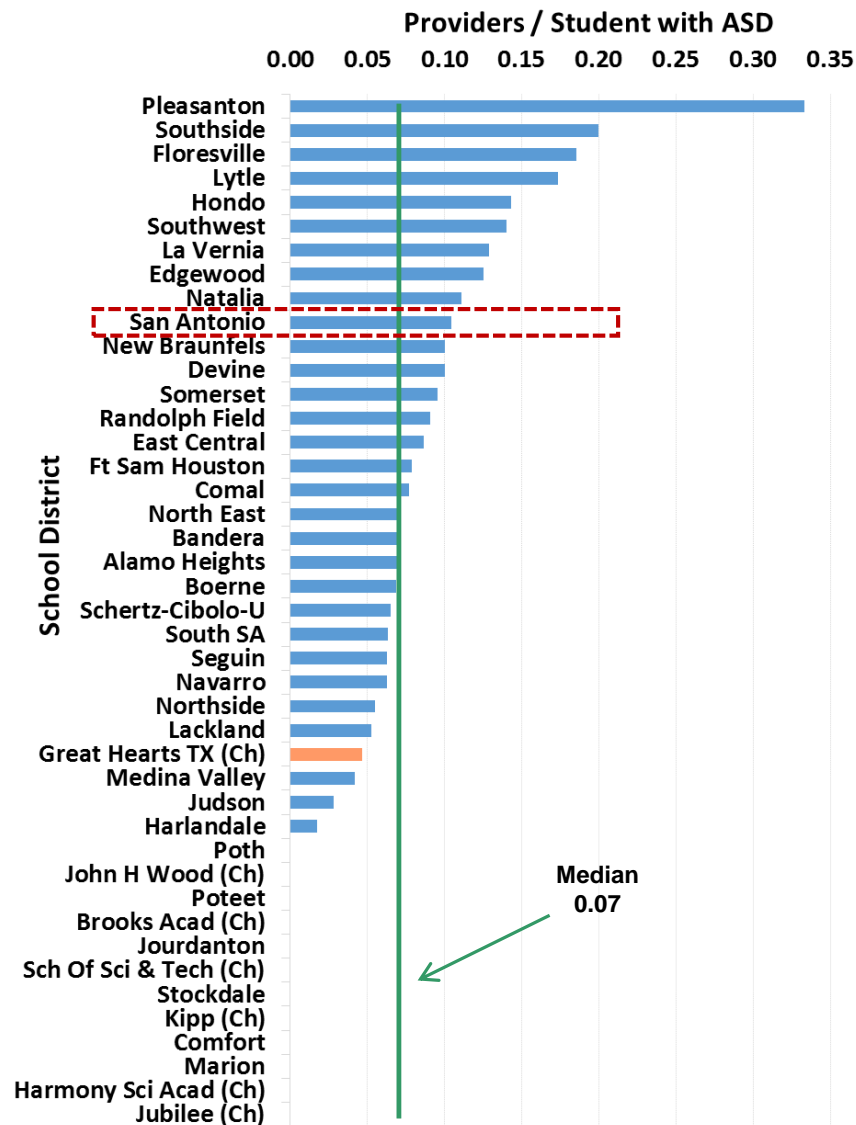
ASD Service Provider Supply - School Districts
Total Special Education FTEs

- The mix of providers varies significantly at a county level

- Despite having more students with ASD and more special education providers than any other district, the specialist to student ratio is the lowest in Bexar County

  - Tied for lowest ratio of speech pathologists (.07 / Student)

    - Speech Pathologists were called out as the most utilized service by students with ASD in 4/4 school district interviews

- Larger counties employ a broader range of specialties but all counties area able to employ some variety of specialties

Specialist	Specialist FTE's / Student with ASD							
	Bexar	**Comal**	**Guadalupe**	**Wilson**	**Medina**	**Atascosa**	**Bandera**	**Kendall**
Students with ASD -->	**3,765**	**288**	**91**	**80**	**70**	**40**	**21**	**6**
Audiologist	0.00	0.01	-	-	-	-	-	0.17
Corrective Therapist	0.00	-	-	-	-	-	-	-
Counselor	0.21	0.23	0.57	0.22	0.29	0.52	0.29	2.46
Educational Diagnostician	0.01	0.02	0.02	0.06	0.10	0.20	0.05	0.17
LSSP/Psychologist	0.06	0.06	0.19	0.06	0.01	0.08	0.10	1.17
Music Therapist	0.00	-	-	-	-	-	-	-
Occupational Therapist	0.01	0.01	0.05	0.01	0.01	0.02	-	0.17
Physical Therapist	0.01	0.01	0.02	-	-	-	-	0.14
Psychological Associate	0.00	-	-	-	-	-	-	-
Social Worker	0.02	0.01	0.07	0.01	0.04	0.05	-	-
Speech Thrpst/Speech-Lang Path	0.07	0.08	0.20	0.13	0.09	0.16	0.07	1.14
Total	**0.38**	**0.43**	**1.12**	**0.49**	**0.54**	**1.03**	**0.50**	**5.40**

- *There is no cross-sharing of special education resources. If a district needs additional services they are contracted externally rather than using providers in another district*

Kronkosky
Charitable Foundation

CAPITAL
HEALTHCARE PLANNING

ASD Service Provider Supply - School Districts
Market Special Education Providers – Public Schools

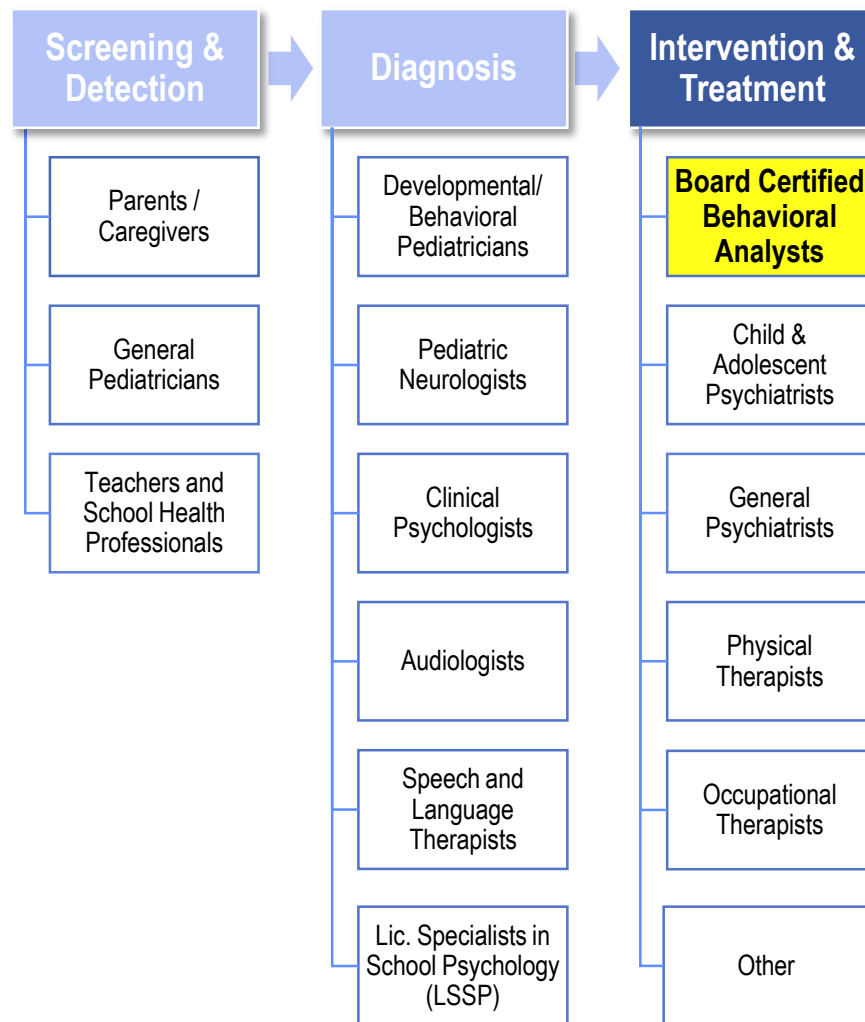| District	Audiologist 12-13	13-14	14-15	Corrective Therapist 12-13	13-14	14-15	Counselor 12-13	13-14	14-15	Educational Diagnostician 12-13	13-14	14-15	LSSP/Psychologist 12-13	13-14	14-15	Music Therapist 12-13	13-14	14-15	Occupational Therapist 12-13	13-14	14-15	Physical Therapist 12-13	13-14	14-15	Psychological Associate 12-13	13-14	14-15	Social Worker 12-13	13-14	14-15	Speech Thrpst/Speech-Lang Path 12-13	13-14	14-15
Academy Of Careers And Technologie	-	-	-	-	-	-	2.0	2.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alamo Heights Isd	-	-	-	0.5	0.5	0.5	13.8	14.8	13.7	-	1.0	1.0	2.5	2.5	2.5	-	-	-	2.0	1.5	1.5	-	-	-	1.0	0.5	0.5	2.1	2.1	2.1	5.8	4.8	6.5
Bexar County Academy	-	-	-	-	-	-	0.5	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brooks Academy Of Science And Engi	-	-	-	-	-	-	2.1	3.1	5.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
East Central Isd	-	-	-	-	-	-	18.0	17.0	19.0	2.0	-	-	6.0	8.0	8.5	-	-	-	2.0	2.0	2.0	-	-	-	-	-	1.0	1.0	1.0	1.0	9.1	6.0	10.6
Edgewood Isd	1.0	1.0	1.0	-	-	-	23.0	23.3	23.2	-	-	-	15.0	14.0	14.0	-	-	-	-	-	-	-	-	-	-	-	-	10.8	12.0	11.9	11.8	11.0	10.9
Ft Sam Houston Isd	-	-	-	-	-	-	2.3	2.3	2.3	-	-	-	1.0	3.0	3.0	-	-	-	2.6	1.6	1.6	-	1.0	1.0	4.0	2.0	2.0	1.8	1.8	1.8	2.0	3.0	3.0
George Gervin Academy	-	-	-	-	-	-	0.5	1.3	0.8	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Great Hearts Texas	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	0.5	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	0.3
Harlandale Isd	-	-	-	-	-	-	34.8	31.7	33.1	3.0	3.0	3.0	7.0	7.0	7.0	-	-	-	-	-	-	-	-	-	-	-	-	13.8	14.0	14.0	2.0	2.0	2.0
Harmony Science Acad (San Antonio)	-	-	-	-	-	-	0.6	1.5	4.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Higgs Carter King Gifted & Talente	N/A	-	-	N/A	-	-	N/A	1.0	0.3	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-
John H Wood Jr Public Charter Dist	-	-	-	-	-	-	-	-	-	0.5	0.9	-	3.8	5.0	6.0	-	-	-	-	-	-	-	-	-	6.0	2.0	4.0	1.0	-	-	-	-	-
Jubilee Academic Center	-	-	-	-	-	-	2.0	1.2	4.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Judson Isd	-	-	-	-	-	-	49.3	48.5	51.1	1.5	2.0	2.0	10.2	15.0	17.0	-	-	-	3.0	3.0	3.0	-	-	-	1.0	1.0	1.0	11.0	10.0	9.0	5.0	5.0	8.0
Kipp San Antonio	-	-	-	-	-	-	2.9	6.0	2.1	-	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lackland Isd	-	-	-	-	-	-	4.0	3.9	4.0	-	-	-	1.3	1.3	1.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.0	1.0
New Frontiers Charter School	-	-	-	-	-	-	1.4	1.4	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North East Isd	1.0	1.0	-	-	-	-	152.5	153.5	157.6	3.7	5.0	3.3	39.3	38.0	40.7	-	-	-	10.3	11.3	11.9	5.0	5.0	5.3	1.0	1.0	-	1.0	1.0	-	38.2	63.6	62.1
Northside Isd	1.0	1.0	1.0	-	-	-	227.7	249.8	251.3	0.5	0.5	0.5	68.4	71.5	73.2	1.0	-	1.0	14.3	14.3	15.2	6.0	6.0	6.9	-	-	-	6.0	5.8	7.0	111.4	105.6	76.8
Por Vida Academy	-	-	-	-	-	-	2.0	3.0	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-
Radiance Academy Of Learning	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-	N/A	N/A	-
Randolph Field Isd	-	-	-	-	-	-	3.5	3.4	3.0	-	-	-	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	1.0	1.0	1.0
San Antonio Isd	-	-	-	-	-	-	131.0	129.9	129.2	14.0	12.0	13.0	19.0	23.0	25.0	-	-	-	4.0	5.0	3.0	4.0	5.0	5.0	-	-	-	18.0	23.0	24.0	40.0	37.0	39.0
School Of Excellence In Education	-	-	-	-	-	-	2.0	0.1	3.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
School Of Science And Technology D	-	-	-	-	-	-	1.1	1.6	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shekinah Radiance Academy	N/A	-	-	N/A	-	-	N/A	-	1.0	N/A	-	-	N/A	1.0	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-	N/A	-	-
Somerset Isd	-	-	-	-	-	-	7.5	6.2	7.9	2.0	2.0	0.9	1.0	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0	2.0	2.0
South San Antonio Isd	-	-	-	-	-	-	20.2	21.6	21.4	3.0	2.3	-	3.0	5.7	5.0	-	-	-	-	-	-	-	-	-	-	-	-	1.0	2.0	2.4	3.0	4.0	4.0
Southside Isd	-	-	-	-	-	-	14.0	13.9	13.9	-	-	2.0	5.0	5.0	5.0	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.0	3.0	4.0	3.0	6.0
Southwest Isd	1.0	-	-	-	-	-	27.0	28.0	26.0	1.0	2.0	2.0	9.0	8.0	7.0	-	-	-	1.8	1.0	1.0	-	-	-	1.0	0.6	-	7.0	6.0	8.0	9.3	13.3	13.8
Southwest Preparatory School	-	1.0	-	-	-	-	1.6	2.0	3.6	3.5	5.0	2.1	5.8	7.5	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.7	3.0
Charlotte Isd	-	-	-	-	-	-	2.0	1.9	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jourdanton Isd	-	-	-	-	-	-	3.0	4.0	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lytle Isd	-	-	-	-	-	-	4.8	4.1	4.5	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	1.3	1.6
Pleasanton Isd	-	-	-	-	-	-	10.7	9.1	7.1	7.0	7.0	7.0	2.0	2.0	3.0	-	-	-	0.8	0.8	0.8	-	-	-	-	-	-	1.0	1.0	1.0	4.0	4.0	5.0
Poteet Isd	-	-	-	-	-	-	4.0	7.0	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	1.0	-	-	-
Bandera Isd	-	-	-	-	-	-	5.0	5.0	5.0	1.0	1.0	1.0	3.0	3.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.0	1.0
Medina Isd	-	-	-	-	-	-	1.0	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5
Comal Isd	2.0	1.0	3.0	-	-	-	41.8	42.5	43.7	3.0	3.0	3.0	10.0	10.0	11.0	-	-	-	3.0	3.0	3.0	1.0	1.0	1.0	-	-	-	4.0	4.0	3.0	16.0	17.0	17.0
New Braunfels Isd	1.0	1.0	-	-	-	-	17.9	17.9	17.8	2.0	1.8	3.0	4.0	6.0	5.0	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	-	-	-	1.0	1.0	1.0	6.0	6.0	6.5
Trinity Charter School	-	-	-	-	-	-	1.0	2.0	3.9	-	-	-	-	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Marion Isd	-	-	-	-	-	-	1.0	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.0	1.0	-	-	-
Navarro Isd	-	-	-	-	-	-	4.0	3.0	4.0	-	-	-	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.0	1.0
Seguin Isd	-	-	-	-	-	-	17.0	17.0	18.0	3.0	3.0	2.0	5.0	6.0	6.5	-	-	-	2.0	2.0	2.0	2.0	2.0	1.8	-	-	-	1.0	1.0	1.0	4.0	4.0	4.0
Schertz-Cibolo-U City Isd	1.0	1.0	-	-	-	-	28.8	29.1	29.0	1.0	-	-	8.0	8.9	10.0	-	-	-	1.9	2.0	2.0	-	-	-	-	-	-	2.0	2.0	2.0	12.4	11.5	13.0
Boerne Isd	1.0	1.0	1.0	-	-	-	12.1	12.4	12.6	2.0	1.0	1.0	5.9	7.0	7.0	-	-	-	1.0	1.0	1.0	0.8	0.8	0.8	-	-	-	-	-	-	7.0	6.8	6.8
Comfort Isd	-	-	-	-	-	-	1.5	0.5	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meadowland Charter School	-	-	-	-	-	-	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Devine Isd	-	-	-	-	-	-	4.0	5.0	5.0	3.0	3.0	3.0	1.0	1.0	-	-	-	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	-	2.0	2.0	2.0
D'Hanis Isd	-	-	-	-	-	-	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hondo Isd	-	-	-	-	-	-	5.1	4.7	5.1	2.0	2.0	2.0	-	-	-	-	-	-	0.6	0.6	0.3	-	-	-	-	-	-	-	-	-	2.0	2.0	2.0
Medina Valley Isd	-	-	-	-	-	-	8.0	8.0	6.3	2.0	2.0	2.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.0	3.0	1.0	1.0	1.0
Natalia Isd	-	-	-	-	-	-	2.0	2.9	2.9	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	1.0	-
Floresville Isd	-	-	-	-	-	-	7.9	7.8	7.0	2.9	3.0	3.0	2.0	1.6	1.0	-	-	-	0.7	0.8	0.8	-	-	-	-	-	0.2	2.0	1.0	1.0	3.9	3.9	6.5
La Vernia Isd	-	-	-	-	-	-	7.0	6.7	6.3	-	2.0	2.0	4.0	2.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.0	3.0	4.0
Poth Isd	-	-	-	-	-	-	2.0	2.0	2.0	-	-	-	1.0	1.0	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stockdale Isd	-	-	-	-	-	-	4.5	3.0	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Average	0.2	0.1	0.1	0.0	0.0	0.0	17.5	17.3	17.0	1.3	1.2	1.1	4.5	4.8	4.7	0.0	0.0	0.0	0.9	0.9	0.9	0.4	0.4	0.4	0.2	0.1	0.1	1.7	1.7	1.7	5.8	5.9	5.6
8 - County Total	9.0	8.0	6.0	0.5	0.5	0.5	946	971	988	70	67	62	245	270	273	1.0	1.0	1.0	51	51	51	22	23	25	12.0	5.7	6.5	92	97	101	314	331	323

Intervention and Treatment

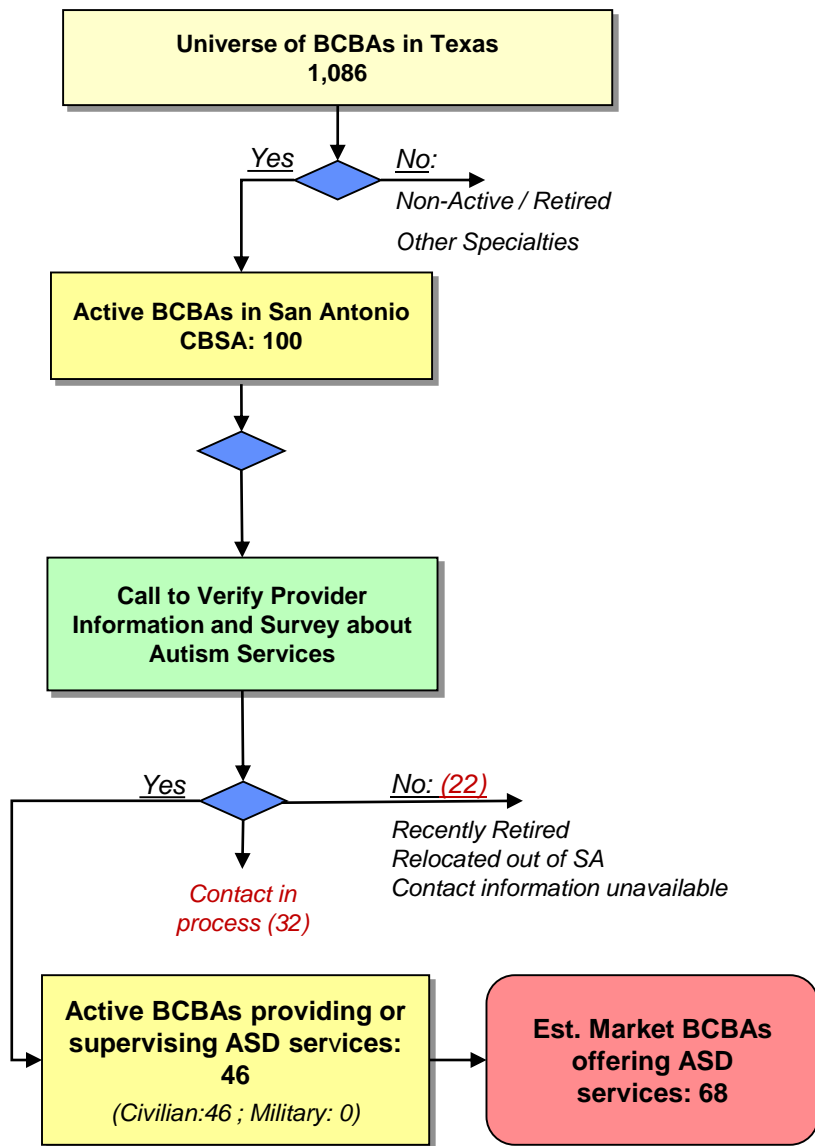# Spectrum of Care – Intervention and Treatment
Board Certified Behavioral Analysts (BCBA)

- Professionals who are certified at the BCBA level are independent practitioners who provide behavior-analytic services[1].
- Requirements:
  - A masters degree in a human service field (special education, education, psychology, counseling psychology, applied behavioral analysis etc.)
  - Significant supervised fieldwork
  - Pass the BCBA examination
- Among other resources, BCBAs provide ABA therapy…one of the core interventions for ASD among children and adolescents
- Supply information for BCBAs in the market was obtained through several sources
  - BACB provided a list of names by county
  - Researched individual names to obtain contact information
  - NOTE: The BACB was not very helpful with information about their membership but would offer an option to email BCBAs statewide to request information directly

Screening & Detection	Diagnosis	Intervention & Treatment
Parents / Caregivers	Developmental/ Behavioral Pediatricians	**Board Certified Behavioral Analysts**
General Pediatricians	Pediatric Neurologists	Child & Adolescent Psychiatrists
Teachers and School Health Professionals	Clinical Psychologists	General Psychiatrists
	Audiologists	Physical Therapists
	Speech and Language Therapists	Occupational Therapists
	Lic. Specialists in School Psychology (LSSP)	Other

Kronkosky Charitable Foundation

CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply
Board Certified Behavioral Analysts (BCBAs)

**Universe of BCBAs in Texas
1,086**

Yes   No:
Non-Active / Retired

Other Specialties

**Active BCBAs in San Antonio
CBSA: 100**

**Call to Verify Provider
Information and Survey about
Autism Services**

Yes   No: (22)

*Recently Retired
Relocated out of SA
Contact information unavailable*

*Contact in
process (32)*

**Active BCBAs providing or
supervising ASD services:
46**

(Civilian:46 ; Military: 0)

**Est. Market BCBAs
offering ASD
services: 68**

- There are large number of BCBAs statewide (1,086 active in TX)

- San Antonio CBSA   105
  - There are 100 active BCBAs in the market according to licensure
    - Not practicing / retired   22
    - *Not providing ASD services*   *0*
  - BCBAs / 100K population[1]   ~1.4
    - San Antonio CBSA trails other major markets - Houston (2.2), Dallas (2.0) or Austin (2.7)

- Autism Spectrum Disorder focused   TBD
  - Practice sites are non-specific as BCBAs often work within patients homes, in the community, or within schools
  - TRICARE is the primary (and often the only) insurance accepted for ABA services
    - Though they cover ABA, the reimbursement rates a through other insurances are so low that payment won't even cover base staffing costs
  - Waiting lists are common, primarily for after school services
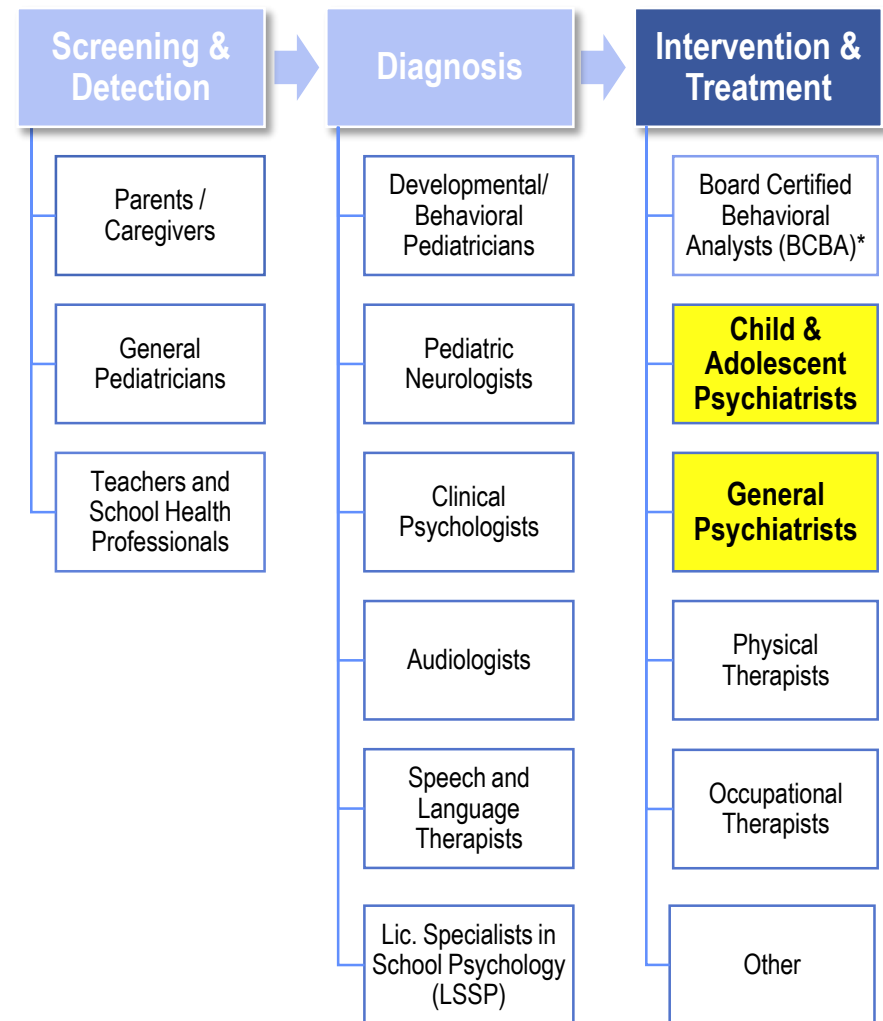
ASD Service Provider Supply
Market Board Certified Behavioral Analysts (BCBAs)

BCBA Verified?	Status	Name	Practice Name	Org. Patients/ Year	Waitlist?	Notes
Yes	Called	Corbin-Newsome, Jawanda	ABA Behavioral Services	5	No	In-home ABA and Behavior support. Takes Tricare and patients from local authority
Yes	Called	Danial, Nadia	ABA Behavioral Services	5	No	In-home ABA and Behavior support. Takes Tricare and patients from local authority
Yes	Called	Ramos, Traci	ABA Behavioral Services	5	No	In-home ABA and Behavior support. Takes Tricare and patients from local authority
Yes	Called	Glaser, Anna	ABA Center for Excellence	138+	Yes	Community-based ABA for all ages. Accepts Tricare, United, and Humana
Yes	Called	Jacobs, Dawn	ABA Center for Excellence	138+	Yes	Community-based ABA for all ages. Accepts Tricare, United, and Humana
Yes	Called	Bachmeier-Clemmer, Stefani	Advanced Behavioral Intervention	5	Yes	Community-based ABA
Yes	Called	Gonzalez, Leticia	Any Baby Can	25		Teaches parents ABA principles
Yes	Called	Jacobs, Sandra	Any Baby Can	25		Teaches parents ABA principles
Yes	Called	Pantermuehl, Rachel	Autism Treatment Center	9	Yes	
Yes	Called	Commins, Elizatbeth	Autism Treatment Center	9	Yes	
Yes	Called	Cook, Cassandra	Behavior Keys	60-70	Yes	Tricare only. She does not offer ABA: She handles speech and OT
Yes	Called	Ramirez, Roxanna	Behavior Keys	60-70	Yes	Tricare only. Clinic-based and community-based ABA
Yes	Called	Gonyer, Mallory	Behavior Keys	60-70	Yes	Tricare only. Clinic-based and community-based ABA
Yes	Called	Castaneda, Lupe	Behavior Pathways	25	Yes	In-home & community based ABA. Specializes in older children, adolescents & adults
Yes	Called	Wilburn, Sarah	Bridging Behaviors	26		In-home ABA
Yes	Called	Aguilar, Lynnette	Camino Real Community Services		Yes	Working as a supervisor / ABA manager at Camino Real CS
Yes	Called	McWhorter, Laura	CARE	3		
Yes	Called	York, Jamie	CARE	3		
Yes	Called	Derby, Peggy	Foundation School for Autism	42	Yes	Public charter school for children with severe autism
Yes	Called	Valdez, Amanda	Foundation School for Autism	42	Yes	Public charter school for children with severe autism
Yes	Called	Dirkmaat, Rebecca	Pedi Rehab & Behavioral Services	9	Yes	ABA Day program: M-F 9-3. Opening larger fac in Jan. Capacity will be ~5
Yes	Called	Mueller, Jaimi	Pedi Rehab & Behavioral Services	9	Yes	ABA Day program: M-F 9-3. Opening larger fac in Jan. Capacity will be ~5
Yes	Called	Rothe, Brittany	Pedi Rehab & Behavioral Services	9	Yes	ABA Day program: M-F 9-3. Opening larger fac in Jan. Capacity will be ~5
Yes	Called	Sciarillo, Anna	Pedi Rehab & Behavioral Services	9	Yes	ABA Day program: M-F 9-3. Opening larger fac in Jan. Capacity will be ~5
Yes	Called	Snyder, Emily	Pedi Rehab & Behavioral Services	9	Yes	ABA Day program: M-F 9-3. Opening larger fac in Jan. Capacity will be ~5
Yes	Called	Sanchez, Armandina	The Behavioral Support Center	22	Yes	In-home ABA. Tricare only
Yes	Called	Skarpetowski, Jennifer	The Behavioral Support Center	22	Yes	In-home ABA. Tricare only
Yes	Called	Andrews, Alonzo	UTSA Autism Center	28		In-clinic, research driven ABA services
Yes	Called	Mason, Lee	UTSA Autism Center	28		In-clinic, research driven ABA services
Yes	Called	Neely, Leslie	UTSA Psychology Department			Asst. Professor at UTSA and will be heading up new BCBA program.

ASD Service Provider Supply
Market Board Certified Behavioral Analysts (BCBAs)

BCBA Verified?	Status	Name	Practice Name	Org. Patients/ Year	Waitlist?	Notes
Yes	Called	Guffey, Wendy		3/day	No	Community-based ABA. Tricare only
Yes	Called	Heritch, Jennifer				Contracts with schools to provide teacher training and modeling
Yes	Called	Jarutowicz, Kimberley		~35	No	Svcs: ABA, parent & staff training, workshops, respite. No afternoon slots. Tricare & PP
Yes	Called	Moore, Anissa		50-70		Contracts with schools to provide teacher training and modeling
Yes	Called	Schexnayder, Ashley		5		In-home ABA
Yes	Left Market	Rickwartz, Stephanie				
No	Called	Hudson, Hallie	Blossom Center for Children		No	ABA Day Program
No	Called	Rohan, Kayleigh	Blossom Center for Children		No	ABA Day Program
No	Called	Vazquez, Gia	Blossom Center for Children		No	ABA Day Program
No	Called	Warren, Anne	Blossom Center for Children		No	ABA Day Program
No	Called	Baker, Jacqueline	CARD			ABA services provided at the Center
No	Called	Paul, Michelle	CARD			ABA services provided at the Center
No	Called	Quintanilla, Sarah	CARD			ABA services provided at the Center
No	Called	Sienkiewicz, Aimee	CARD			ABA services provided at the Center
No	Called	Scott, Christine	Pedi Rehab & Behavioral Services	9	Yes	ABA Day program: M-F 9-3. Opening larger fac in Jan. Capacity will be ~5
No	Called	Diaz, Crystal	Stone Oak Therapy of SA		Yes	
No	Called	Goswitz, Claudia	Stone Oak Therapy of SA		Yes	
No	Message Left	de la Cruz, Berenice	Autism Community Network			
No	Message Left	Kunze, Megan	Autism Community Network			
No	Message Left	Sanchez, Adriana	Autism Community Network			
No	Message Left	Garza, Christelle	Behavior Change Institute			
No	Message Left	Fazio, Corinne	Behavioral Innovations			
No	Message Left	Aron, Ann	Butterfly Effects			
No	Message Left	Nel, Cherie	Butterfly Effects			
No	Message Left	Vandertulip, Lee	CBA- Behavior Analysts of TX			
No	Message Left	Reynolds, Carol	Fort Sam Houston ISD			Teacher / Behavioral Analyst
No	Message Left	Calame, Taylor	Integrated Behavior Solutions Inc.			
No	Message Left	Sims, Britt	Integrated Behavior Solutions Inc.			
No	Message Left	Burnett, Tana	NISD			
No	Message Left	Gutierrez, Anel	One for Autism			

ASD Service Provider Supply
Market Board Certified Behavioral Analysts (BCBAs)

BCBA Verified?	Status	Name	Practice Name	Org. Patients/ Year	Waitlist?	Notes
No	Message Left	Ortega, Ana	Promise Center for Autism			
No	Message Left	Allen, Dehazard	South TX Behavioral Institute			
No	Message Left	Boozer, Mark	South TX Behavioral Institute			
No	Message Left	Gonzalez, Steven	South TX Behavioral Institute			
No	Message Left	Hernandez-Rice, Olivia	South TX Behavioral Institute			
No	Message Left	Lehardy, Robert	South TX Behavioral Institute			
No	Message Left	Palma, Monica	South TX Behavioral Institute			
No	Message Left	Barrera, Diana				
No	Message Left	Bench, Francisca				
No	Message Left	Boncek, Steven				
No	Message Left	Casas, Sonya				
No	Message Left	Garrett, jennifer				
No	Message Left	Happe, Shawn				
No	Message Left	Ma, Chia-hui				
No	Message Left	Nebbia, Wendy				
No	Message Left	Reed, Jenna				
No	Message Left	Reynolds, John				
No	Message Left	Schatz, Shannon				
No	Message Left	Strange, Patrice				
No	Can't contact	Curtis, Stephanie				
No	Can't contact	Davis, Consuelo				
No	Can't Contact	Dryden, Donna				
No	Can't contact	Fawcett, Annie				
No	Can't contact	Fisher, Charlotte				
No	Can't contact	Gutierrez, Melissa				
No	Can't contact	Harris, Maite				
No	Can't contact	Howell, Alexandria				
No	Can't contact	Jennings-Gilbreath, Dorraine				
No	Can't Contact	Kirchner, Meaghan				
No	Can't contact	Kunnavatana, Soraya				

ASD Service Provider Supply
Market Board Certified Behavioral Analysts (BCBAs)

BCBA Verified?	Status	Name	Practice Name	Org. Patients/ Year	Waitlist?	Notes
No	Can't contact	Lewis, Laura				
No	Can't contact	May, Megan				
No	Can't contact	Misbahuddin, Nadia				
No	Can't contact	Rodgers, Melanie				
No	Can't contact	Salinas, Lucia				
No	Can't contact	Sarli, Gary				
No	Can't contact	Stewart, Sabrina				
No	Can't contact	Velasco, Leandro				
No	Can't contact	Womack, Rebecca				
No	Can't contact	Kaplan, Melissa				

Spectrum of Care – Intervention and Treatment
Child and Adolescent and General Psychiatrists

- Child and Adolescent Psychiatrists diagnose and treat an array of mental health and behavioral health concerns.
  - Medical doctors who have completed:
    - 4 years of medical school and 3 years of residency training in medicine, neurology, and general psychiatry with adults; and
    - 2 years of specialized training in psychiatric work with children, adolescents, and families
  - Provide psychotherapy, preform psychological exams and can prescribe medication
  - Focused on disorders appearing in childhood:
    - Autism spectrum disorders
    - Attention-deficit hyperactivity disorder (ADHD)
    - Learning disabilities
    - Mental retardation
    - Mood disorders
    - Depressive and anxiety disorders
    - Drug dependency and delinquency
- Licensure data for Psychiatrists comes from the Texas Board of Medical Examiners

Screening & Detection	Diagnosis	Intervention & Treatment
Parents / Caregivers	Developmental/ Behavioral Pediatricians	Board Certified Behavioral Analysts (BCBA)*
General Pediatricians	Pediatric Neurologists	**Child & Adolescent Psychiatrists**
Teachers and School Health Professionals	Clinical Psychologists	**General Psychiatrists**
	Audiologists	Physical Therapists
	Speech and Language Therapists	Occupational Therapists
	Lic. Specialists in School Psychology (LSSP)	Other

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CAPITAL HEALTHCARE PLANNING

Child and Adolescent Psychiatrists generally provide a wide range of services. Few appear to focus on ASD.

Universe of Child & Adolescent Psychiatrists in Texas: 681

Yes / No:
Non-Market
Non-Active / Retired
Other Specialties

Child & Adolescent Psychiatrists in San Antonio CBSA: 88

Match w/ NPI/SKA data

Revised Active Market Providers: 91

Validate Active?
Yes / No: (15)
Recently Retired
Moved

Contact in process or unavailable (24)

Yes / No:(35)
Verify ASD Services Offered

Number of Child & Adolescent Psychiatrists offering ASD services: 17
(Civilian:17 ; Military: 0)

Est. Child & Adolescent Psychiatrists offering ASD services: 23

- Child & Adolescent Psychiatry has a fairly large number of providers but limited numbers dealing with ASD – 681 statewide

- San Antonio CBSA
  - There are 91 active C&AP's in the market according to licensure and NPI data
    - Not practicing / Retired   -15
    - *Not providing ASD services*   *-35*
  - C&AP's / 100K population[1]   3.2
    - San Antonio CBSA C&APs per capita compared to Houston (3.5), Dallas (2.4) or Austin (4.7)

- Autism Spectrum Disorder focused
  - The majority of the Child & Adolescent Psychiatrists working in small practices offer at least some services related to ASD, while the majority of those working in large systems do not
  - Of those offering ASD services:
    - Many provide medication management;
    - roughly half provide therapy services; and
    - 50% are taking new patients

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CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply
Total General Psychiatrists
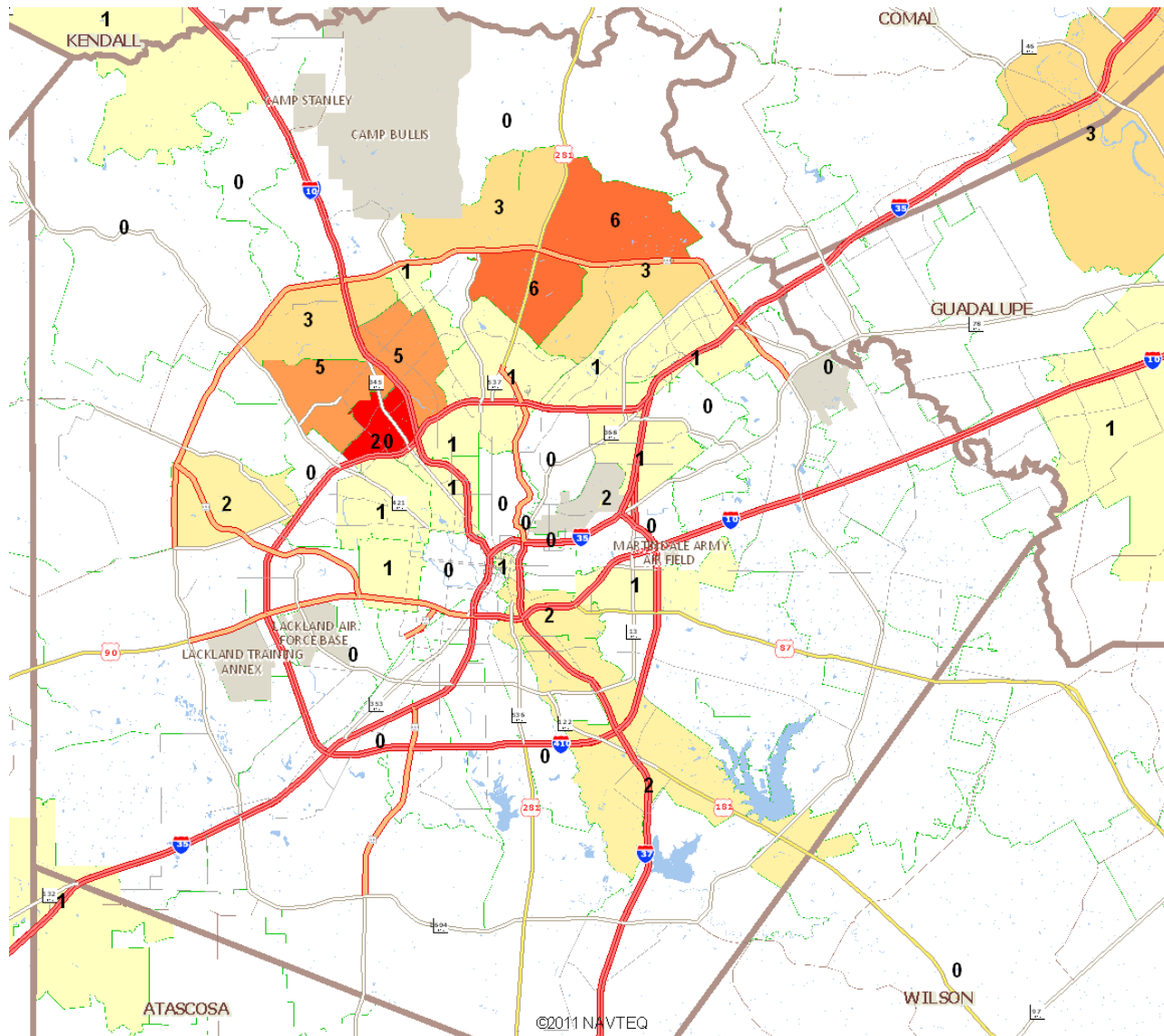
- General Psychiatrists are more widely distributed but remain predominantly focused at the Medical Center

- A disproportionate number of providers are distributed across North and Northwestern San Antonio

ASD Service Provider Supply
General Psychiatrists offering services for ASD
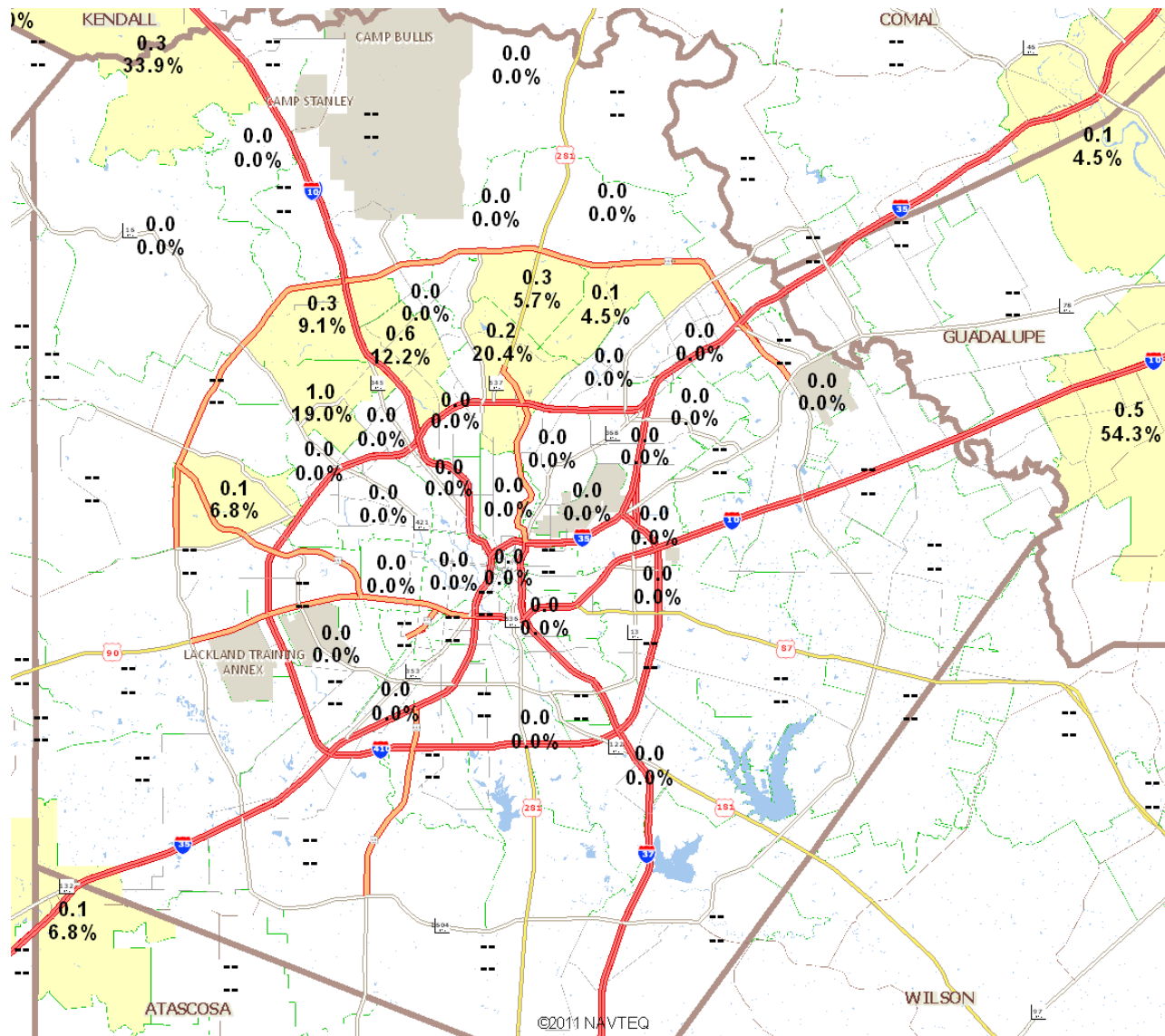
- The "FTE" involved with ASD patients has been allocated to existing providers to outline the "true" resources available

- The limited number of General Psychiatrists serving ASD patients becomes obvious

- Concentrated in North San Antonio

ASD Service Provider Supply
Market Child & Adolescent Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Burnside	John Charles	64	ADHD Clinic of SA	Yes	5%		Services: Evaluations/diagnostics
Yes	Spratley	Kris R	60	ADHD Clinic of SA	Yes	5%	Yes	Services: Evaluations/diagnostics
Yes	Batenburg	Caroline Cristine	53	Batenburg & Burns	Yes		Yes	New patients with local referal
Yes	Price	Clinton Conell	53	Bluebonnet Trails CS	Yes			ASD services at IDD centers: Assessments, therapy, training
Yes	Lucas	Leslie Ruth	56	Camino Real CS	Yes	5%	Yes	Waiting list for services
Yes	Hogan	Marguerite Inez	55	Counseling Center	Yes	10%	No	
Yes	Salinas-Garcia	Grace M	46	Family Wellness Cntr	Yes	5%		Recept: MD does see patients with ASD.
Yes	Williams	Edmund Payne	61	Genesis Psychiatric Cntr	Yes		Yes	Services: Evaluations & med. mgmt.
Yes	Hernandez	Joseph Martin	47	SA Behavioral Healthcare Hosp	Yes	15%		IP Hospital
Yes	Hinton	Mark A	50	SA Behavioral Healthcare Hosp	Yes	15%		IP Hospital
Yes	Serrano	Alberto Carlos	85	Serrnano OB-GYN	Yes	-	Yes	Provides med mgmt. Eval & counseling provided by colleague
Yes	Martin	Andrew Hayes	41	Texas Family Psychiarty	Yes			Website says med. mgmt. provided for ASD. Confirming
Yes	Cantu	Michelle Lee	37		Yes	40%	Yes	Services: Diagnosis, treatment, therapy
Yes	Demoor	Thomas Murray	56		Yes	40%		Services: Med. mgmt. & therapy
Yes	Vela	Vanessa Lynn	45		Yes	25%	Yes	Services: diagnosis and treatment
Yes	Matthews	Kenneth Lee	72		Yes	5%	Yes	Services: Treatment/therapy
Yes	Wynne	Susan Kay	56		Yes			
Yes	Brothers	Teresita M	71	Alamo MH Group	No			
Yes	Deeves	Shawna Mohney	44	Alamo MH Group	No			
Yes	Martinez Fernandez	Lady Aura Caridad	35	CentroMed	No			
Yes	Cepeda Abril	Gil Claudio	74	Clarity	No			Works at the urgent care facility
Yes	Gonzalez Vega	Lizmarie	38	Clarity	No			Mental health services only
Yes	Gotanco	Lucille Marie	47	Clarity	No			Mental health services only
Yes	Hough	Corey Michael	40	Clarity	No			Mental health services only
Yes	Michelsen	Soad Loren	49	Clarity	No			Mental health services only
Yes	Reeves	Kacy	39	Clarity	No			Mental health services only
Yes	Romo	Candace Andrea	34	Clarity	No			Mental health services only
Yes	Campos	Juan Ignacio	59	Cowan Campos & Quinn	No			Refers to Dr. Patricia Heartmans
Yes	Adams	John Michael	40	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Fernandez	Benigno J	52	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Howe	Don Duvall	71	Laurel Ridge Treatment Cntr	No			Substance abuse only

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CAPITAL
HEALTHCARE PLANNING

ASD Service Provider Supply
Market Child & Adolescent Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Kashyap	Vikram	42	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Sant'Ambrogio	Giorgio	55	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Unzueta-Hernandez	Mary Richelle	41	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Ramachandruni	Ramalakshmi Madhur	47	San Antonio VAMC	No			
Yes	Sargent	Charles Hunt	58	Stonebridge Aliance	No			Only sees children with open CPS cases
Yes	Rivera	Karla Varela	37	University Health System	No			UHS refers patients to CHOSA
Yes	Holden	Patrick	71	UT Medicine	No			Adult and Geriatric
Yes	Bailey	Brigitte Yvette	54	UT Medicine	No			
Yes	Matthews	Thomas L	45	UT Medicine	No			
Yes	Olvera	Rene Luis	52	UT Medicine	No			
Yes	Pliszka	Steven Ray	61	UT Medicine	No			
Yes	Roybal	Donna	43	UT Medicine	No			
Yes	Schillerstrom	Tracy Lynn	42	UT Medicine	No			
Yes	Talley	Brenda Jean	61	UT Medicine	No			Adult and Geriatric
Yes	Eddins-Folensbee	Florence Favre	59	UTHSCSA	No			UTHSC refers out for autism services
Yes	Rodriguez	David Anthony	40	UTHSCSA	No			UTHSC refers out for autism services
Yes	Sandoval	Jessica Flores	32	UTHSCSA	No			UTHSC refers out for autism services
Yes	Cohen	Melvin Lee	66		No			
Yes	Lawrence	Leonard E	79		No			Refers to Dr. Patricia Heartmans
Yes	Martini	Sharon Rae	47		No			
Yes	Samaniego	Hector Xavier	62		No			Refers to psychologist Charles Gutierrez
No	Dowben	Jonathan S	57	Brooke Army Med Cntr	Message left			
No	Martin	Joseph Paul	54	Brooke Army Med Cntr	Message left			
Yes	De Paz	Cesar Eduardo	40	CHCSBC	Message left			
Yes	Hardaway	Thomas Gray	63	CHCSBC	Message left			
Yes	James	Kimberly Dawn	44	Comal County MH Cntr	Message left			Recept: "I believe we do offer ASD services". Pending confirm
Yes	Skelton	Jolie Katherine	36	Comal County MH Cntr	Message left			Recept: "I believe we do offer ASD services". Pending confirm
Yes	Medrano	Martha A	62	Communicare E. Campus	Message left			
Yes	Hartt	Lyudmila Vasilievna	48	Hartt Medical Group	Message left			
Yes	Harper	John Kirk	51	SA State Supported Living Cntr	Message left			
No	Luna	Sergio H	61	SA State Supported Living Cntr	Message left			

ASD Service Provider Supply
Market Child & Adolescent Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Obregon	Maria Luisa	40	SA State Supported Living Cntr	Message left			
Yes	Dominguez	Maria Guadalupe	64	South TX Behavioral Med	Message left			Offers therapy services, but it varies by MD. Pending confirm
Yes	Garcia-Holguin	Mary Helen	53	South TX Behavioral Med	Message left			Offers therapy services, but it varies by MD. Pending confirm
Yes	Istafanous	Ihab Monir	51	STVHCS	Message left			
No	Ballard	Rachel Rushton	52		Message left			
Yes	Ferruzzi	Giancarlo Roberto	53		Message left			
No	Guchereau	Michelle Suzanne	38		Message left			
No	Hartman	Staci Diane	33		Message left			
Yes	Johnson	Patrice Jeanine	63		Message left			Practice of women only
Yes	Lopez	Lydia Ruiz	56		Message left			
Yes	Rao	Mrudula	51		Message left			
Yes	Rodriguez	Moises Gonzalo	60		Message left			
Yes	Starling	Kelley Marie	50		Message left			
No	Medina	Edgar Samuel	43		Can't Contact			
No	Martin	Thomas Allen	69	Brooke Army Med Cntr	Retired			Likely retired (Age 69)
Yes	Macedo	Carlos A	73	CHCSBC	Retired			
Yes	Hernandez	Jose Manuel	70	Communicare E. Campus	Retired			Likely retired (Age 70)
Yes	Amrung	Suchakorn Achava	71	SA State Supported Living Cntr	Retired			Likely retired (Age 71)
Yes	Beck	Patricia Anne F.	65	SA State Supported Living Cntr	Retired			Likely retired (Age 65)
Yes	Harris	William Robert	75	SA State Supported Living Cntr	Retired			Likely retired (Age 75)
Yes	Perkins	Herbert A	73	STVHCS	Retired			Likely retired (Age 73)
Yes	Pfeifer	Carl M	81	The Children's Shelter	Retired			
Yes	Mitchell	Elizabeth L	66		Retired		No	Likely retired (Age 66)
Yes	Brenz	Ronald Wesley	75		Retired			Likely retired (Age 75)
Yes	Dominguez	Emilio J	80		Retired			Likely retired (Age 80)
No	Miranda	Estela Samonte	74		Retired			Likely retired (Age 74)
Yes	Rhodes	Linda Jane	66		Retired			Likely retired (Age 66)
Yes	Rogeness	Graham Arthur	78		Retired			
Yes	Wicoff	James Sterling	69		Retired			Likely retired (Age 69)

General Psychiatry does not appear to be a specialty heavily involved in the care of autism in the San Antonio CBSA

Universe of General Psychiatrists in Texas: 1,160

Yes / No:
Non-Market
Non-Active / Retired
Other Specialties

General Psychiatrists in San Antonio CBSA: 176

Match w/ NPI/SKA data

Revised Active Market Providers: 161

Validate Active?
Yes / No: (44)
Recently Retired Moved

Contact in process or unavailable (58)

Yes / No:(54)
Verify ASD Services Offered

Number General Psychiatrists offering ASD services: 5
(Civilian:5 ; Military: 0)

Est. General Psychiatrist FTEs offering ASD services: 8

- General Psychiatry has a large number of providers but limited numbers dealing with ASD – 1,160 statewide

- San Antonio CBSA

  - There are 161 active Gen Psych in the market according to licensure and NPI data

    - Not practicing / Retired   -44
    - *Not providing ASD services*   *-54*

  - General Psych / 100K population[1]   5.0

    - The San Antonio CBSA has as many Gen Psych per capita as Houston (4.8), Dallas (4.6) or Austin (7.4)

- Autism Spectrum Disorder focused

  - The vast majority of General Psychiatrists are not providing services for those with ASD.

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CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply
Total Child & Adolescent Psychiatrists
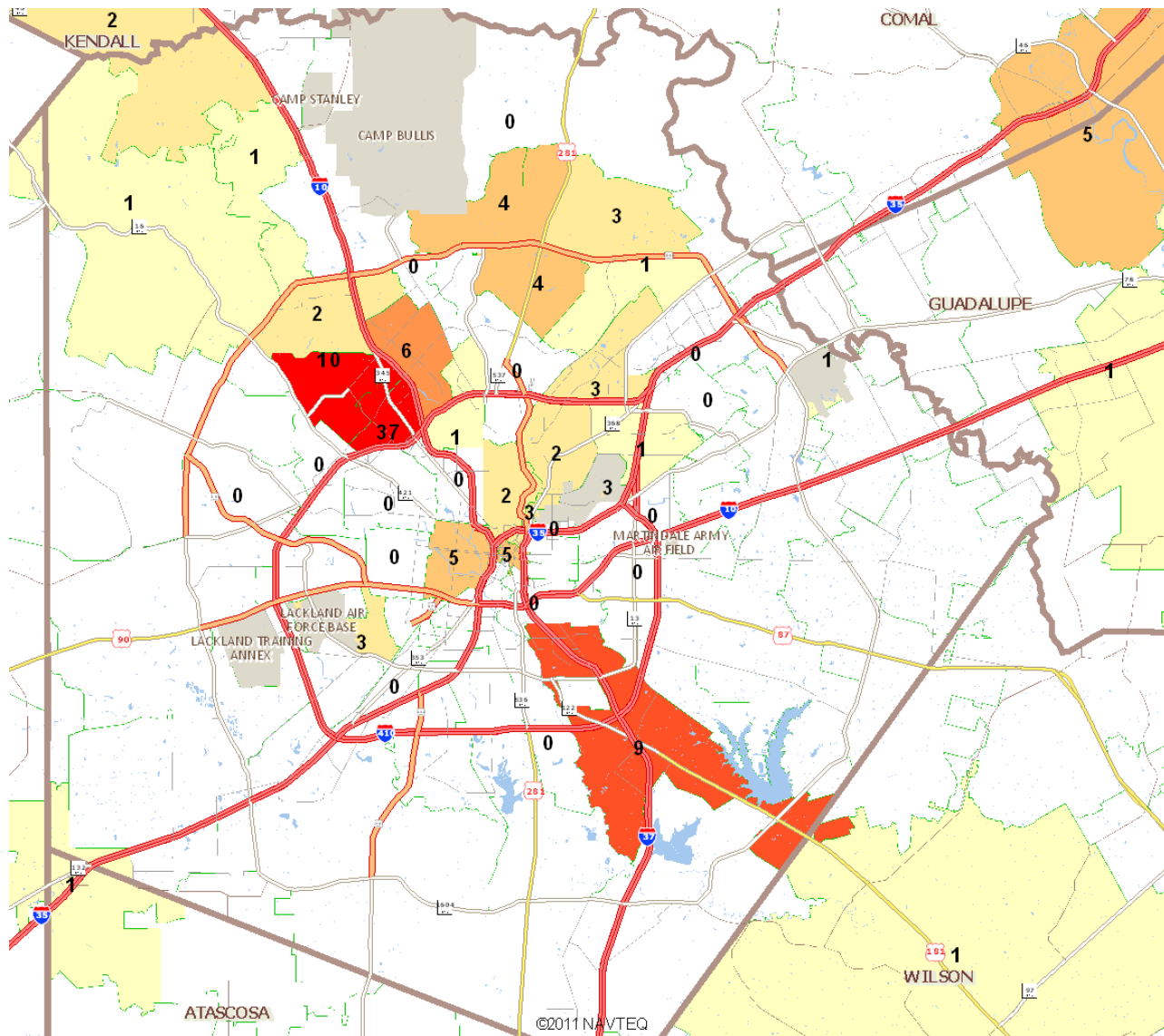
- Child & Adolescent Psychiatrists are more widely distributed but remain predominantly focused at the Medical Center

- A disproportionate number of providers are distributed across north and northwestern San Antonio

ASD Service Provider Supply
Child & Adolescent Psychiatrists offering services for ASD
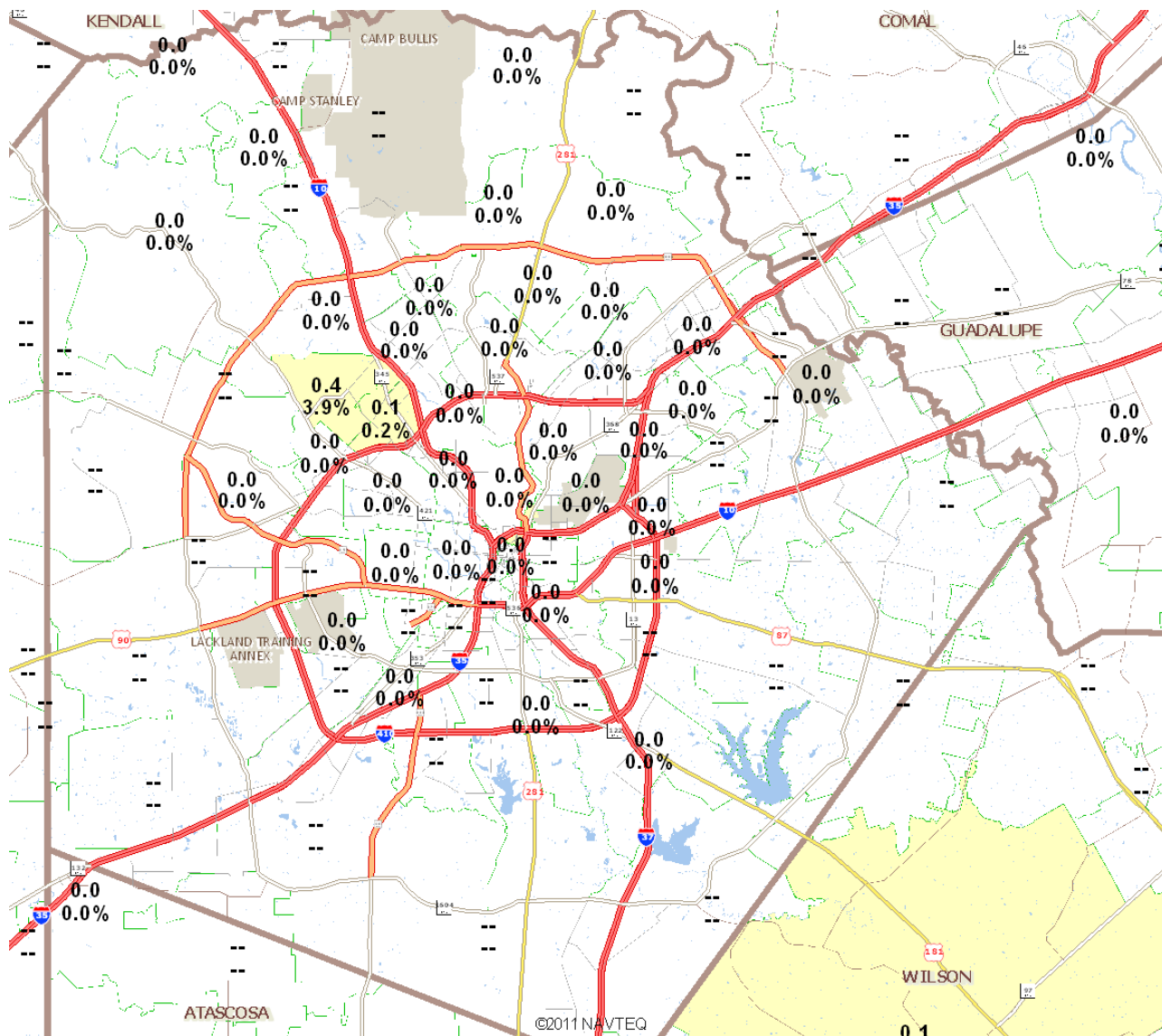
- The "FTE" involved with ASD patients has been allocated to existing providers to outline the "true" resources available

- The limited number of Child & Adolescent Psychiatrists serving ASD patients becomes obvious

- Concentrated in the medical center

ASD Service Provider Supply
Market General Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Bischoff	Timothy Alan	62	Camino Real CS	Yes	5%		
Yes	Polk	Henry Lysell	44	SA Behavioral Healthcare Hosp	Yes	15%		IP Hospital
Yes	Schuenemeyer	Aneta Alicja	49	Schuenemeyer & Simpson	Yes	10%	Yes	Services: Diagnosis. Private pay only.
Yes	Gonzalez-Sanchez	Edulfo	73		Yes	<5%	No	
Yes	Triana	Gisela Maria	72		Yes			
Yes	Cavazos	Javen Valerie	38	Alamo MH Group	No			
Yes	Chaisson-Mcrae	Clarissa	36	Alamo MH Group	No			
Yes	Mcmanus	Jimmy Wayne	69	Alamo MH Group	No			
Yes	Stenger	Earl Martin	75	Alamo MH Group	No			
Yes	Taylor	Sally Edith	58	Alamo MH Group	No			
Yes	Wallace	Christopher Lesle	54	Alamo MH Group	No			
Yes	Dickson	James	66	Counseling Center	No			
Yes	Quinn	Melissa De Jesus	37	Cowan Campos & Quinn	No			Refers to Dr. Patricia Heartmans
Yes	Baez-Cabrera	Luis Manuel	35	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Brown	Frederick W	73	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Quinones	Marlon P	39	Laurel Ridge Treatment Cntr	No			Substance abuse only
Yes	Haider	Nadeem	51	Meth Spec & Transplant Hosp	No			Refer to the Center for Health Care Services
Yes	Panagopoulos	Vasileios	34	Meth Spec & Transplant Hosp	No			Refer to the Center for Health Care Services
Yes	Arla	Straight Line	38	San Antonio VAMC	No			
Yes	Badiger	Mallikarjun Pundleek	39	San Antonio VAMC	No			
Yes	Crimmins-Tubb	Terri Kathleen	44	San Antonio VAMC	No			
Yes	Kaous	Shahid Mehmood	59	San Antonio VAMC	No			
Yes	Kasinath	Uma	63	San Antonio VAMC	No			
Yes	Simpson	Joseph Anthony	69	Schuenemeyer & Simpson	No			
Yes	Braida	Nicole Ninette	58	South Texas VA OP Clinic	No			
Yes	Brown	Thomas Markham	55	South Texas VA OP Clinic	No			
Yes	Casiano	Felix Angel	50	South Texas VA OP Clinic	No			
No	Chaudhuri	Mitali	46	South Texas VA OP Clinic	No			
Yes	Doleshal	Barbara Ann Holle	69	South Texas VA OP Clinic	No			
Yes	George	Jacob	67	South Texas VA OP Clinic	No			

ASD Service Provider Supply
Market General Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Gonzalez	Pablo Isaias	34	South Texas VA OP Clinic	No			
Yes	Lloyd	Deirdre Balliett	46	South Texas VA OP Clinic	No			
Yes	Miller	Michael S	55	South Texas VA OP Clinic	No			
Yes	Timmerman	Iva Marie	60	South Texas VA OP Clinic	No			
Yes	Womack	Rosalyn L	43	South Texas VA OP Clinic	No			
Yes	Wu	Weiran	47	South Texas VA OP Clinic	No			
No	Ybarra	Christie Ann	40	South Texas VA OP Clinic	No			
Yes	Root	Walter W	59	Stone Oak MH Group	No			
Yes	Lutz	Mary L	46	UTHSCSA	No			UTHSC refers out for autism services
Yes	Martinez	Melissa	42	UTHSCSA	No			UTHSC refers out for autism services
No	Nuwayhid	Ziyad Bahij	36	UTHSCSA	No			UTHSC refers out for autism services
Yes	Ogburn	Kelin Mezzomo	37	UTHSCSA	No			UTHSC refers out for autism services
Yes	Bowden	Charles Lee	78	UTHSCSA	No			UTHSC refers out for autism services
No	Leon	Robert Leonard	91	UTHSCSA	No			UTHSC refers out for autism services
Yes	Martinez	Cervando	75	UTHSCSA	No			UTHSC refers out for autism services
Yes	Iken Tennison	Andrea K	46	Zeitgeist Wellness Group	No			
Yes	Wise	Barbara Virginia	44	Zeitgeist Wellness Group	No			
Yes	Bailey	Julia Garza	44		No			"...Not severe cases and ASD is typically a 2nd diagnosis"
Yes	Belvis	Erlinda Edralin	74		No			
Yes	Deuter	Melissa Stennett	42		No			
Yes	Laroe	Michele Clarke	50		No			
Yes	Mitchell	Whitney Hermes	39		No			
Yes	Monterrosa	Ana Elizabeth	63		No			
Yes	Mulroy	Amy Edmondson	48		No			
Yes	Redmond	James Richard	49		No			
Yes	Sanchez	Ramon Victor	47		No			
Yes	Scott	Anette Susanne	56		No			
Yes	Ticknor	Christopher Blaine	60		No			
Yes	Zuelzer	Mary Elizabeth	56		No			Refers to Dr. Patricia Heartmans
No	Christman	Donald Sinclair	38	59th Medical Wing	Message left			

CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply
Market General Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
No	Melendez	Rene Francisco	56	59th Medical Wing	Message left			
No	Neeley	Tara Irene	44	59th Medical Wing	Message left			
No	Myers	Michael Wesley	48	Brooke Army Med Cntr	Message left			
Yes	Adepoju	Dorcas Iyabo	37	CHCSBC	Message left			
Yes	Robinson	Julie Anne	63	Comal County MH Cntr	Message left			Receptionist: "I believe we do". Left a voicemail for details.
Yes	Senyszyn	Richard William	50	New Braufels Psychiatry	Message left			
No	Balleza	Phillip Bersoza	58	SA State Supported Living Cntr	Message left			
No	Healey	Christopher Scott	32	SA State Supported Living Cntr	Message left			
No	Kousa	Sahar	47	SA State Supported Living Cntr	Message left			
Yes	Litton	Vicky L	59	SA State Supported Living Cntr	Message left			
Yes	Olsen	Jerry George	55	SA State Supported Living Cntr	Message left			
No	Ortiz	Waleska Del Carmen	40	SA State Supported Living Cntr	Message left			
Yes	Valdez	Olivia A	58	SA State Supported Living Cntr	Message left			
No	Walker	Bettina Bridgford	37	SA State Supported Living Cntr	Message left			
Yes	Fox	Fredrick Lonald	50	South TX Behavioral Med	Message left			Offers therapy services, but it varies by MD. Pending confirm.
Yes	Sherick	Kurt James	57	South TX Behavioral Med	Message left			Offers therapy services, but it varies by MD. Pending confirm.
Yes	Fisher	Keith Allan	41	Terrell & Fisher	Message left			Mental health services only
Yes	Terrell	Clark Don	59	Terrell & Fisher	Message left			Mental health services only
Yes	Jacobson	Mikael James	43		Message left			
Yes	Jones	Roberta Jeanine	61		Message left			
Yes	Nell	Marina Michaelovna	49		Message left			
No	Mcgrath	Mark Thomas	61	Camino Real CS	Can't Contact			
No	Villarreal	Marcelo	51	Camino Real CS	Can't Contact			
Yes	Dassori	Albana Maria	59		Can't Contact			
Yes	Gonzalez	David	58		Can't Contact			
No	Jeffreys	Matthew David	57		Can't Contact			
Yes	Parten	Elizabeth Helen	63		Can't Contact			
No	Gelfond	Stephen David	74	Brooke Army Med Cntr	Retired			Likely retired (Age 74)
Yes	Kleck	Henry George	85	SA State Supported Living Cntr	Retired			Likely retired (Age 85)
Yes	Mings	Thomas Erwin	68	SA State Supported Living Cntr	Retired			Likely retired (Age 68)

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CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply
Market General Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
No	Pederson	William Marion	76	SA State Supported Living Cntr	Retired			Likely retired (Age 76)
Yes	Williams	Thomas Harold	82	SA State Supported Living Cntr	Retired			Likely retired (Age 82)
Yes	Allawala	Yousuf J	62	Stone Oak MH Group	Retired			
Yes	Albanese	Helen Garshanin	75		Retired			Likely retired (Age 75)
Yes	Apostol	Alma Alingod	78		Retired			Likely retired (Age 78)
Yes	Arnold	Charles Sylvin	77		Retired			
Yes	Baillargeon	Jacques G	76		Retired			Likely retired (Age 76)
Yes	Dionne	Douglas Paul	71		Retired			Likely retired (Age 71)
Yes	Dyer	John Thomas	86		Retired			
Yes	Eclarinal	Zenaida B	68		Retired			Likely retired (Age 68)
Yes	Enriquez	John N	67		Retired			Likely retired (Age 67)
No	Fabre	Louis Fernand	75		Retired			Likely retired (Age 75)
Yes	Faulk	Dean Mckenzie	65		Retired			Likely retired (Age 65)
Yes	Forster	Estrella De Maria C De	84		Retired			Likely retired (Age 84)
Yes	Garcia	Cesar Adalberto	69		Retired			Likely retired (Age 69)
Yes	Garza-Trevino	Enrique Sergio	68		Retired			Likely retired (Age 68)
Yes	Hare	Henry Phillip	91		Retired			Likely retired (Age 91)
Yes	Hawkins	Linda Louise	70		Retired			Likely retired (Age 70)
Yes	Hetherly	Vroni	72		Retired			Likely retired (Age 72)
Yes	Hostetter	Robin E	65		Retired			Likely retired (Age 65)
Yes	Jaceldo	Teodorico Hilario	90		Retired			
Yes	Johnson	David Gary	76		Retired			Likely retired (Age 76)
Yes	Koli	Malathi Vijay	72		Retired			Likely retired (Age 72)
Yes	Lee	James Arthur	76		Retired			Likely retired (Age 76)
Yes	Lennhoff	Michael	77		Retired			Likely retired (Age 77)
Yes	Mesa	Gonzalo	77		Retired			Likely retired (Age 77)
Yes	Morgan	Douglas Preston	69		Retired			Likely retired (Age 69)
Yes	Nathan	Habib	82		Retired			Likely retired (Age 82)
Yes	Nau	Cornelius Hugo	65		Retired			Likely retired (Age 65)
Yes	Pittard	Joe Tom	71		Retired			Likely retired (Age 71)

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CAPITAL HEALTHCARE PLANNING

ASD Service Provider Supply
Market General Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
No	Poe	Richard Orla	80		Retired			Likely retired (Age 80)
Yes	Renthal	Ann Lomax	71		Retired			Likely retired (Age 71)
Yes	Richmond	Lewis Hillard	82		Retired			Likely retired (Age 82)
Yes	Rodriguez	Francisco Jose	80		Retired			
Yes	Romero	Emilio Felipe	70		Retired			Likely retired (Age 70)
Yes	Rosenthal	Saul Haskell	80		Retired			Likely retired (Age 80)
Yes	Scavone	Michael James	68		Retired			Likely retired (Age 68)
Yes	Shanfield	Stephen B	77		Retired			
Yes	Stoller	Jerry J	80		Retired			Likely retired (Age 80)
No	Vogtsberger	Kenneth Norman	66		Retired			Likely retired (Age 66)
Yes	Zuniga	Higinio	90		Retired			Likely retired (Age 90)
No	Baptiste	Nadine	41					
Yes	Benzick	Jeffrey Michael	46					
Yes	Caballero	Patricia	55					
Yes	Carrion	Patricia Gomez	60					
No	Castro	Rebecca	54					
Yes	Daniels	Gus Theodore	44					
Yes	De Llanos	Ariel	63					
Yes	Dhawan	Nikhil	35					
Yes	Engles	Lily Lore	61					
Yes	Flatley	Mary Ann	64					
Yes	Harrison	Cathleen Dye	56					
Yes	Hollingsworth	Jeffrey Jacob	42					
Yes	Jennings	Marisa Leigh	39					
No	Mcmanis	Susan Elizabeth	55					
Yes	Mercado	Michelle	44					
Yes	Moore	Jolene Christie	42					
Yes	Mueller	Eric Robert	49					
Yes	Oliva	Damaso Andres	55					
Yes	Pankowsky	Helen Orit	63					

ASD Service Provider Supply
Market General Psychiatrists

Verified?	Last Name	First Name	Age	Practice Name	See Patients with ASD?	% ASD	Taking New Patients?	Notes
Yes	Penny	Gary Lynn	52					
No	Poage	Carter David	31					
No	Rasco	Sarah Speeg	39					
Yes	Rodriguez	Rolando Xavier	60					
Yes	Seward	Jeffrey Stephen	56					
No	Smith	Eileen Ann	61					
Yes	Suryadevara	Durga	45					
Yes	Thompson	Peter Melgaard	60					
Yes	Troiano	Robert Michael	36					
No	Whidbee	Janel Fletcher	47					
No	Williams	Theresa Howell	50					

Summary of Market Supply

The Supply of most specialties is lower than it appears. For many providers, autism represents a small part of their workload.

- **Screening**
  - Pediatricians are fairly well supplied overall but are poorly distributed
  - Opportunities likely exist to improve screening volume and efficacy

- **Diagnosis**
  - Physician specialties involved in Diagnosis are in limited Supply
    - Base supply is small
    - There are essentially 2 focusing on ASD
  - Psychologists are in greater supply but the percentage that focus on (or even address) ASDs is very small
  - LSSPs are the most available but focus primarily on needs related to education

Provider Type	Total Providers in Texas	Active Providers in CBSA	Providers Serving ASD Pop	Percent Serving ASD Pop	Est. FTEs Serving ASD Pop
Diagnosis					
LSSPs	3,264	273	273	100%	273.0
Clinical Psychologists	4,668	426	133	31%	24.6
Dev./Behavioral Peds.	48	14	10	71%	4.0
Pediatric Neurologist	204	17	4	24%	1.7
Intervention and Management					
BCBAs	1,086	101	68	67%	68.0
Child Psychiatrists	681	91	23	25%	3.7
General Psychiatrists	1,160	161	8	5%	0.6
Total	**11,111**	**1,083**	**519**	**48%**	**375.6**

- **Treatment**
  - BCBAs supply is limited although virtually all are working with ASDs
    - Economic conditions in SA not attractive to BCBAs
  - Child & Adolescent and General Psychiatrists in the market generally do not work with ASD
    - Relatively small and unfunded portion of the extreme Need in the SA market for their services
  - BCBAs and LSSPs constitute the majority of the FTE autism supply

Future Supply

The supply of ASD services is vulnerable to provider retirement. The loss of a single provider can have a significant impact on the total market supply

- If not replaced, the future physician supply will decline as providers age and leave the workforce

- Assuming a retirement age of 70, the supply of medical doctors offering ASD services would decrease by 18% by 2026

  - Pediatric Neurology, one of the key specialties involved in diagnosis, would be the most significantly impacted - 62% decrease

- Given that there are few providers currently working with ASD, the retirement of any one provider substantially effects the overall supply

Specialty	FTE Supply			'16 - '26 Change	
	2016	2021	2026	Raw	Percent
Child and Adolescent Psychiatry	3.7	3.5	3.2	(0.5)	-17%
Developmental/Behavioral Pediatrics	4.0	3.9	3.9	(0.1)	-3%
Pediatric Neurology	1.7	1.6	1.1	(0.7)	-62%
General Psychiatry	0.6	0.5	0.4	(0.2)	-60%
Total	**10.1**	**9.5**	**8.5**	**(1.5)**	**-18%**

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CAPITAL HEALTHCARE PLANNING

Review of Market Teaching Programs

Teaching Programs that are developing more of the specialists needed for ASD services are limited in the market

- Within the San Antonio CBSA there are very few teaching/ training programs educating the next generation of ASD providers
  - UTHSC San Antonio is the only physician training program
    - Gen. and Child & Adolescent Psychiatry
    - No Dev./ Behavioral Pediatrics
  - Only one accredited Behavioral Analysis program
  - A number of schools have psychology programs but most are general in nature (3 offer LSSP training)
- Expanding the "market" to include Austin adds significantly to the available resources
- CHOSA hosts 30-40 4th yr. pediatric residents from Baylor College of Medicine
  - Some study neuro, but none have chosen to focus on developmental disorders
  - No DBP program

Schools Offer Programs in:	Program	City	Specialties
Psychology			
Austin Community College District	Psychology	Austin	General Psychology
Huston-Tillotson University	Psychology	Austin	General Psychology
Saint Edward's University	Psychology	Austin	General Psychology
The University of Texas at Austin	Psychology	Austin	Behavioral Neuroscience, Clinical Psychology, Developmental Psychology
Schreiner University	Psychology	Kerrville	General Psychology
Our Lady of the Lake University - Online	Psychology	San Antonio	General Psychology, School Psychology
Palo Alto College	Psychology	San Antonio	General Psychology
St Mary's University	Psychology	San Antonio	Clinical Psychology, General Psychology
St Philips College	Psychology	San Antonio	General Psychology
The University of Texas at San Antonio	Psychology	San Antonio	General Psychology, School Psychology
Trinity University	Psychology	San Antonio	General Psychology, School Psychology
University of the Incarnate Word	Psychology	San Antonio	General Psychology
Texas State University-San Marcos	Psychology	San Marcos	General Psychology, Health Psychology
Texas Lutheran University	Psychology	Seguin	General Psychology
Behavioral Analyis			
Texas State University	Behavioral Analyis	San Marcos	Board prep coursework/degrees
University of Texas at Austin	Behavioral Analyis	Austin	Board prep coursework/degrees
University of Texas at San Antonio	Behavioral Analyis	San Antonio	Board prep coursework/degrees
Psychiatry			
University of Texas at Austin	Psychiatry	Austin	Residency Programs
University of Texas Health Science Center	Psychiatry	San Antonio	Residency Programs
Pediatric Neurology			
University of Texas Health Science Center	Pediatric Neurology	San Antonio	Residency Programs
University of Texas at Austin	Pediatric Neurology	Austin	Residency Programs
Developmental Behavioral Pediatrics			
Child & Adolescent Psychiatry			
University of Texas Health Science Center	Child & Adolescent Psych	San Antonio	Residency Programs
University of Texas at Austin	Child & Adolescent Psych	Austin	Residency Programs

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CAPITAL HEALTHCARE PLANNING

Strategic Interviews – Teaching Programs
University of Texas Health Science Center – San Antonio

Are Pediatric Neurology students introduced to careers in ASD during their program?

- Students learn about developmental disorders such as ASD both in the classroom and in their clinical rotational program

  - "One class is primarily focused on developmental disabilities"

  - "All residents must spend one day out of the month at developmental disability community service center such as Any Baby Can or a respite center"

  - "Another day in their rotation must be spent observing autism diagnosis at organizations such as Behavior Keys or Stone Oak"

  - "We have a minimum of one resident per month at the military's autism clinic at SAMCC"

Do a significant number of graduates decide to pursue careers working with ASD?

- Most residents choose not to focus on ASD. In most cases, potential compensation is a significant deterrent

  - "Students just aren't interested in it... there is no money there"

  - "I can only think of two graduates within the last 15 years that have gone on to work with autism. One, Dr. Svoboda, now heads up the Autism Clinic at CHOSA and the other went on to practice in Austin"

Strategic Interviews – Teaching Programs
University of Texas – San Antonio

How is the BCBA certification program structured?

- Currently the BCBA program is a certificate program that can be added on to any psychology or education degree

  - "Requires 15 additional credit hours"

  - "Typically psychology students"

- UTSA is planning to further develop this into a larger, stand-alone a masters program

  - "Students will be able to earn required certification practicum hours while in school. This way there will be a significantly shorter gap between graduation and certification"

  - "Currently we are supplying roughly 4 BCBAs per year. With these changes we should be able to bring this up to 12"

Do graduates typically stay in the San Antonio market?

- Many students leave the market and purse careers in Dallas, Austin, Houston, or others.

  - "That's where the paid internships are. Students develop relationships with these organizations and then join them full-time after graduation"

  - "We are working with organizations in town to create more competitive opportunities in San Antonio"

Review of Military ASD Resources

Military personnel represent a large portion of San Antonio's population and utilize services related to ASD both externally and internal to existing bases

- There appear to be a number of programs for military personnel dealing with ASD
  - The **Exceptional Family Member Program** (EFMP) is designed to provide support to military family members with special needs
    - Several providers indicated that the Exceptional Family Member Program does not refers children with ASD to the military Dept of Pediatrics
  - The **Interdisciplinary Autism Team** provides comprehensive evaluation services for Autism, Asperger's and PDD
    - Located in the SAMMC Pediatric Subspecialties department
    - ~2 evaluations per week
  - The TRICARE **Autism Demonstration Project** helps provide Educational Interventions for Autism Spectrum Disorders (EIA) for children diagnosed with ASD
- Dr. Stephen Greefkens, a key member of the autism diagnosis team, provided information about the military's approach to dealing with autism. Additional interviews are pending due to staffing changes within the pediatrics department

Installation	Population
Fort Sam Houston:	
Total Force Active Duty and DOD Civ:	36,976
Family Members:	48,415
Lackland AFB:	
Total Force Active Duty and DOD Civ:	34,833
Family Members:	11,744
Randolph AFB:	
Total Force Active Duty and DOD Civ:	10,201
Family Members:	5,291
Total	**147,460**

Strategic Interviews - Military
How does the military provide for individuals dealing with ASD?

- **ASD is a small proportion of the services provided by the behavioral health team**

- **All San Antonio area military personnel and dependents are provided for through a central Autism Clinic**
  - One day per week service – occasionally increased to meet need
  - Multidisciplinary care team
    - Developmental Behavioral Pediatrics (4)
    - Child Psychiatry
    - Social Worker
    - Speech Therapist
    - Others at need
  - Language testing, cognitive screening, measures of adaptive behavior, autism diagnostic schedule
  - Refer out for ABA services
  - Limited child psych service – generally refer out due to low volume

- **As the "spectrum" has become broader the number of patients has increased**
  - Waiting list of 3-4 months for diagnosis
  - Prioritize younger or at-risk children

- **Military programs try to be compatible with schools to leverage screening**
  - "…schools are getting pretty good"
  - "…better to capture kids in a natural environment…reveals more"

Summary of Market Supply

- The quality of ASD resources in the San Antonio CBSA is generally perceived as high but limited creating access barriers

  - Destinations of care including CHOSA, The Autism Treatment Center and The Autism Community Network all keep consistent waiting lists

  - Schools praise special education teacher passion and dedication but note significant recruiting difficulties

  - A high-quality comprehensive autism diagnostic evaluation team at SAMMC… accessible only to military personnel and their dependents

- This supply of providers with autism related specialties decreases exponentially when they are asked if they do provide ASD services and (even more significantly) how much

  - Only four focus fully on autism (1 DBP, 1 pediatric neurologist, 2 psychologists)

  - Only 3.5% of market doctors in ASD related specialties actually work with ASD patients

  - Although LSSPs and BCBAs far outnumber physician providers, they are also undersupplied

- Provider teaching programs do exist in the market but are not sufficient to meet market demand

  - Programs are generally small in nature

  - Many students choose to specialize in higher paying subspecialties in lieu of dev. disabilities

  - Schools note many students leaving the San Antonio after graduating

Review of Market Demand

ASD Service Provider Demand
Process

- Determining the Demand for providers in the market will be a process of building upon data and assumptions as limited clear information exists

- Demographic projections are straightforward and have been pulled from local and national sources

- The Prevalence Rate for ASD is likely one of the most controversial factors to be applied

  - No clear correct answer in empirical data

  - Highly variable

  - Changing significantly over the past

  - Studies are limited in scope generally focusing on pediatric

- The application of the Prevalence Rate to San Antonio CBSA population will provide estimates of the total number of individuals living with ASD

- Converting patient volumes into estimates of Provider Demand will be subjective and based on high level assumptions of provider productivity

  - No specific standards exist for this particular application

  - Based on subjective input of providers operating in the market

**Population
San Antonio CBSA
By Age Cohorts**

⬇

**Prevalence Rate for ASD
Detailed by Age, Sex**

⬇

**Individuals in Market living
with ASD**

⬇

**Provider Productivity
By Specialty and ASD
Services Offered**

⬇

**Estimated Market Demand
for Providers
Offering ASD Services**

Demographic Analysis

Demographics - 2016 Population and Growth
The service area will grow significantly over the next 5 years (> TX and US)

Demographics 2016 - 2021	Bexar County	Atascosa County	Bandera County	Comal County	Guadalupe County	Kendall County	Medina County	Wilson County	Texas	National
	79%	2%	1%	6%	6%	2%	2%	2%		
Total Population										
2016	1,892,863	50,844	20,557	150,780	131,613	42,273	44,359	52,881	27,611,474	322,431,073
2021	2,041,953	54,567	21,398	167,111	144,210	46,861	46,547	57,289	29,594,025	334,341,978
% Change	7.9%	7.3%	4.1%	10.8%	9.6%	10.9%	4.9%	8.3%	7.2%	3.7%
> Pediatrics (0-17)										
2016	493,182	13,975	3,491	35,167	32,791	9,385	10,526	12,505	7,247,601	74,055,720
2021	517,245	14,463	3,422	36,960	33,604	9,597	10,316	12,441	7,532,231	74,736,465
% Change	4.9%	3.5%	-2.0%	5.1%	2.5%	2.3%	-2.0%	-0.5%	3.9%	0.9%
> Young Adults (18-44)										
2016	736,080	17,207	4,911	47,347	46,154	12,187	14,863	16,793	10,396,772	115,494,756
2021	775,883	18,722	5,217	52,588	50,157	13,980	16,073	18,564	10,879,537	117,531,304
% Change	5.4%	8.8%	6.2%	11.1%	8.7%	14.7%	8.1%	10.5%	4.6%	1.8%
> Middle Age (45-64)										
2016	440,456	12,261	6,990	42,371	34,539	12,313	11,722	15,308	6,644,162	84,259,280
2021	475,165	12,617	6,789	45,066	37,942	12,825	11,554	15,705	7,089,695	84,895,866
% Change	7.9%	2.9%	-2.9%	6.4%	9.9%	4.2%	-1.4%	2.6%	6.7%	0.8%
> Seniors (65+)										
2016	223,145	7,401	5,165	25,895	18,129	8,388	7,248	8,275	3,322,939	48,621,317
2021	273,660	8,765	5,970	32,497	22,507	10,459	8,604	10,579	4,092,562	57,178,343
% Change	22.6%	18.4%	15.6%	25.5%	24.1%	24.7%	18.7%	27.8%	23.2%	17.6%
Median Household Income										
2016	$55,507	$55,939	$54,216	$73,180	$64,420	$74,135	$59,807	$71,317	$59,059	$59,502
2021	$59,404	$62,564	$60,118	$81,514	$68,120	$77,595	$66,599	$80,229	$64,754	$64,125
% Change	7.0%	11.8%	10.9%	11.4%	5.7%	4.7%	11.4%	12.5%	9.6%	7.8%
Median Age										
2016	34.3	35.5	51.3	41.7	37.7	44.0	38.3	40.4	35.2	38.6
2021	35.6	35.7	53.5	42.7	38.4	44.6	38.5	41.2	36.2	39.6
% Change	3.6%	0.4%	4.3%	2.6%	2.0%	1.4%	0.4%	1.8%	2.8%	2.5%

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Demographics - 2016 Population and Growth
The majority of the population is north of I-10

Source: Claritas National Planning Data Center, 2014 Base

Demographics - 2016 Population and Growth
The majority of the population is north of I-10

Source: Claritas National Planning Data Center, 2014 Base

Demographics - 2016 Population and Growth

Strong growth is forecast across the region particularly in the Northwest

Source: Claritas National Planning Data Center, 2014 Base

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CAPITAL HEALTHCARE PLANNING

Demographics - 2016 Population and Growth
Strong growth is forecast across the region particularly in the Northwest

Source: Claritas National Planning Data Center, 2014 Base
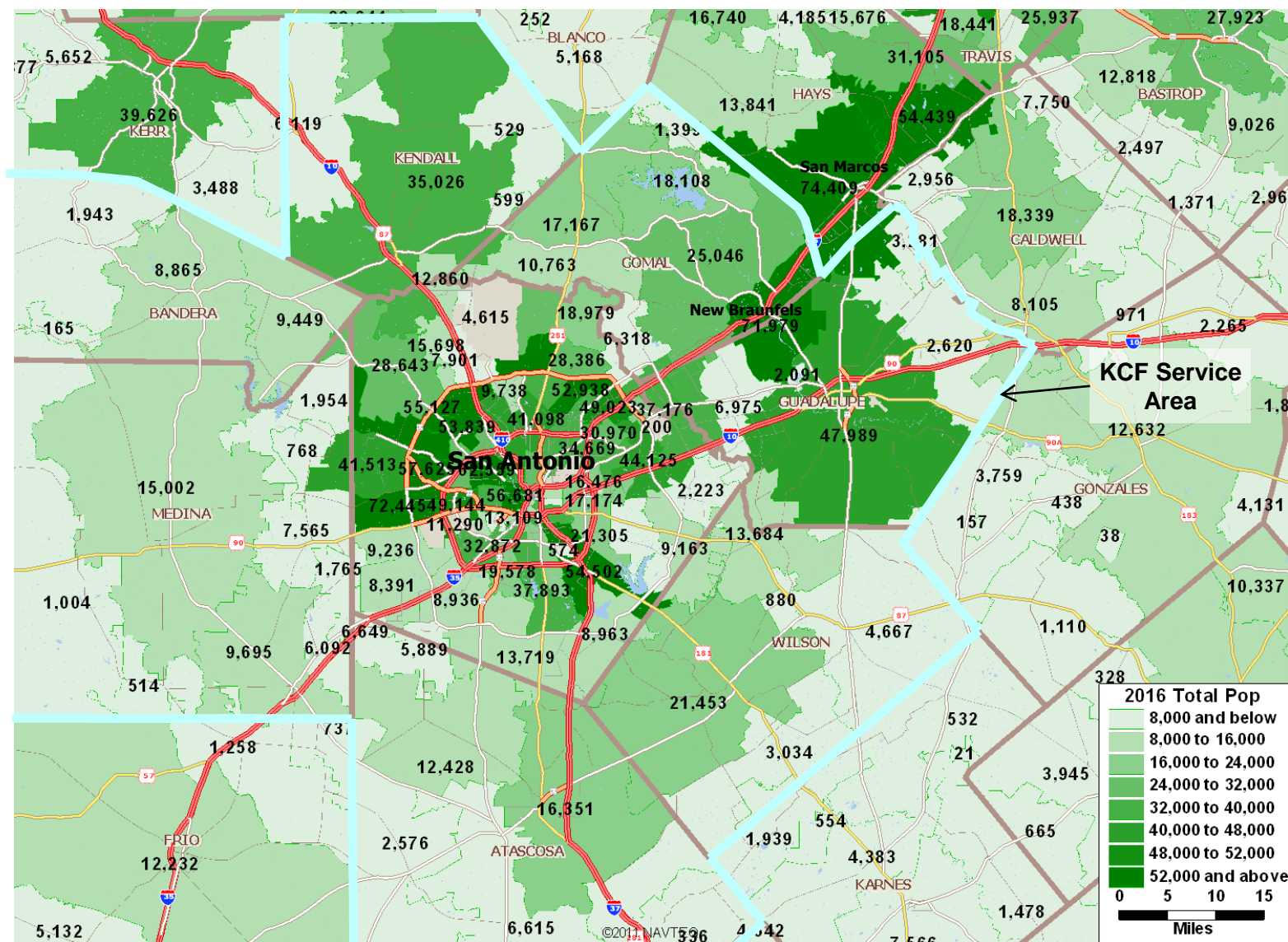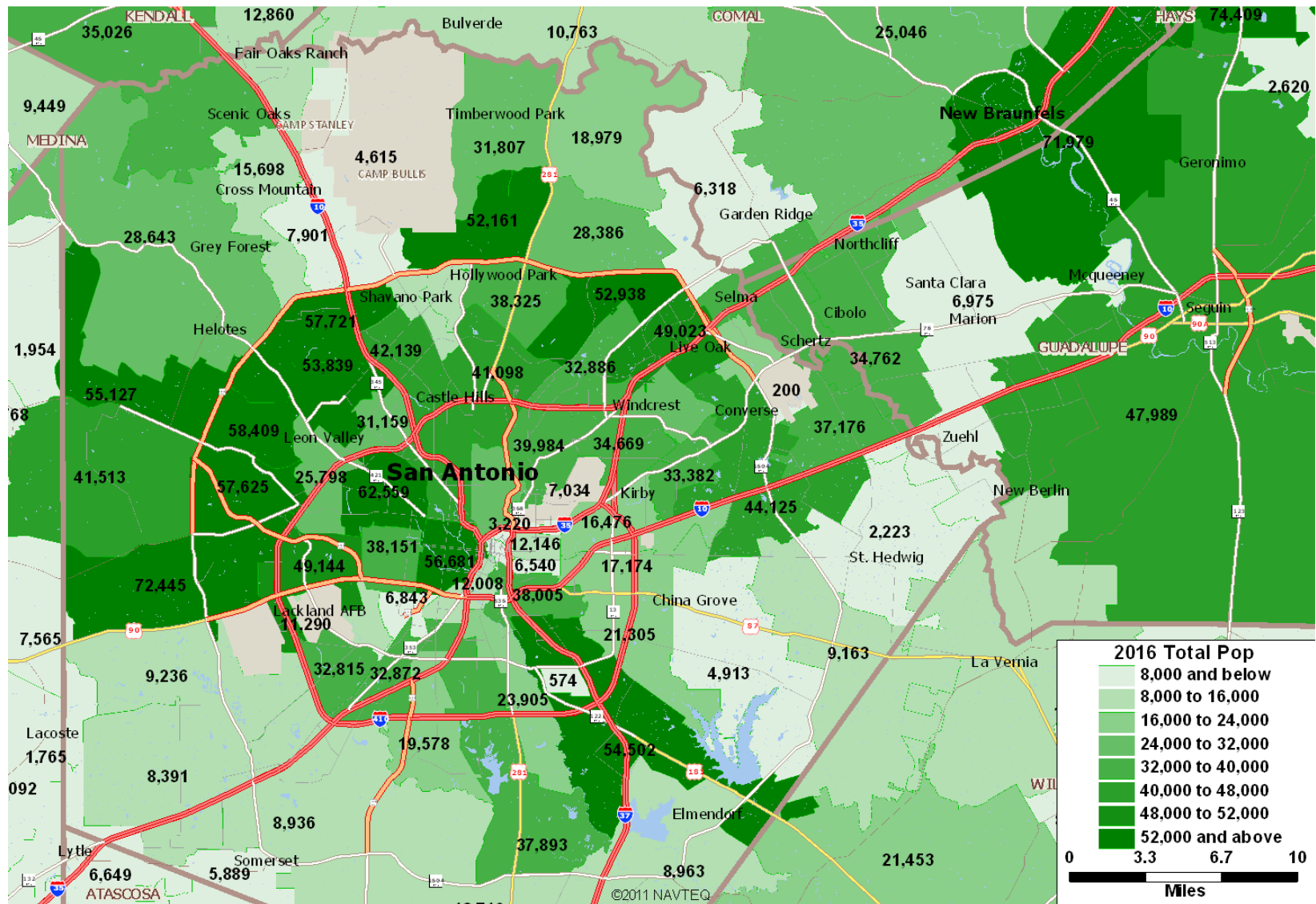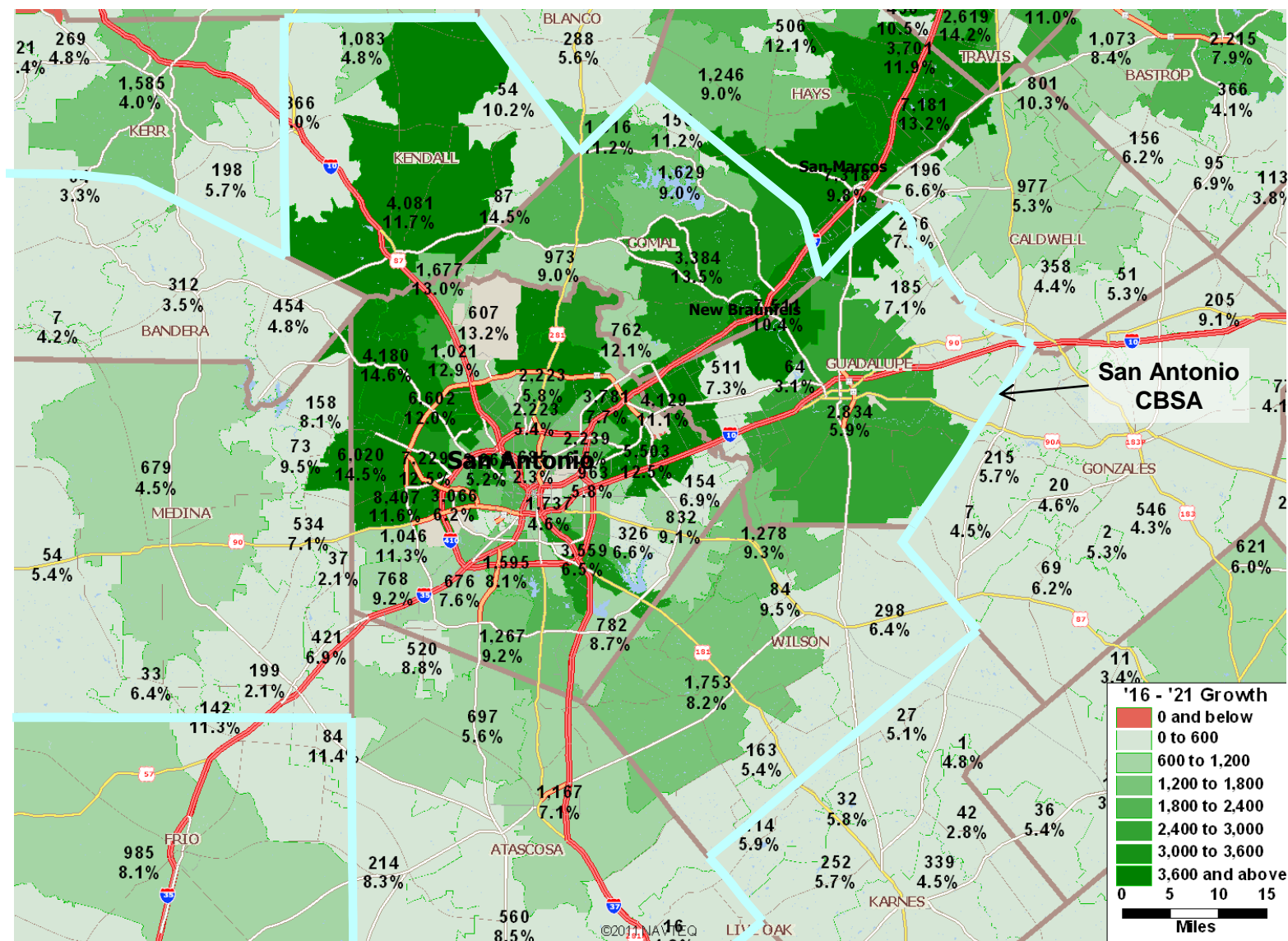
Demographics - Public School Enrollment
Enrollment continues to grow with population including Special Education

- In the San Antonio CBSA, special education enrollment and total enrollment are increasing at virtually the same rate

- However, at a county level, these growth rates show more variation

  - Guadalupe, Wilson and Bandera counties have all seen a decease in the special education enrollment despite total enrollment growth

  - Significantly higher special education growth in Comal county (17.1%)

- Total school enrollment has increased in nearly all counties in the CBSA since 2012

  - 6% decrease in Bandera county

County	Special Education Enrollment			Total Enrollment		
	12 - 13 School Yr	14 - 15 School Yr	Percent Growth	12 - 13 School Yr	14 - 15 School Yr	Percent Growth
Bexar	33,865	34,790	2.7%	340,030	350,256	3.0%
Comal	2,416	2,828	17.1%	26,934	29,280	8.7%
Guadalupe	2,177	2,148	-1.3%	24,052	25,259	5.0%
Medina	880	929	5.6%	9,308	9,789	5.2%
Atascota	659	702	6.5%	8,984	9,190	2.3%
Wilson	945	912	-3.5%	8,535	8,800	3.1%
Kendall	660	708	7.3%	8,279	8,720	5.3%
Bandera	282	272	-3.5%	2,713	2,549	-6.0%
CBSA Total	**41,884**	**43,289**	**3.4%**	**428,835**	**443,843**	**3.5%**

Demographics - Public School Enrollment

The population of children with ASD varies…not consistent with enrollment

- In Bexar County, nearly 4,000 students receive special education support for autism

- Northside ISD is the largest district both by size and enrollment with 103,606 students

  - Contains over 1/3 of the total children receiving special education support

- Several smaller districts such as Alamo Heights, South San Antonio ISD and Harlandale ISD support the densely populated downtown area

Boerne 7,493 92

Comal 20,327 196

1,293 12

14,638 187

NORTHSIDE ISD 103,606 1,269

North East 67,971 787

Randolph Field

Judson 23,340 240

Schertz-Cibolo Universal City

Alamo Heights 4,763; 84

Fort Sam Houston 1,514; 28

Edgewood 11,735 92

San Antonio 53,750 350

Lackland 884; 22

Medina Valley 4,218 19

South San Antonio 9,960 60

Harlandale 15,289 119

East Central 9,836 111

Southwest 13,524 98

Somerset 3,964 18

Southside 5,335 13

- **2014 – 2015 District Enrollment**

- **Children with educational diagnosis of ASD**

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CAPITAL HEALTHCARE PLANNING

Demographics - Percentage of Families Below the Federal Poverty Line
Central, East and South Bexar as well as Medina County have significant poverty

% Below FPL
- 4.0% and below
- 4.0% to 8.0%
- 8.0% to 12.0%
- 12.0% to 16.0%
- 16.0% to 20.0%
- 20.0% to 24.0%
- 24.0% to 28.0%
- 28.0% and above

San Antonio CBSA

Kronkosky Charitable Foundation

CAPITAL HEALTHCARE PLANNING

Demographics - Percentage of Families Below the Federal Poverty Line
Central, East and South Bexar as well as Medina County have significant poverty

Source: Claritas National Planning Data Center, 2014 Base

Demographics – Medicaid Enrollment
Despite Texas not seeking expansion Medicaid enrollment is up across the market

- The number of insured people in Texas has increased despite the state's choice not to expand Medicaid

- In just 5 years, the number of Medicaid enrollees in the CBSA has increased by 28%
  - Over 51,000 new beneficiaries

- The increase in the number of children covered through CHIP was even more dramatic
  - Growth of more than 67%
  - ~19,500 additional children covered
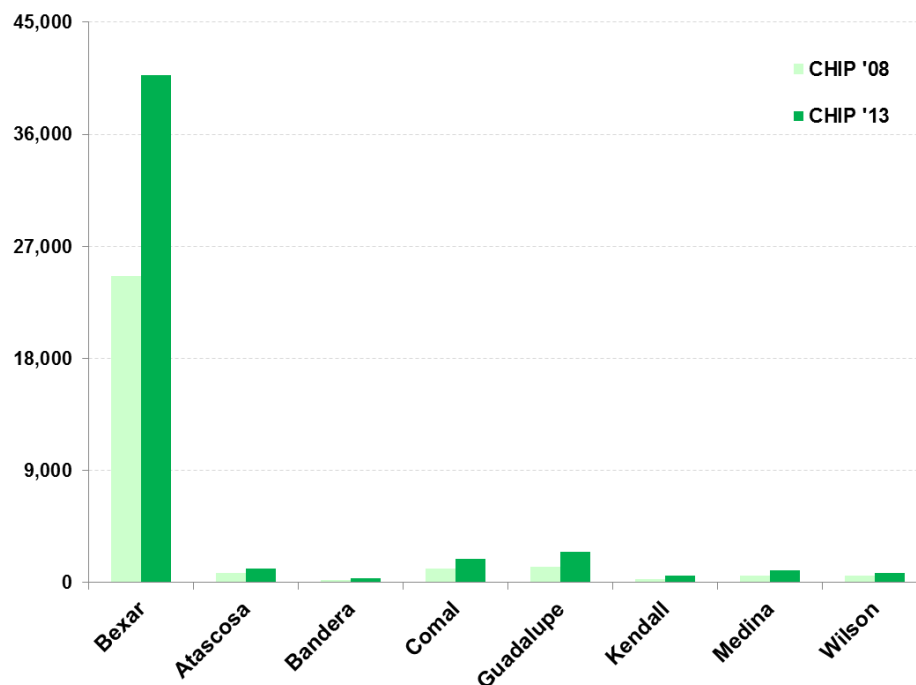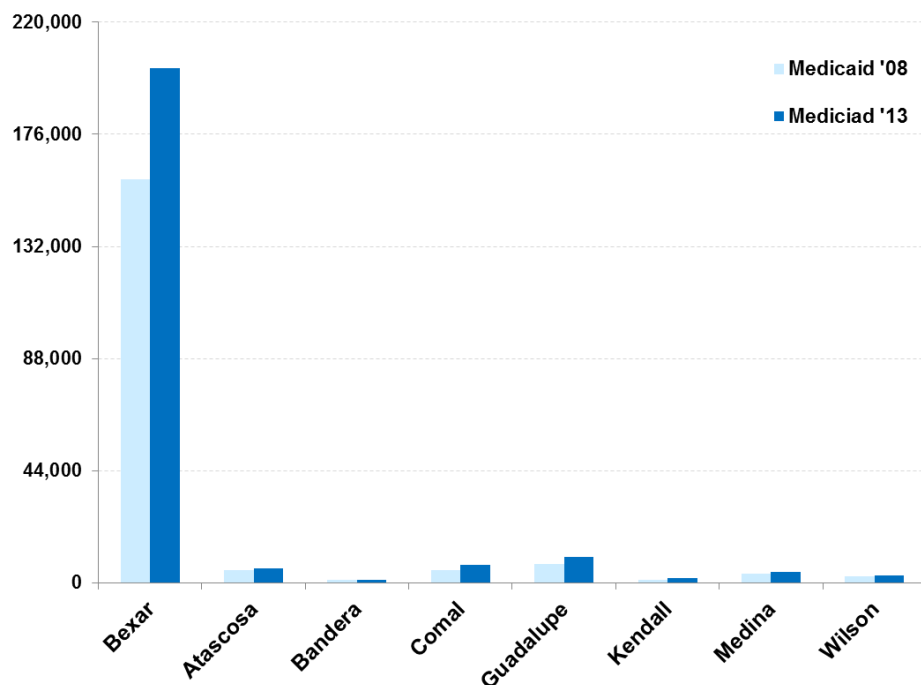
Demographics – Uninsured
Uninsured %'s have fallen as those in Medicaid and the Exchanges have grown

- In 2013 ~11.3 million Texans were uninsured (24.8%).

  - Improvement from the 25.7% which was seen in 2008

- Nearly all counties in the San Antonio CBSA has lower insurance rates than Texas overall

  - Bandera County is the only exception (0.3% higher than Texas average)
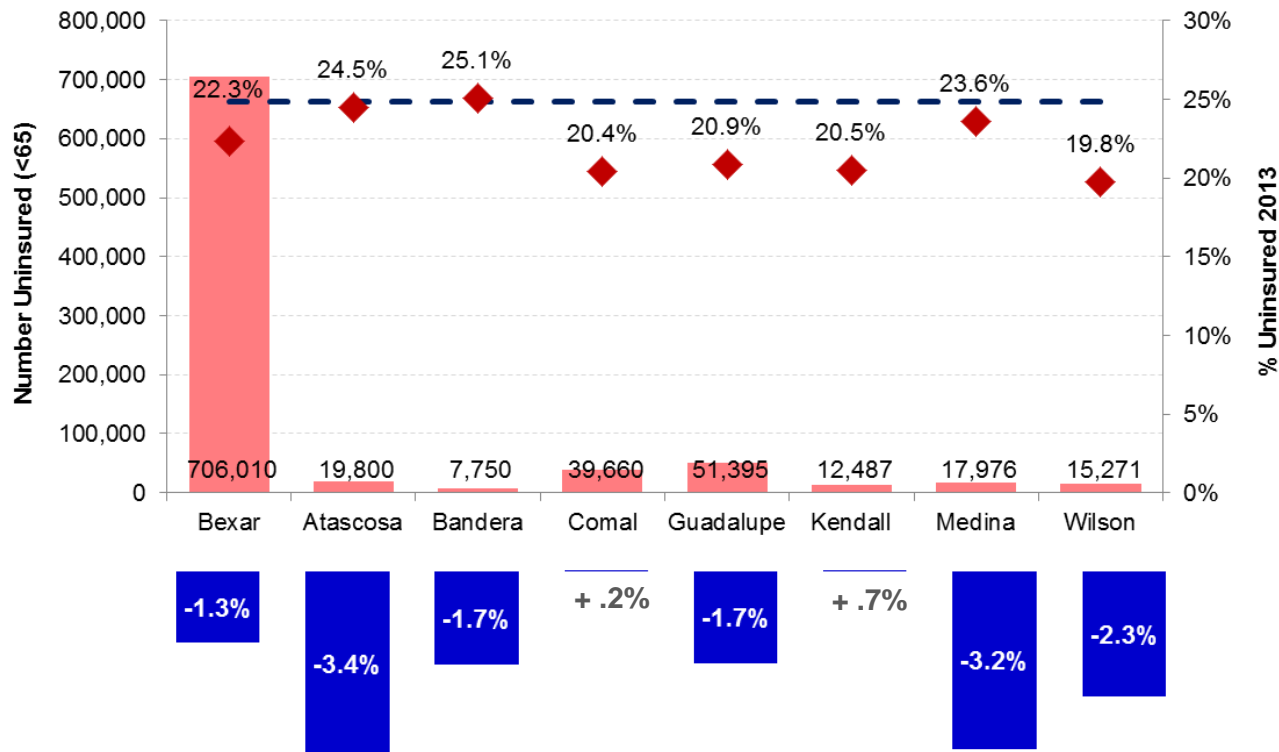
Autism Prevalence Assessment

ASD Service Provider Demand
Process

- Determining the Demand for providers in the market will be a process of building upon data and assumptions as limited clear information exists

- Demographic projections are straightforward and have been pulled from local and national sources

- The Prevalence Rate for ASD is likely one of the most controversial factors to be applied

  – No clear correct answer in empirical data

  – Highly variable

  – Changing significantly over the past

  – Studies are limited in scope generally focusing on pediatric

- The application of the Prevalence Rate to San Antonio CBSA population will provide estimates of the total number of individuals living with ASD

- Converting patient volumes into estimates of Provider Demand will be subjective and based on high level assumptions of provider productivity

  – No specific standards exist for this particular application

  – Based on subjective input of providers operating in the market

Population San Antonio CBSA By Age Cohorts

↓

Prevalence Rate for ASD Detailed by Age, Sex

↓

Individuals in Market living with ASD

↓

Provider Productivity By Specialty and ASD Services Offered

↓

Estimated Market Demand for Providers Offering ASD Services

The prevalence rate for ASD has been a moving target for many years. We have blended empirical analysis and market specific data attempting to derive applicable San Antonio rates

- Prevalence: The degree to which something is prevalent; *especially* : the percentage of a population that is affected with a particular disease at a given time

- A number of studies exploring the prevalence of autism have been conducted over time. These studies alone may not be adequate for estimating the demand for ASD

  - Typically reported at a high level. For example, rates for males vs. females may be reported, but the influence of geography or income is much less likely to be explored

  - Often only a specific age / age range is included (usually pediatric). The changing needs of a person with ASD as they age is important in calculating the demand for services

- We have attempted to supplement the analysis using San Antonio specific data from multiple sources (commercial payors, Medicaid, Medicare, Tri-Care) to come to a reasonable prevalence rate for the San Antonio CBSA
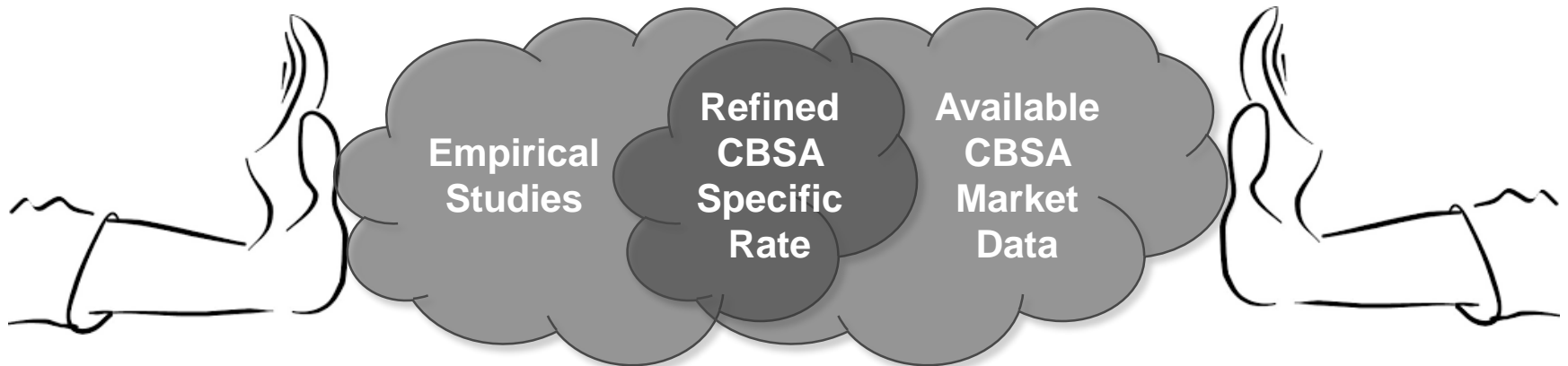
Empirical Studies **Refined CBSA Specific Rate** **Available CBSA Market Data**

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CAPITAL HEALTHCARE PLANNING

Sixty-One academic studies that discuss the prevalence of autism of were reviewed in order to understand how diagnosis has changed over of time.

- Each of the sixty-one studies that were reviewed were unique. Consequently, the results of these studies can not be taken to be 100% comparable

- Studies varied on factors that may influence or impact the data such as:
  - Country in which the study was conducted
  - Sample Size
    - Significant range between the study with the largest sample size (4,600,000) to the sample with the smallest (826)
  - Time period studied
    - Could be impacted by the level of knowledge about ASD or stigmas associated with the disorder in earlier time periods
  - Criteria used to define autism
    - DSM-V, ICD-9, etc.
  - Methodology and approach to identifying individuals with ASD
    - Parent survey, medical record review, questionnaire, etc.

20 Different Countries

26% from the United States

45 Different Age Cohorts Observed

67% Pedi-only

10 Different Diagnostic Criteria Used

Most common: DSM-IV and ICD-10

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CAPITAL HEALTHCARE PLANNING

Sixty-One academic studies that discuss the prevalence of autism of were reviewed in order to understand how diagnosis has changed over of time.

Format - Year Published: Author

- 1966 Lotter
- 1970 Brask
- 1970 Treffert
- 1979 Wing & Gould
- 1982 Hoshino et al.
- 1983 Ishii & Takahashi
- 1983 Bohman et al.
- 1984 McCarthy et al.
- 1984 Gillberg
- 1986 Steinhausen et al.
- 1986 Staffenberg, Gillberg
- 1987 Matsuishi et al.
- 1987 Burd et al.
- 1988 Bryson et al.
- 1988 Tanoue et al.
- 1989 Ciadella & Mamelle
- 1989 Sugiyama & Abe
- 1989 Ritvo et al.
- 1991 Gillberg et al.
- 1992 Fombonne & Mazaubrun
- 1996 Honda et al.

- 1997 Fombonne et al.
- 1997 Arivdsson et al.
- 1997 Webb et al.
- 1998 Sponheim & Skjeldae
- 1998 Kadesjo et al.
- 2000 Baird et al.
- 2000 Powell et al.
- 2000 Kielinen et al.
- 2000 Magnusson & Saemundsen
- 2001 Chakrabarti, Fombonne
- 2001 Fombonne et al.
- 2001 Bertrand et al.
- 2001 Croen et al.
- 2003 Yeargin-Allsopp et al.
- 2003 Gurney et al.
- 2003 Lingam et al.
- 2004 Icasiano et al.
- 2004 Lauritsen et al.
- 2006 Fomonne et al.
- 2006 Baird et al.
- 2007 CDC ADDM Network
- 2007 CDC ADDM Network

- 2007 Oullette-Kuntzet al.
- 2008 Wong et al.
- 2008 Williams et al.
- 2008 Montiel- Nava et al.
- 2009 Baron- Cohen et al.
- 2009 CDC ADDM Network
- 2009 CDC ADDM Network
- 2010 Al-Farsi et al.
- 2011 Parner et al.
- 2011 Parner et al.
- 2011 Chien et al.
- 2011 Windham et al.
- 2011 Kim et al.
- 2012 Zimmerman et al.
- 2012 Kocovska et al.
- 2012 CDC ADDM Network
- 2014 CDC ADDM Network
- 2015 NCHS - National Health Interview Survey

Over time the results of studies have shown the prevalence of ASD increasing. A number of factors, most of which are non clinical, have influenced the change.
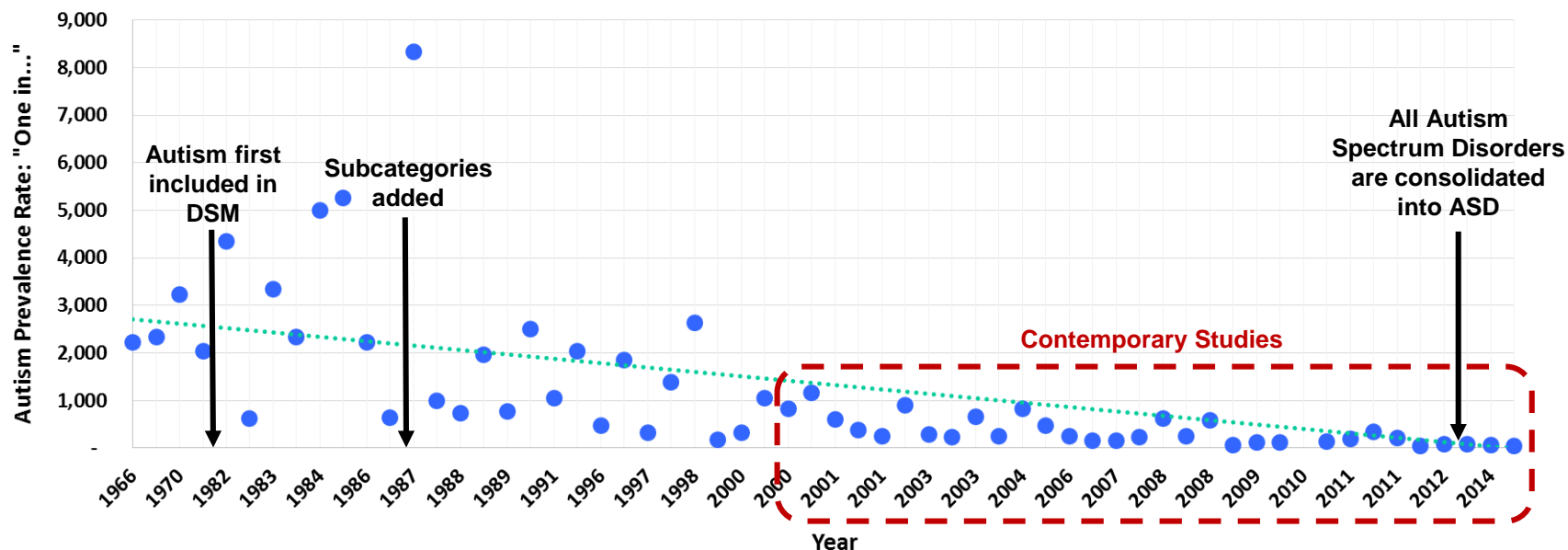
- Since the 1960's, many studies have been conducted to assess the prevalence of autism

- The definition of autism according to the Diagnostic and Statistical Manual of Mental Disorders (DSM) has changed over time:

  - 1980 – Autism was first listed as "infantile autism"

  - 1987 – Term "Infantile autism" is replaced with "autism disorder. The new entry is more expansive and contains a checklist of diagnostic criteria

  - 1994 – Asperger's, Rett syndrome, childhood disintegrative disorder, and PDD-NOS are added as subtypes

  - 2013 – The DSM-5 creates an umbrella condition, ASD, that includes all subcategories of autism

Future studies may show a decrease in prevalence as recent changes to the DSM have changed ASD diagnosis again

- In 2013, the diagnostic criteria for ASD were changed for the DSM-V. This version:
    - Does not distinguish between subtypes. Related conditions (Asperger's, PDD-NOS, etc.) are now reclassified into one category
    - Recognizes only 2 domains of impairment: social communication and restricted, repetitive behavior
    - Specifies fewer (7 vs 12) diagnostic criteria
    - Emphasizes need for communication deficits for diagnosis
    - Allows for more consideration of historical behaviors

- A study done by the CDC's ADDM Network suggests it may be slightly more difficult to receive an autism diagnosis under the new version.
    - Found that only 81.2% of the children that met DSM-IV criteria met DSM-V criteria
    - Most ineligible children were only lacking by one criterion
    - Many could meet criteria for social communication disorder or others

- Despite these changes, there has still been a proportional increase in prevalence

ASD prevalence estimates
◇ ADDM Network (previously reported)
○ *DSM-5* criteria
▨ Not ADDM ASD case children but met *DSM-5* ASD criteria

X-axis: ADDM Network Surveillance Year (2000, 2002, 2004, 2006, 2008)
Y-axis: ASD Prevalence Per 1000

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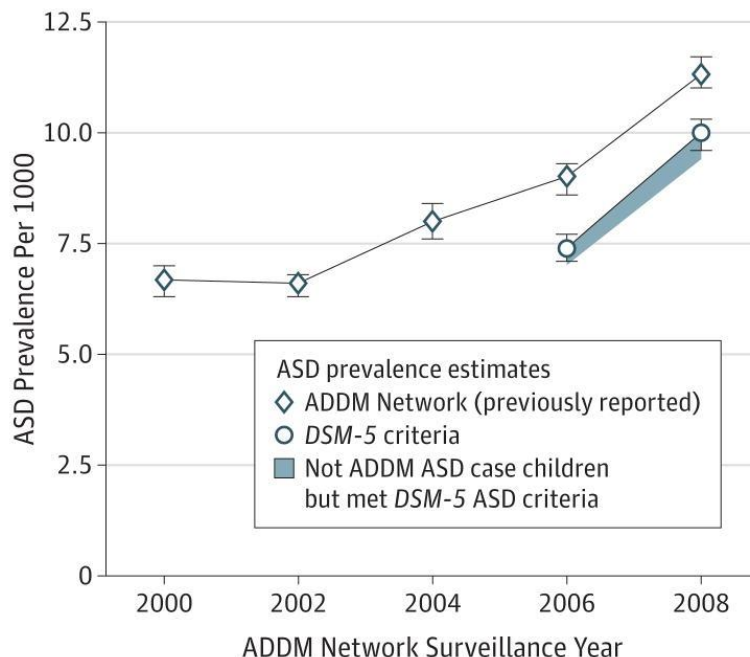
In contemporary studies the prevalence rate for ASD has settled into a fairly tight range of between 1:90 and 1:45
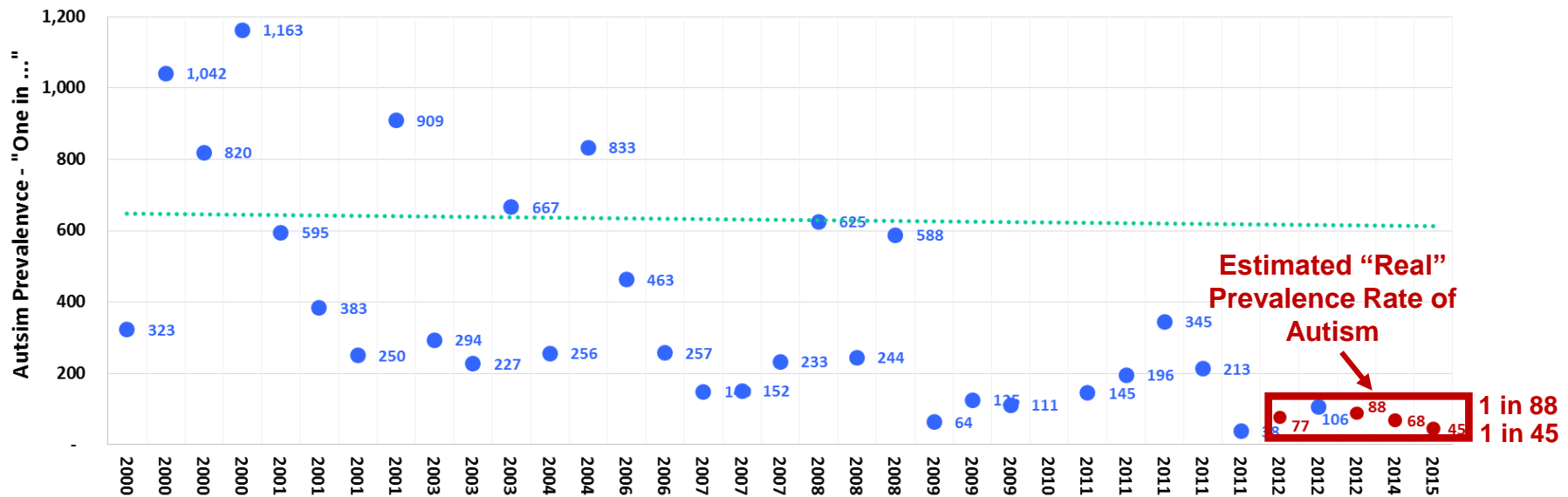
- Prevalence rates reported in more recent studies appear to be in greater agreement on the prevalence rate of autism

  - High variability in prevalence rates prior to 2011

  - More recent rates show a more consistent albeit higher rate of prevalence

- Because of the numerous methodology differences in these studies, the "real" estimated prevalence rate of autism is likely best described as a range

- Contemporary US based studies place this range between 1 in 88 and 1 in 45

We have selected four contemporary, domestic studies to inform our "average" prevalence for ASD.

Study Author / Organization	Year Published	Country	Time Period Studied	Age Range Studied	No. in Sample	Criteria Used	Methodology Used	ASD PR 1	ASD PR 2	ASD PR 3	Most Recent PR: "1 in"	ASD Pop IQ<70 (%)
Zimmerman et al.	2012	United States	2002, 2006, 2008	8	26,213 ('02) 29,494 ('06) 33,757 ('08)	ICD-9 and Special Edu. Classification	Case enumeration	6.5	10.2	13	76.9	Not Reported
CDC ADDM Network	2012	United States	2008	8	337,093	DSM-IV	Case enumeration and record review	11.3			88.5	38
CDC ADDM Network	2014	United States	2010	8	363,749	DSM-IV	Case enumeration and record review	14.7			68.0	31
National Health Interview Survey (NCHS)	2015	United States	2014	3 to 17	~13,000	Parent survey	Parent-reported survey responses	22.4			44.6	Not Reported

- The four empirical studies that make up the ranged use in this analysis were conducted differently. This minimizes the impact of differences in study approaches on the results

  - Relatively large vs small samples (largest 364k; lowest 36k)

  - Criteria used – Two of the most utilized manuals for clinical diagnosis, parent survey and special education classification

- Most importantly, all four studies were published recently and *look at similar age groups*. Controlling these variables allows for a more accurate comparison

- Note: The most recent prevalence rate (observed in 2008) in the Zimmerman study was used in this comparison and any following analysis

Source: The Center for Disease Control, 2011 "Summary of Autism Spectrum Disorder (ASD) Prevalence Studies"

We have selected four contemporary, domestic studies to inform our "average" prevalence for ASD.

- The prevalence rates in the four empirical studies vary by gender and race / ethnicity

- Gender

  - On average, men are far more likely to have an autism diagnosis

    - 71.4% higher than women

    - Variation in prevalence among studies is highest for women

      - Low of 1 in 252

      - High of 1 in 87

- Ethnicity/Race

  - Individuals that identify as white (not Hispanic or Latino) have a disproportionately higher prevalence rate of autism

    - Approximately 15-20% higher than the mean

Prevalence - "One in ..."

	Overall ASD Prevalence	Sex - Men	Sex - Women	Race / Ethnicity - White	Race / Ethnicity - Non-Hispanic Black	Race ./ Ethnicity - Hispanic
Low	88	54	252	83	98	127
Average Study Rate	70	44	172	62	75	95
High	45	30	87	39	45	67

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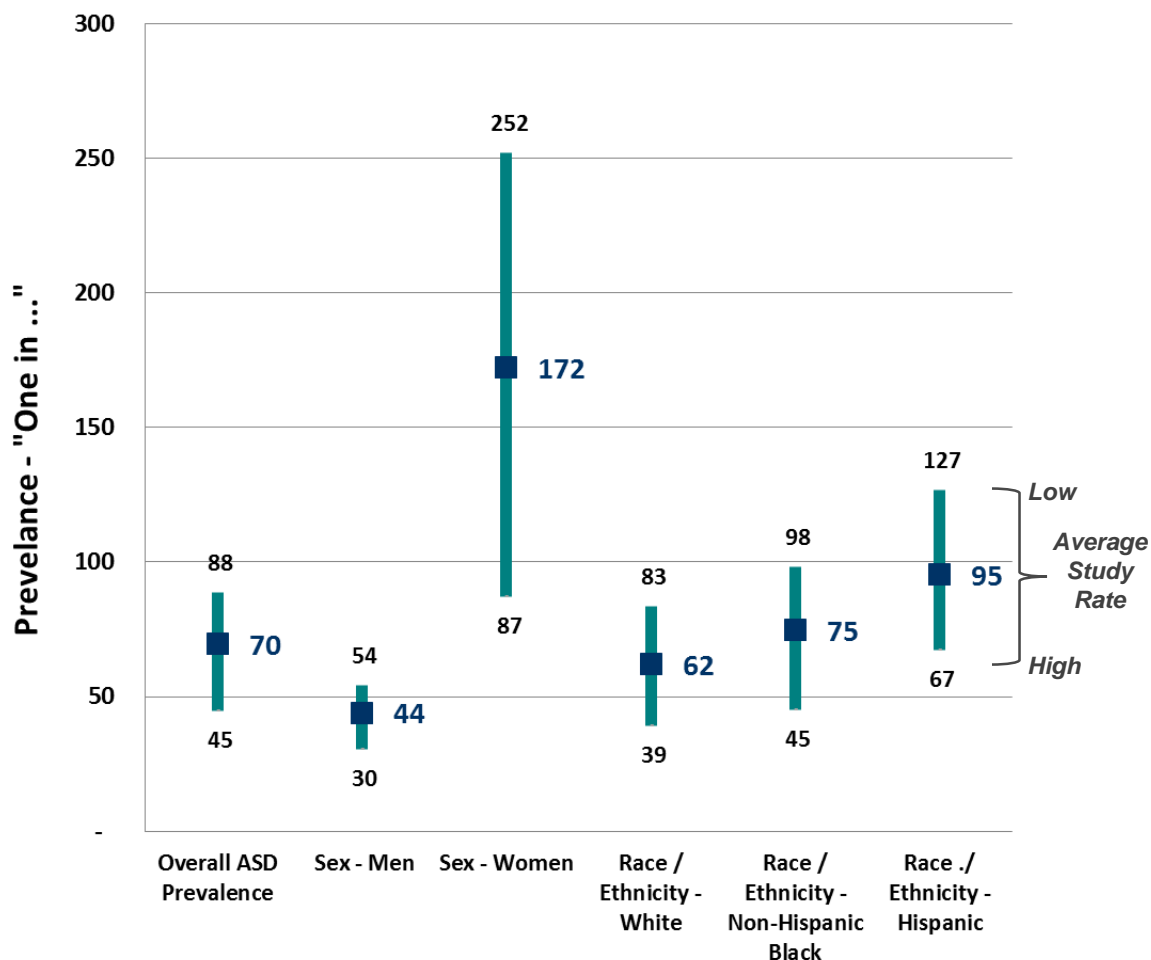
San Antonio Market Data Approach

San Antonio Market Data Approach

We analyzed San Antonio market specific payor data in an effort to develop market specific prevalence rates.

- Unfortunately, there is no one source for complete and detailed data on the number of individuals with autism

- We have attempted to blend analysis of a number of data sources to estimate the total number of individuals with Autism in the San Antonio CBSA

- Every effort was made to include as much of the population as possible. Data sources include claims data from all major payors in San Antonio including:

  – Texas Medicaid

  – Texas Medicare *(In Progress – Awaiting Revised Data)*

  – Commercial Payors

  – TRICARE Military Insurance

2015 San Antonio CBSA Inpatient Payor Mix*

Pie chart:
- Other / Gov 2%
- Medicaid 21%
- Medicare 42%
- Mgd / Comm 35%

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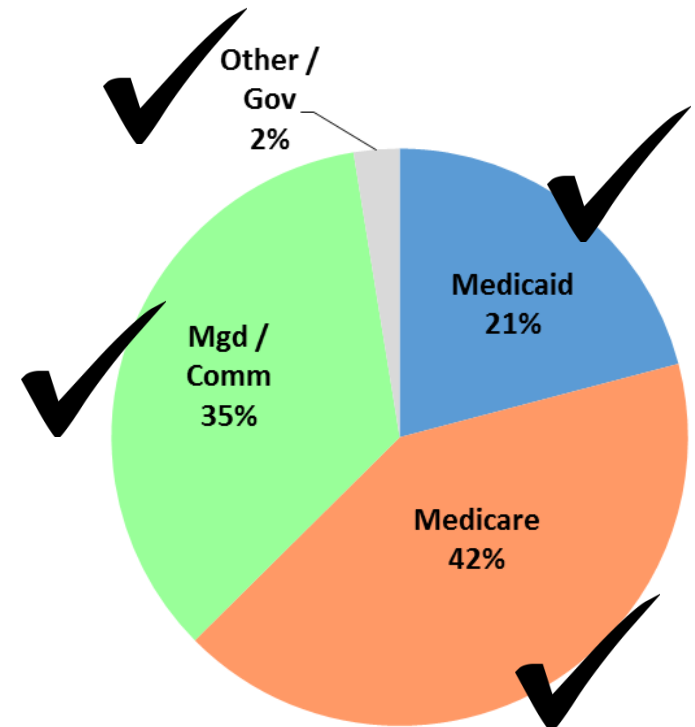
San Antonio Market Data Approach
Medical Definition of Autism

- The International Classification of Diseases, Version 9 (ISD-9) is a standardized set of codes that is used to record patient diagnoses and symptoms

- ICD-9 codes that define autism spectrum disorder include:
  - 299. Autistic disorder
    - Childhood autism
    - Kanner's syndrome
  - 299.1 Childhood disintegrative disorder - Heller's syndrome
  - 299.8 Other specified pervasive developmental disorders
    - Asperger's disorder
    - Atypical childhood psychosis
    - Borderline psychosis of childhood
  - 299.9 Unspec pervasive developmental disorder
    - Pervasive developmental disorder NOS

299.8 | **299.0 299.1** | **299.9**

Aspergers Syndrome
No delay in language and cognitive development. Difficulties in social interaction. Development of restricted and repetitive patterns of behavior, interest, and activity.

Autistic Disorder
Significant language delays. Impairment in social interaction and communiation. Restricted repetitive and stereotyped pattern of behavior, interest, and activity.

Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)
Symptoms are similar to autistic disorder. However, all criteria for autistic disorders are not met due to late age onset.

- Our data analysis seeks to identify unique patients with a claim that contains one of these ICD-9 codes for ASD **anywhere** in the diagnosis codes associated with claims
  - Relies on the assumption that individuals with autism will identify as such at the doctors office

- Development of Electronic Medical Records should significantly improve capture in future

CAPITAL HEALTHCARE PLANNING
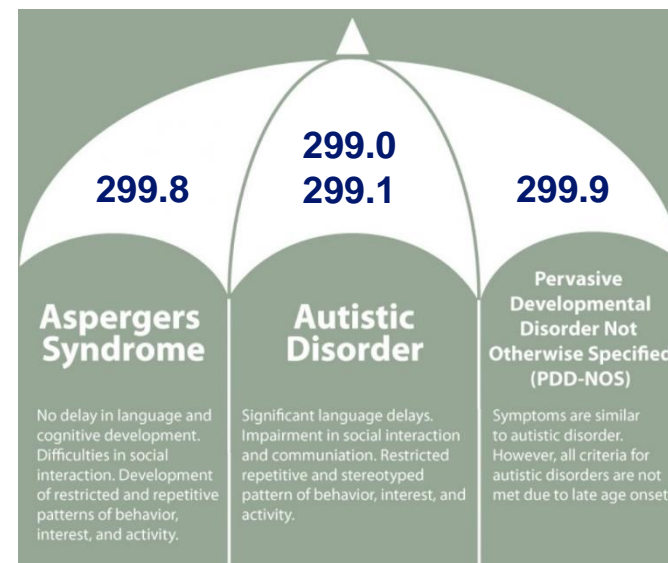
San Antonio Market Data Approach
San Antonio CBSA ASD Prevalence Rate - Medicaid

- Medicaid was the most comprehensive source for autism data received. However, it is apparent that the data misses a significant portion of the target population

  - An ICD-9 code for ASD appeared in 2,258 records of patients in the total sample (498k records) of Medicaid enrollees in the CBSA

  - Data relies on the assumption that a patient will disclose an autism diagnosis during their visit and that this will be recorded by their provider

  - Medicaid does not pay for ABA therapy

| County Name | Age Group | | | | | | | | | Overal Prevalence | Gender* | |
	0-2	3-5	6-10	11-13	14-17	18-20	21-43	44-64	65+		Female	Male
San Antonio	670	129	139	182	232	223	292	1,051	7,869	221	577	119
Houston	611	161	161	200	263	190	220	980	10,701	233	584	130
Austin	680	162	158	190	234	188	219	388	2,282	225	535	130
Dallas / Fort Worth	1,085	236	227	287	356	280	319	1,150	4,595	336	803	194
Texas Total	**779**	**159**	**160**	**197**	**272**	**230**	**274**	**1,022**	**5,643**	**248**	**621**	**141**

- In the 6-10 age group, the most comparable to empirical studies, the data shows the San Antonio CBSA ASD rate of 1 in 139

- The data does indicate San Antonio as having a higher autism prevalence rate than Austin, Dallas/Fort Worth or Houston or Texas

- Analysis of Medicaid data supports findings of lower prevalence rate among Hispanic populations

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CAPITAL HEALTHCARE PLANNING

San Antonio Market Data Approach
San Antonio CBSA ASD Prevalence Rate - Medicare

- In order to protect patient anonymity, Texas Medicare withholds any data in which the number of records is 10 or less

Illustrative Sample

* Denotes at least one person with ASD

ZIP Code	Total	Age Group									Gender		
		0-3	4-6	7-11	12-14	15-17	18-21	22-44	45-64	65+	Female	Male	Unknown
75001	*	*	*	*	*	-	-	-	-	-	*	*	-
75002	18	-	*	*	*	*	*	-	-	-	17	1	-
75006	29	*	*	*	*	*	*	*	-	-	23	6	-
75009	*	-	-	*	-	*	*	*	-	-	*	*	-

- Just over half of the zip codes in the San Antonio CBSA were not masked and therefore provided the total number of beneficiaries with ASD by gender

- The data does provide limited insights

  - Medicare supports a significant number of individuals with ASD through Medicare SSI disability

  - No single zip code in the market had enough 65+ age group beneficiaries to exceed the "10 or less" filter and very few zips indicated any ASD beneficiaries

  - There is likely significant overlap between the potential Medicare and the Medicaid data as many ASD patients will likely be "dual eligibles"

San Antonio Market Data Approach
San Antonio CBSA Autism Prevalence Rate - Commercial

Area	Age Group								Gender		One In...
	0-3	4-6	7-11	12-14	15-18	19-21	22-44	45-64	Female	Male	
Austin	208	115	**107**	108	158	325	2,084	25,124	861	255	396
Dallas	363	130	**141**	136	241	551	3,446	8,623	1,432	312	527
Fort Worth	371	154	**119**	131	212	374	2,156	11,395	1,121	297	480
Houston	315	117	**127**	157	239	367	2,860	11,866	1,280	315	514
San Antonio	**281**	**121**	**169**	**160**	**216**	**318**	**3,481**	**49,076**	**1,228**	**338**	**538**
Total Texas	324	132	**140**	153	242	426	2,879	12,492	1,300	329	532
Non Texas	246	108	**98**	111	158	290	1,689	8,575	1,046	256	418
Total Nationwide	250	110	**100**	113	162	295	1,733	8,710	1,058	260	423

- The ICD-9 code for autism showed up in the records of only 360 patients in the total sample (194k records) of commercially insured people in the San Antonio CBSA
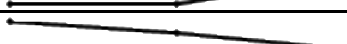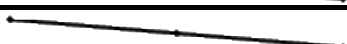
- In the 7-11 age group, the most comparable to empirical studies, the data shows San Antonio having a lower autism prevalence rate than: major Texas CBSAs, the state, and the nation overall

  – Prevalence rates in commercial data are the reverse of the Medicaid data potentially due to access or coverage issues

  – Supports male female variation

- **The low prevalence rates suggested by commercial data reflect only those with commercial insurance and are not representative of the total population**

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CAPITAL HEALTHCARE PLANNING

San Antonio Market Data Approach
San Antonio CBSA Autism Prevalence Rate - Commercial

- While the data is not likely representative of the total number of commercially insured patients with autism, it does appear to be directionally correct

  - Prevalence rates are high in younger age cohorts and increase exponentially after teenage years

  - Men have a much higher prevalence rate than women (nearly 4x higher)

- There are a number of reasons why this data may have under reported the true number of patients with autism. Patients may not be captured due to:

  - Lack of patient reporting – Patients may not disclose autism diagnoses during interviews with doctors

  - Low reimbursement rates – As mentioned in multiple interviews with providers, reimbursement rates for services such as ABA therapy can very low or difficult to collect. For many providers, it is not financially sustainable to accept private insurance. Insured patients that paid for services out of pocket would have not been captured in the data.

    - "In some places reimbursement rates are so low that we wouldn't be able to cover the hourly cost of a BCBA even if we paid 100% of the reimbursement"

    - "There have been instances in which an insurance company has sent a check for less than a dollar, because after deductibles and loopholes that is what they feel like they need to pay for ABA"

    - "Federal insurances or those spanning more than one state do not have to provide reimbursement for ABA because they are above state law"

San Antonio Market Data Approach
San Antonio and Market Area ASD Prevalence Rate - TRICARE

- The ICD-9 code for autism showed up in the records of ~136 patients in the sample (149k records) of TRICARE insured people in the greater San Antonio market[1]

Fiscal Year	Age Group								Gender		Market		
	0-3	4-6	7-11	12-14	15-17	18-21	22-44	45-64	Female	Male	SA	SA+ Mkt[1]	Texas
FY13	104	45	47	76	116	234	1,562	8,490	462	129	138	157	165
FY14	99	43	43	61	92	210	1,205	7,189	424	113	125	152	152
FY15	86	36	42	53	88	175	1,170	5,901	361	107	115	136	138
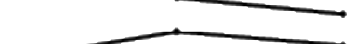
- In the 7-11 age group, the most comparable to empirical studies, the data shows TRICARE subscribers having a much higher autism prevalence rate than empirical studies and local Medicaid data at 1:42 (total Texas)

  - Supports male female variation with males more than 3 times as likely to have ASD

  - On a per person bases CBSA military families have much better access to diagnostic services than civilian populations. Studies have shown correlation between ASD prevalence and accessibility of diagnostic resources[2]

  - White males make up the majority of military population (ASD prevalence in white populations 50% higher than Hispanic)[3] while Hispanic representation is disproportionately low compared to the civilian population

Multi-racial* (n=42,268) 3.2%
Other/ Unknown (n=56,602) 4.3%
American Indian or Alaska Native (n=18,139) 1.4%
Asian (n=52,891) 4.0%
Black or African American (n=228,148) 17.2%
Native Hawaiian or Other Pacific Islander (n=14,022) 1.1%
White (n=914,203) 68.9%

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CAPITAL HEALTHCARE PLANNING

San Antonio Market Data Approach

TEA data represents the most robust data. However, there is significant difference between an educational and medical diagnosis that needs considered
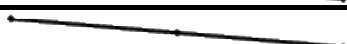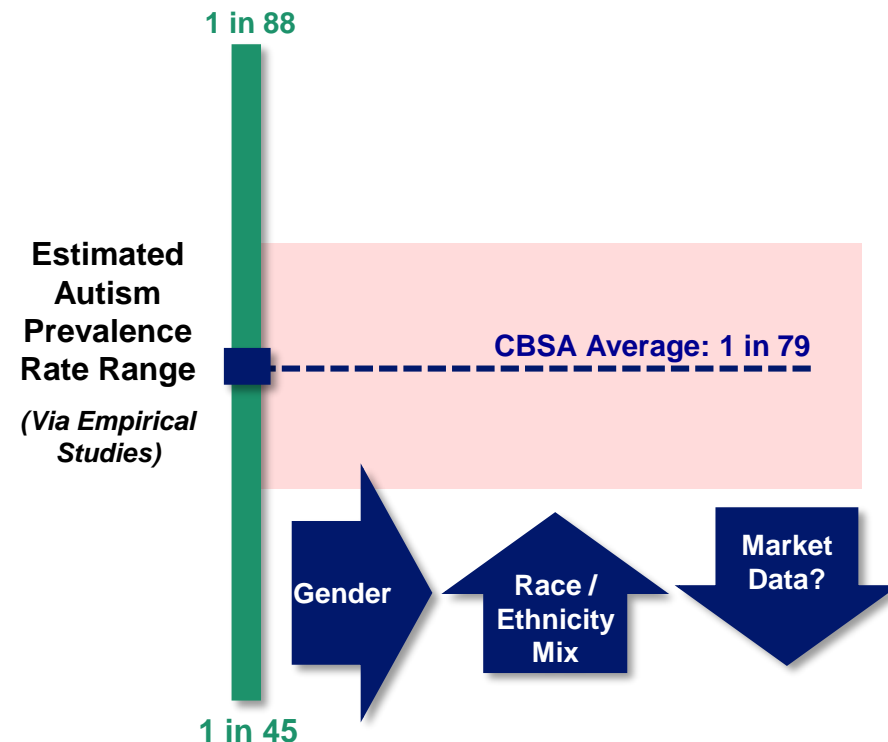
- Schools evaluate students based on "educational need". If a child presents symptoms that interfere with their ability to learn, they will receive a diagnosis / special education services

- It could be (and it is fairly often the case) that a child meets all of the criteria for a medical diagnosis of autism but is not determined to have an educational need

- Research suggests that 49% of medically diagnosed children with ASD do not receive an educational diagnosis.

- Adjusting TEA data to account for this brings estimated prevalence rates well within the empirical estimated range.

County	Number of Students with ASD			Prevalence - "One in..."			Special Education Students with ASD - Trend		
	12-13	13-14	14-15	12-13	13-14	14-15	12-13	13-14	14-15
Bexar County	3,160	3,419	3,765	108	101	93			
Comal County	250	257	288	108	109	102			
Guadalupe County	69	80	91	152	131	117			
Wilson County	82	81	80	104	106	110			
Bandera County	16	17	21	170	156	121			
Medina County	57	62	70	163	153	140			
Atascosa County	40	39	40	225	234	230			
Kendall County	*	*	6	*	*	188			
CBSA Total	3,674	3,955	4,361	111	105	97			
Texas Total	41,064	45,257	49,678	124	114	105			

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CAPITAL HEALTHCARE PLANNING

San Antonio Market Data Approach

TEA data represents the most robust data. However, there is significant difference between an educational and medical diagnosis that needs considered

- Schools evaluate students based on "educational need". If a child presents symptoms that interfere with their ability to learn, they will receive a diagnosis / special education services

- It could be (and it is fairly often the case) that a child meets all of the criteria for a medical diagnosis of autism but is not determined to have an educational need

- Research suggests that 49% of medically diagnosed children with ASD do not receive an educational diagnosis.

- Adjusting TEA data to account for this brings estimated prevalence rates well within the empirical estimated range.

County	Adjusted Number of Students with ASD			Prevalence - "One in..."			Special Education Students with ASD - Trend		
	12-13	13-14	14-15	12-13	13-14	14-15	12-13	13-14	14-15
Bexar County	4,708	5,094	5,610	72	68	62			
Comal County	373	383	429	72	73	68			
Guadalupe County	103	119	136	102	88	78			
Wilson County	122	121	119	70	71	74			
Bandera County	24	25	31	114	104	81			
Medina County	85	92	104	110	102	94			
Atascosa County	60	58	60	151	157	154			
Kendall County	*	*	9	*	*	126			
CBSA Total	5,474	5,893	6,498	75	70	65			
Texas Total	61,185	67,433	74,020	83	76	71			

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CAPITAL HEALTHCARE PLANNING

The specific make up of the San Antonio market would likely cause the market ASD prevalence rate to be lower than "standard...predominantly due to the high percentage of Hispanic population."
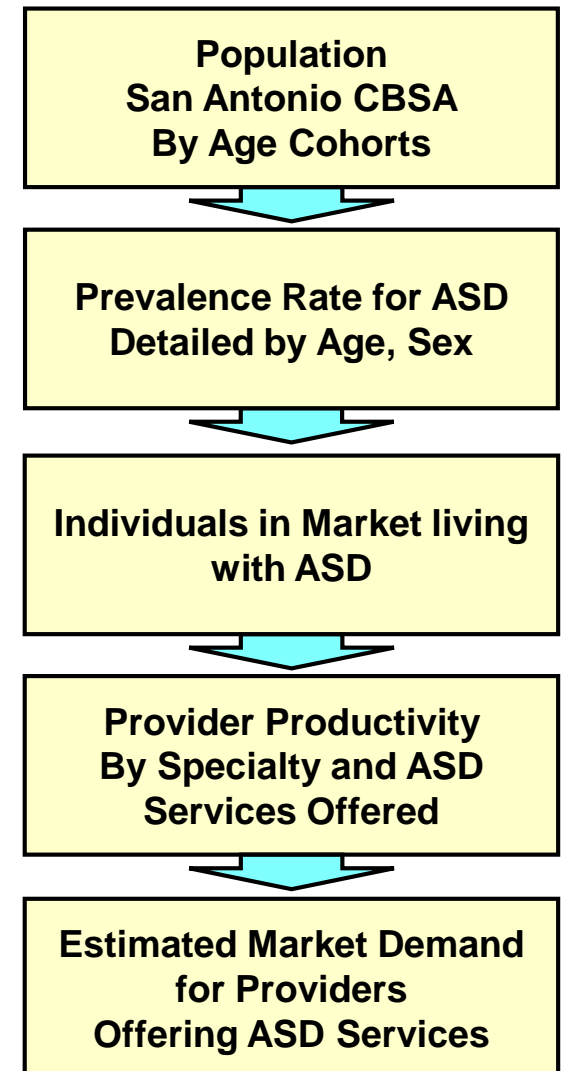
- The benchmark studies were conducted on a national scale. We have adjusted the base prevalence rate based on select differences between the CBSA and the US averages

  – Gender
    - The prevalence rate of autism is significantly higher for males than females (4:1)
    - Very little variation (0.1%) was found between the gender mix in the CBSA and the US... no adjustment was made to the overall rate

  – Race / Ethnicity
    - The prevalence rate of autism is significantly lower for Hispanics than other ethnicities/races(5:1)
    - The San Antonio area has a very different race/ethnicity mix than the nation
    - The average prevalence rate would be adjusted by 15% to account for the CBSA's large Hispanic population.

  – Some market data shows higher prevalence of ASD in the CBSA compared to other markets across all payors. An adjustment in prevalence rates could be included.
    - Impossible to determine if this is a clinical "Demand" problem or an access or "Supply" issue
    - "Adjusted" TEA data shows market rate in line with expectations

1 in 88

Estimated Autism Prevalence Rate Range

(Via Empirical Studies)

CBSA Average: 1 in 79

Gender   **Race / Ethnicity Mix**   **Market Data?**

1 in 45

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CAPITAL HEALTHCARE PLANNING

ASD Service Provider Demand
Process

- Determining the Demand for providers in the market will be a process of building upon data and assumptions as limited clear information exists

- Demographic projections are straightforward and have been pulled from local and national sources

- The Prevalence Rate for ASD is likely one of the most controversial factors to be applied

  – No clear correct answer in empirical data

  – Highly variable

  – Changing significantly over the past

  – Studies are limited in scope generally focusing on pediatric

- The application of the Prevalence Rate to San Antonio CBSA population will provide estimates of the total number of individuals living with ASD

- Converting patient volumes into estimates of Provider Demand will be subjective and based on high level assumptions of provider productivity

  – No specific standards exist for this particular application

  – Based on subjective input of providers operating in the market

**Population
San Antonio CBSA
By Age Cohorts**

⬇

**Prevalence Rate for ASD
Detailed by Age, Sex**

⬇

**Individuals in Market living
with ASD**

⬇

**Provider Productivity
By Specialty and ASD
Services Offered**

⬇

**Estimated Market Demand
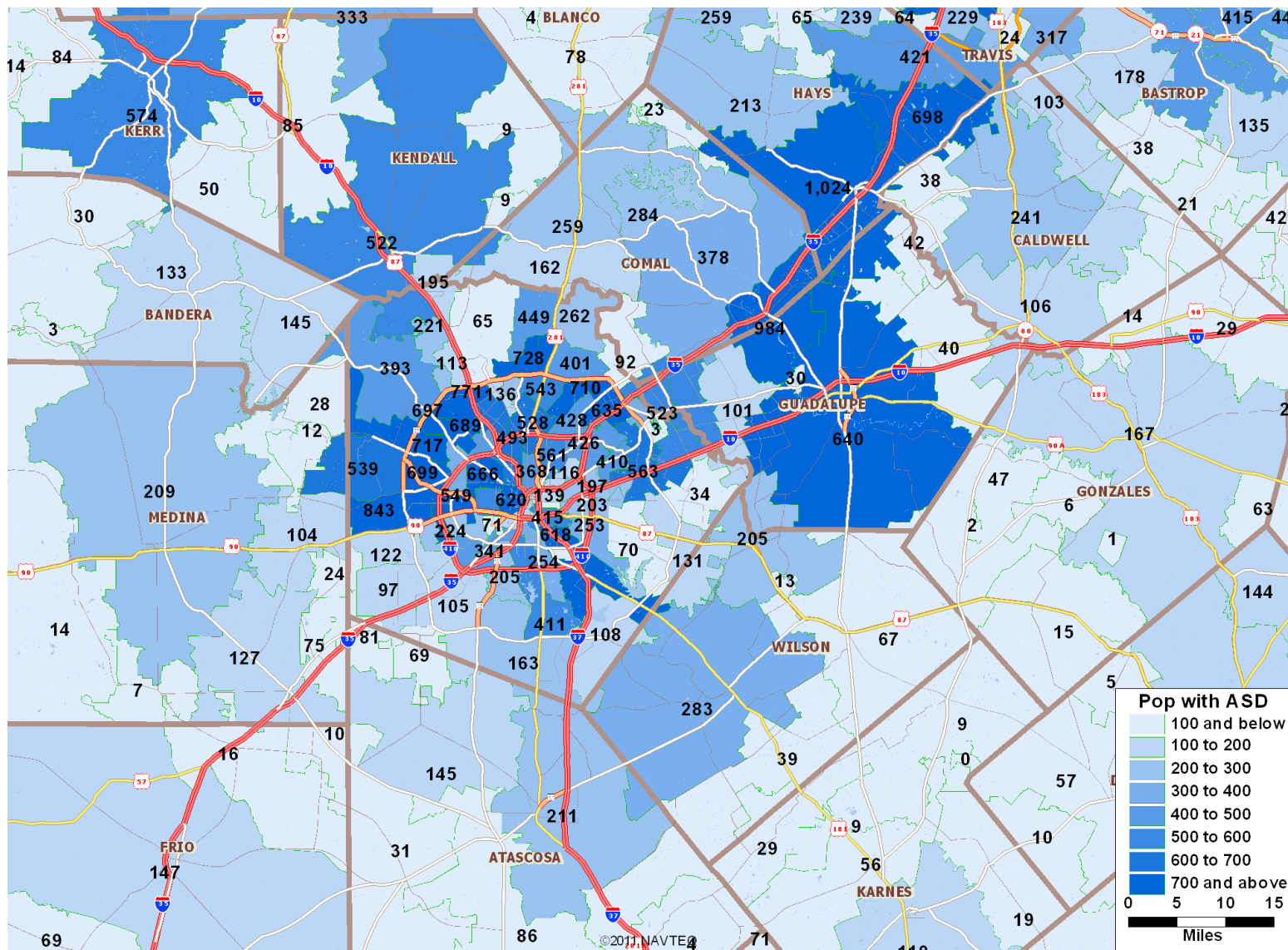for Providers
Offering ASD Services**

The total estimated number of individuals living with ASD is over 30,000 across the CBSA with over 23,000 in Bexar County

- Distribution of individuals with ASD generally follows overall population with Bexar County accounting for the vast majority

- In the San Antonio CBSA, the estimated prevalence rate of autism varies by county (High of 1:66 (Bandera) to low of 1:81 (Bexar and Atascosa)
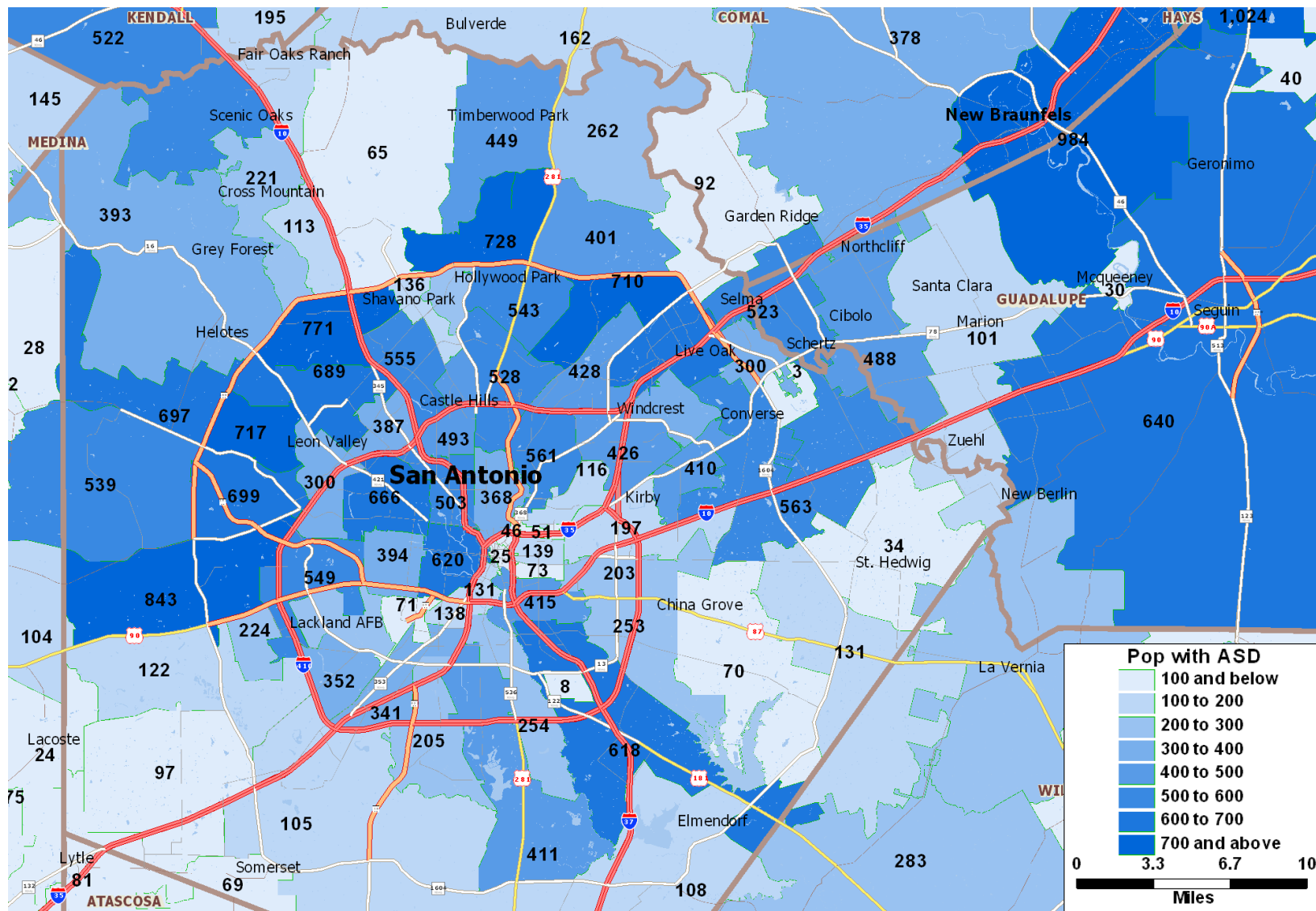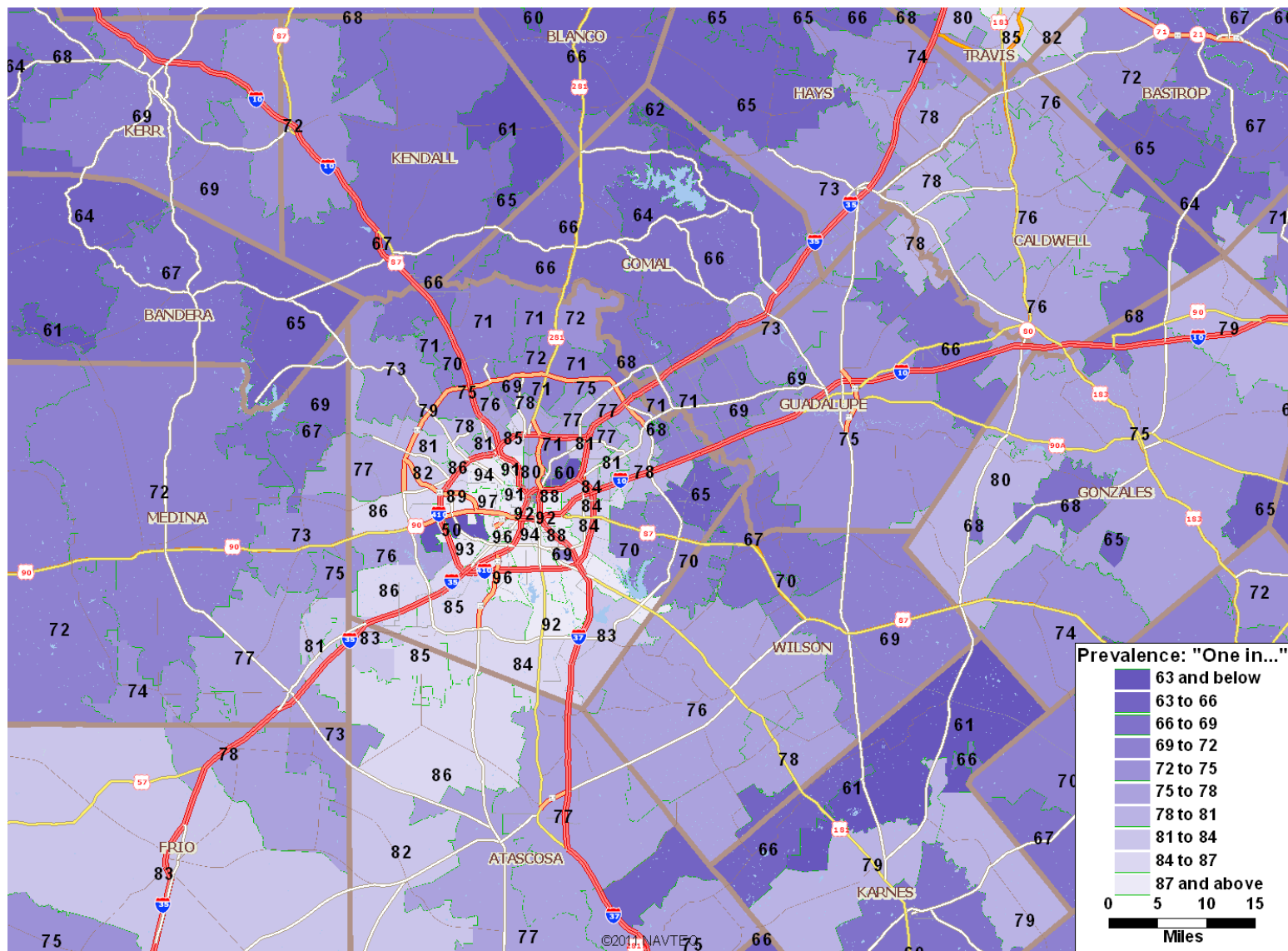
County	Total Population	Est. People with ASD	One in....
Bexar	1,893,000	23,400	81
Comal	150,780	2,182	69
Guadalupe	131,613	1,822	72
Wilson	52,881	739	72
Atascosa	50,844	628	81
Medina	44,359	599	74
Kendall	42,273	625	68
Bandera	20,557	312	66
CBSA Total	**2,386,170**	**30,338**	**79**
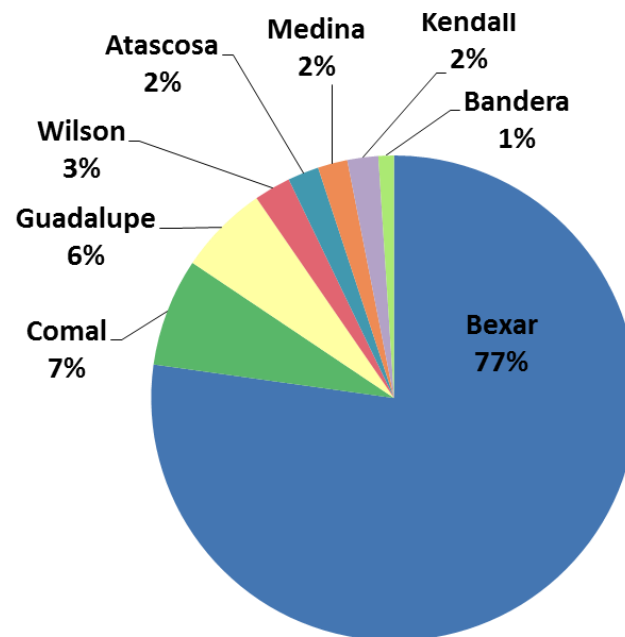
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CAPITAL HEALTHCARE PLANNING

The total estimated number of individuals living with ASD is over 30,000 across the CBSA with over 23,000 in Bexar County


Pop with ASD
- 100 and below
- 100 to 200
- 200 to 300
- 300 to 400
- 400 to 500
- 500 to 600
- 600 to 700
- 700 and above

0   5   10   15
Miles

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CAPITAL
HEALTHCARE PLANNING

The total estimated number of individuals living with ASD is over 30,000 across the CBSA with over 23,000 in Bexar County

The total estimated number of individuals living with ASD is over 30,000 across the CBSA with over 23,000 in Bexar County

Prevalence: "One in..."
- 63 and below
- 63 to 66
- 66 to 69
- 69 to 72
- 72 to 75
- 75 to 78
- 78 to 81
- 81 to 84
- 84 to 87
- 87 and above

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The total estimated number of individuals living with ASD is over 30,000 across the CBSA with over 23,000 in Bexar County

Prevalence: "One in"
- 63 and below
- 63 to 66
- 66 to 69
- 69 to 72
- 72 to 75
- 75 to 78
- 78 to 81
- 81 to 84
- 84 to 87
- 87 and above

ASD projections based off of demographics from Claritas National Planning Data Center, 2014 Base

The total estimated number of individuals living with ASD is over 30,000 across the CBSA with over 23,000 in Bexar County

- For most age categories, the distribution of individuals with autism would follow the overall population's age distribution
  - 0-3 - Prevalence of autism could be "lower" because autism is typically not diagnosed until age 2
    - A 50% decrease in prevalence rate has ben included in the following analyses to account for infants between the ages of 0 and 2 who have not been diagnosed with ASD and are therefore not seeking services
  - 5+ - Actual prevalence could be marginally lower if mortality rates considered. Autism itself does not affect life expectancy, however research has shown that the mortality risk among individuals with autism is twice as high as the general population (in large part due to drowning and other accidents). [1]
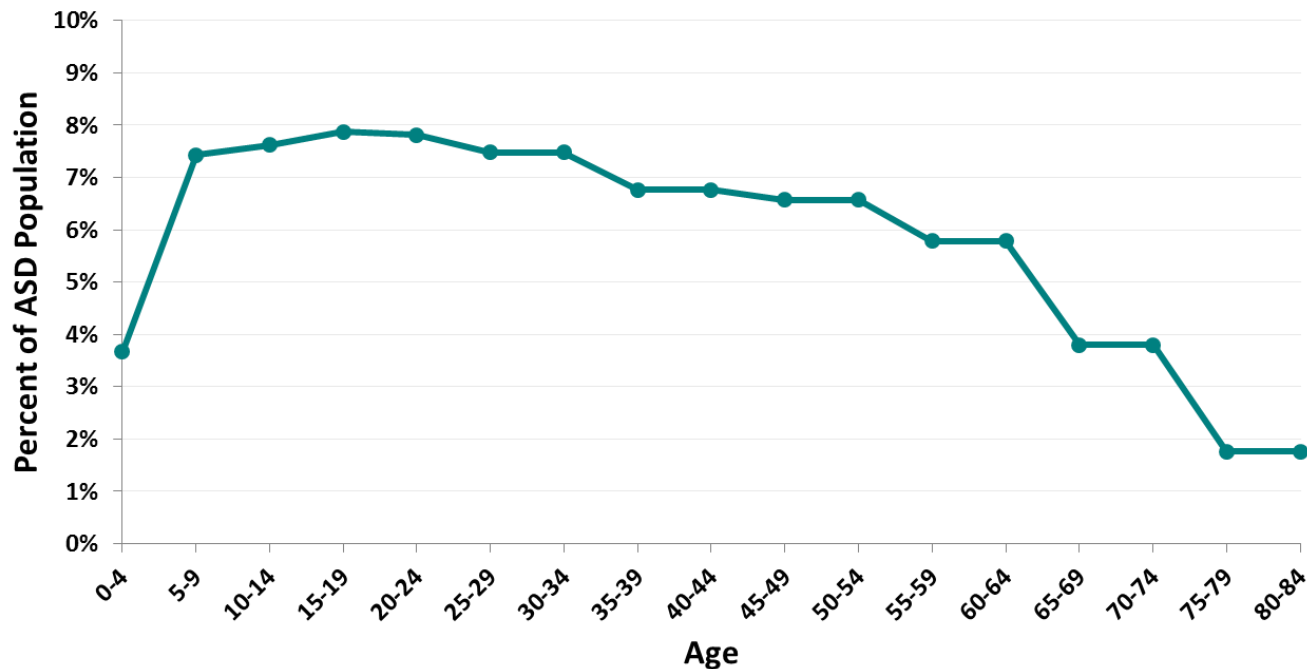
Age	No. with ASD	% of ASD Pop
0-4	1,111	4%
5-9	2,252	7%
10-14	2,312	8%
15-19	2,388	8%
20-24	2,370	8%
25-29	2,270	7%
30-34	2,270	7%
35-39	2,051	7%
40-44	2,051	7%
45-49	1,994	7%
50-54	1,994	7%
55-59	1,755	6%
60-64	1,755	6%
65-69	1,153	4%
70-74	1,153	4%
75-79	535	2%
80-84	535	2%
85+	388	1%
Total	**30,338**	**100%**

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CAPITAL HEALTHCARE PLANNING

Given the disparity in the prevalence of ASD across genders it is estimated that the vast majority of those in the market with ASD will be male.
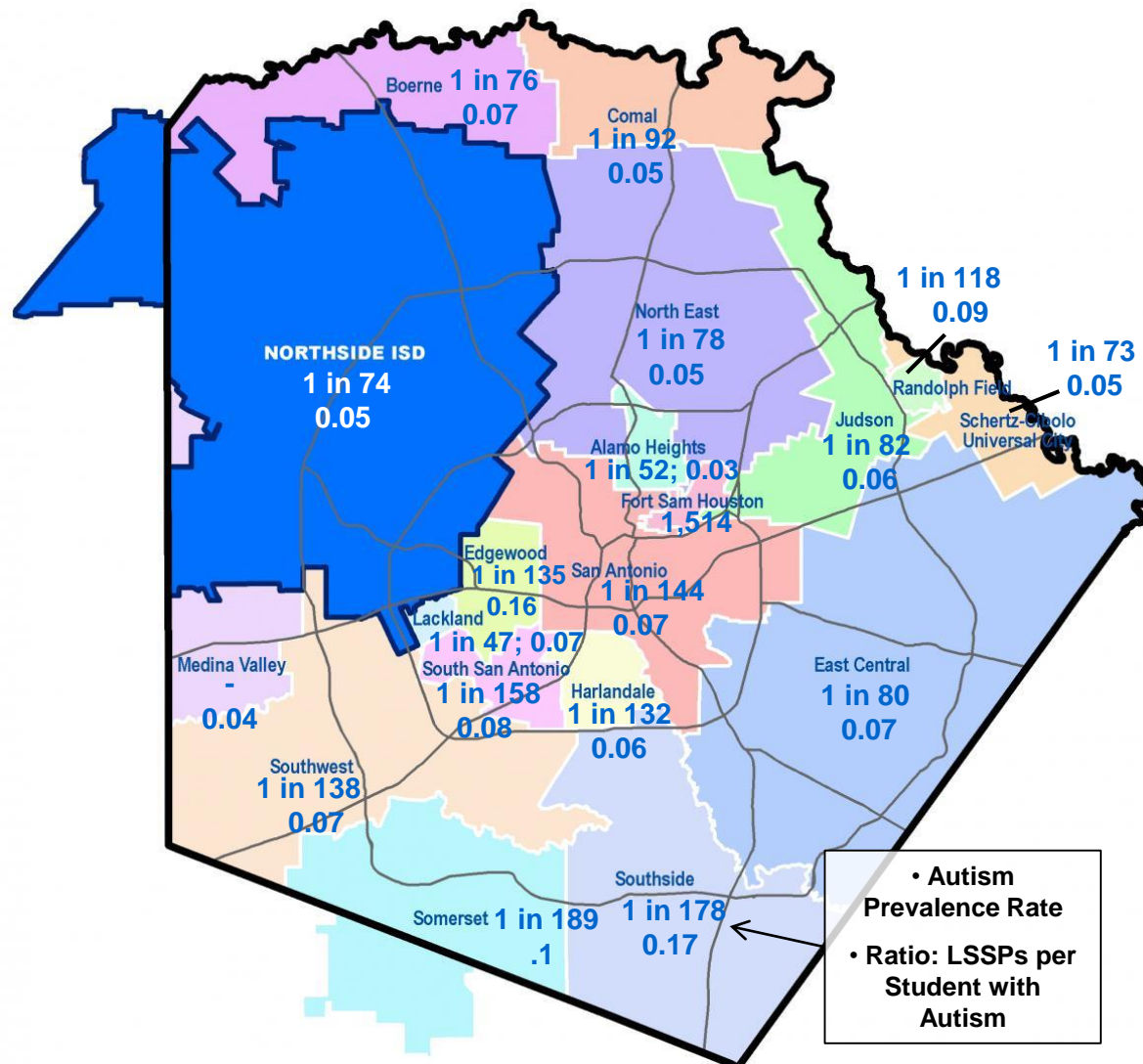
- Despite being 49% percent of the population in the CBSA, an estimated 77% of the autism population is male

County	Percent Male	Percent Female	Total Pop	Males with ASD	Females with ASD	Total ASD
Bexar	49.2%	50.8%	1,892,863	18,118	5,313	23,431
Wilson	49.3%	50.7%	150,780	1,689	492	2,182
Atascosa	49.1%	50.9%	131,613	1,406	415	1,822
Bandera	50.0%	50.0%	52,881	576	163	739
Comal	49.6%	50.4%	50,844	487	141	628
Kendall	51.7%	48.3%	44,359	473	126	599
Medina	48.9%	51.1%	42,273	482	143	625
Guadalupe	49.4%	50.6%	20,557	242	70	312
CBSA Total	**49.3%**	**50.7%**	**2,386,170**	**23,474**	**6,864**	**30,338**

Females 23% 6,864

Males 77% 23,474
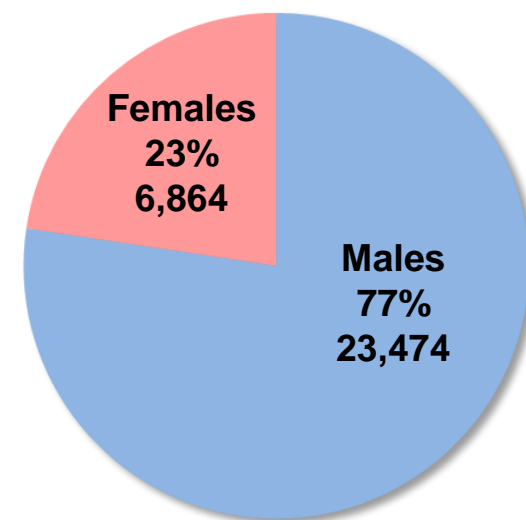
Districts in the northern and eastern portions of Bexar County tend to have higher prevalence of ASD

- Data from the TEA reveals significant variation in the prevalence of educationally diagnosed autism among school districts

- Districts socioeconomically challenged areas tend to have a lower prevalence rate

- Supported by Race/Ethnicity variation in ASD occurrence

- Variation in funding, district attractiveness to teachers working with ASD, etc., are also likely contributing factors

Boerne 1 in 76
0.07

Comal
1 in 92
0.05

1 in 118
0.09

NORTHSIDE ISD
1 in 74
0.05

North East
1 in 78
0.05

1 in 73
0.05

Randolph Field

Judson
1 in 82
0.06

Schertz-Cibolo
Universal City

Alamo Heights
1 in 52; 0.03

Fort Sam Houston
1,514

Edgewood
1 in 135
0.16

San Antonio
1 in 144
0.07

Lackland
1 in 47; 0.07

Medina Valley
-
0.04

South San Antonio
1 in 158
0.08

Harlandale
1 in 132
0.06

East Central
1 in 80
0.07

Southwest
1 in 138
0.07

Somerset 1 in 189
.1

Southside
1 in 178
0.17

- **Autism Prevalence Rate**
- **Ratio: LSSPs per Student with Autism**

Source: Texas Education Agency

CAPITAL HEALTHCARE PLANNING

The total number of people living with ASD in the San Antonio CBSA could increase by over 5,000 people in just ten years

- The San Antonio CBSA is experiencing a period of high growth, especially in Comal and Kendall Counties

- The number of individuals with ASD will grow with the overall population

  - 10-year increase of over 17.6% in the CBSA

- The number of people with autism in faster growing counties such as Comal and Kendall has potential to increase by over 20%

  - Assuming no increase in the autism prevalence rate

County	Population with ASD			'16 -'26 Growth	
	2016	2021	2026	Raw	Percent
Bexar	23,431	25,351	27,461	4,030	17.2%
Comal	2,182	2,417	2,678	497	22.8%
Guadalupe	1,822	1,997	2,192	371	20.4%
Wilson	739	799	865	125	17.0%
Atascosa	628	674	722	94	15.0%
Kendall	625	692	767	143	22.8%
Medina	599	627	657	58	9.8%
Bandera	312	325	338	26	8.2%
CBSA Total	30,338	32,883	35,682	5,344	17.6%

Economic Impact of ASD

Caring for ASD's has significant cost throughout a person's life. In the CBSA, the estimated overall economic impact of dealing with ASDs exceeds $2 billion

Ages 0-17

- Special education expense is the most significant cost of caring for children with ASDs.
  - For children with intellectual disabilities, this expense is estimated to be over $60,000 per year, over 50% of total costs
  - Decline in Special Ed costs for older children may be a "reality" versus optimal…costs may be significantly higher

Component	Cost per Year: SA CBSA (In Millions)	
	With ID	Without ID
Residential Care	$10.2	$7.6
Special Education	156.6	117.5
Services	-	-
Medical	39.9	29.9
Nonmedical	32.3	24.2
Productivity loss (parents)	53.1	79.6
Total Costs	**292.1**	**258.9**
Pediatric Total	**550.9**	

Ages 18+

- The yearly costs attributed to ASD do not substantially decrease when a child transitions out of school (Costs are estimated to increase by $2,336 per year for individuals with ID)

- Productivity loss to the individual with ASD is a significant portion (31.3%) of the overall yearly cost
  - According to Autism Speaks, 16.8% of the population living with disabilities are employed
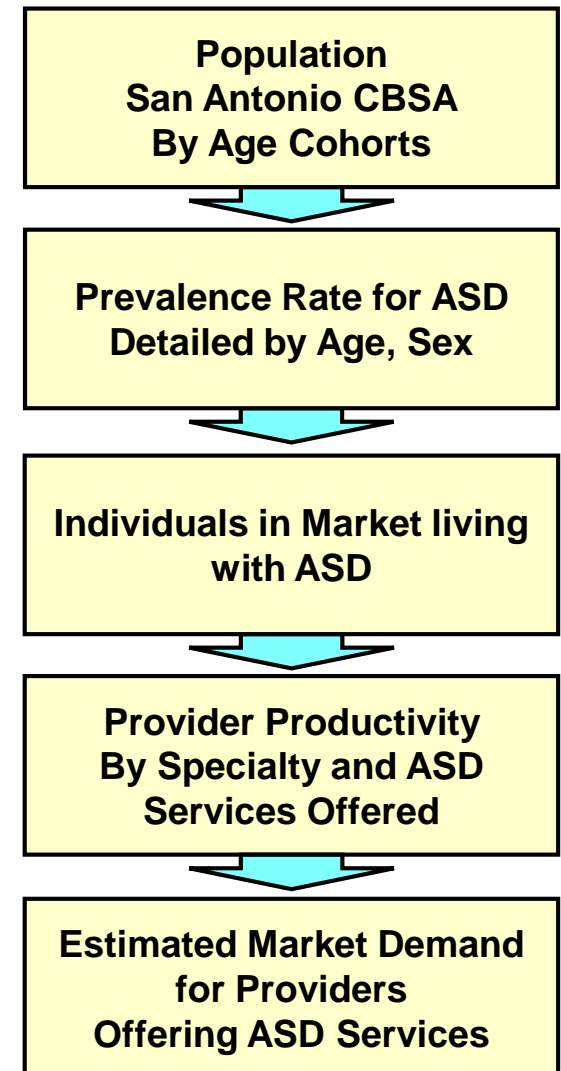
Accommodation	$336.3	$252.2
Employment Support	6.6	4.9
Services	-	-
Medical	252.5	189.4
Nonmedical	105.9	79.4
Productivity loss		
Individual with ASD	83.5	125.3
Parents	10.6	15.9
Total Costs	795.4	667.1
Adult Total	**1,462.5**	
SA CBSA Total	**2,013.4**	

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CAPITAL HEALTHCARE PLANNING

ASD Provider Demand

ASD Service Provider Demand
Process

- Determining the Demand for providers in the market will be a process of building upon data and assumptions as limited clear information exists

- Demographic projections are straightforward and have been pulled from local and national sources

- The Prevalence Rate for ASD is likely one of the most controversial factors to be applied

  – No clear correct answer in empirical data

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**Population
San Antonio CBSA
By Age Cohorts**

↓

**Prevalence Rate for ASD
Detailed by Age, Sex**

↓

**Individuals in Market living
with ASD**

↓

**Provider Productivity
By Specialty and ASD
Services Offered**

↓

**Estimated Market Demand
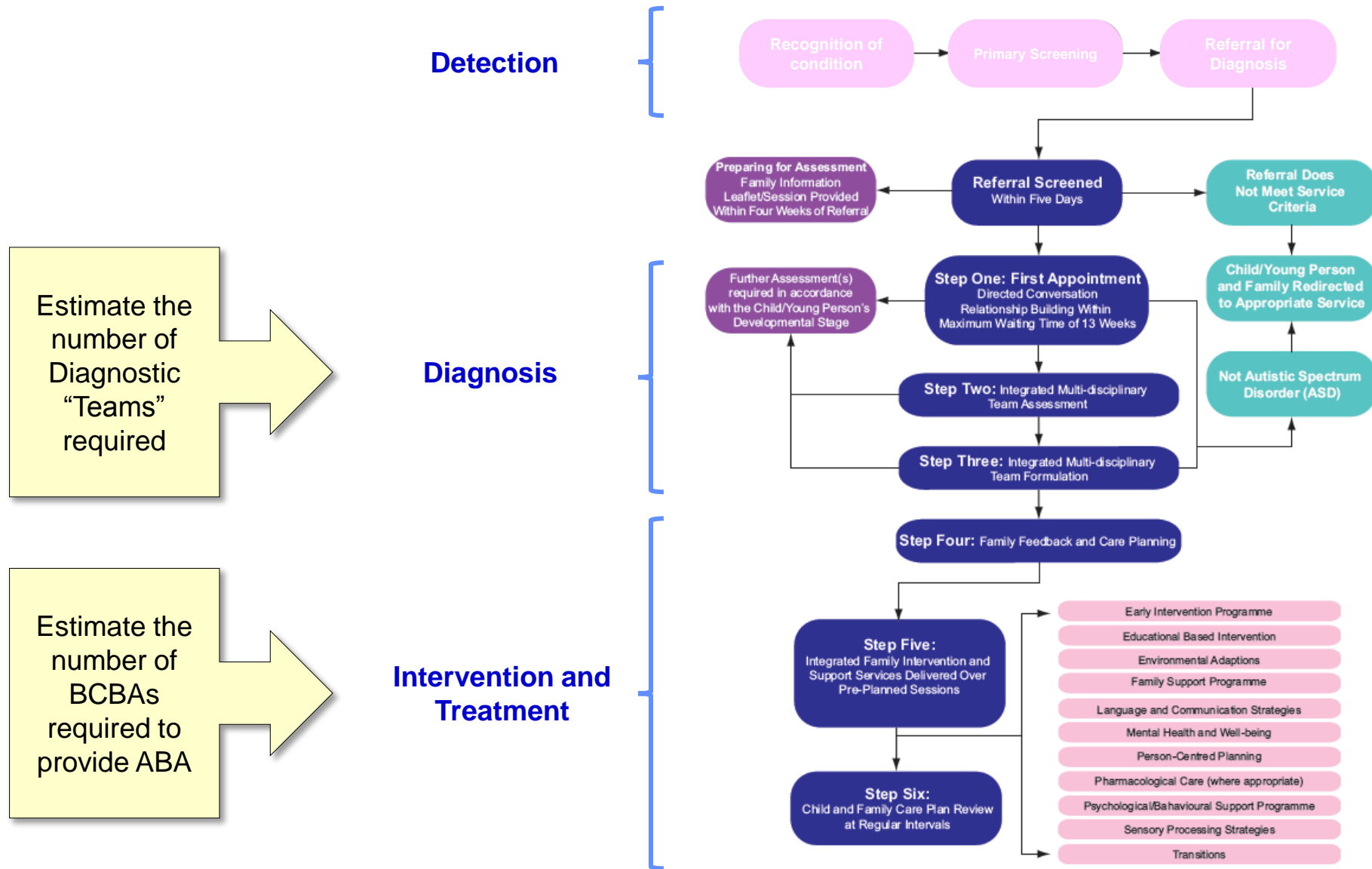for Providers
Offering ASD Services**

The number of providers required to meet the demands of the ASD population are estimated based on high level understanding of resource requirements for Diagnosis and ABA treatment and do not represent the entire spectrum of Need

- *The following analysis estimates the number of providers required to meet the Diagnosis and ABA treatment demands of the ASD population. The provider needs are estimated based on high level and do not represent the entire spectrum of Need*

- The Supply portion of the analysis will explore in depth the active providers in the market serving ASD populations.

- To estimate Provider Demand we interviewed key individuals to better understand the specialties are involved and manpower required to properly diagnose and/or provide treatment for individuals with ASD

- The following individuals provided in depth information:
  - A Patricia Del Angel, MD - Medical Director, Autism Care Network
  - Stephen Greefkens, MD – Developmental Pediatrics – SAMMC-Sub-specialty Peds Dept
  - Jeffrey Grimes, PhD – Psychologist – Clarity Child Guidance Center
  - Nancy Ratliff, Ph.D. – Psychologist
  - Dawn Jacobs, BCBA – Director, ABA Center for Excellence
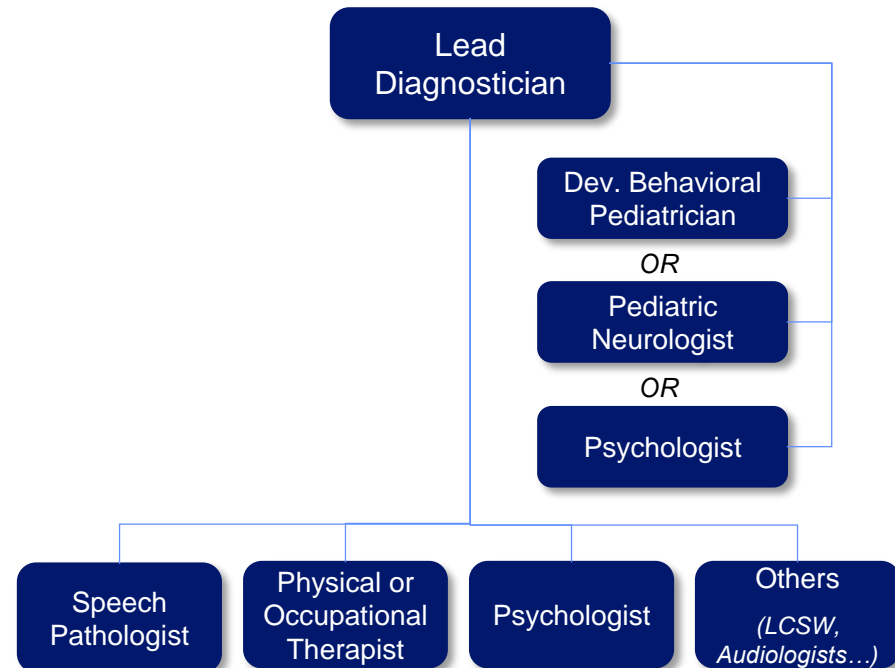 - Leslie Neely, Ph.D., BCBA-D – Assistant Professor - Educational Psychology, UTSA

We have divided provider need estimates into key Diagnosis and Intervention and Treatment segments

Detection

Recognition of condition → Primary Screening → Referral for Diagnosis

Preparing for Assessment
Family Information
Leaflet/Session Provided
Within Four Weeks of Referral

Referral Screened
Within Five Days

Referral Does Not Meet Service Criteria

Estimate the number of Diagnostic "Teams" required

Diagnosis

Further Assessment(s) required in accordance with the Child/Young Person's Developmental Stage

Step One: First Appointment
Directed Conversation
Relationship Building Within
Maximum Waiting Time of 13 Weeks

Child/Young Person and Family Redirected to Appropriate Service

Step Two: Integrated Multi-disciplinary Team Assessment

Not Autistic Spectrum Disorder (ASD)

Step Three: Integrated Multi-disciplinary Team Formulation

Step Four: Family Feedback and Care Planning

Estimate the number of BCBAs required to provide ABA

Intervention and Treatment

Step Five:
Integrated Family Intervention and Support Services Delivered Over Pre-Planned Sessions

- Early Intervention Programme
- Educational Based Intervention
- Environmental Adaptions
- Family Support Programme
- Language and Communication Strategies
- Mental Health and Well-being
- Person-Centred Planning
- Pharmacological Care (where appropriate)
- Psychological/Behavioural Support Programme
- Sensory Processing Strategies
- Transitions

Step Six:
Child and Family Care Plan Review at Regular Intervals

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Provider Demand – Diagnosis

Diagnosis is considered best achieved through a multidisciplinary team approach. What is the appropriate number of teams required to support demand in the CBSA?

- Diagnostic ASD evaluations are complex

- A multidisciplinary approach incorporating clinical evaluations and behavioral observations is seen as the gold standard

- Team composition varies but generally consists of:
  - Lead Diagnostician
    - Developmental Behavioral Pediatrician
    - Pediatric Neurologist
    - Psychologist
  - Supporting specialists testing various aptitudes
    - Speech Language Therapists
    - Physical/Occupational Therapists
    - Child and Adolescent or other psychologists
    - Audiologists
    - Others

- In some cases this process occurs over multiple visits but is generally considered best provided in 1-2 extended sessions

Lead Diagnostician

Dev. Behavioral Pediatrician

OR

Pediatric Neurologist

OR

Psychologist

Speech Pathologist

Physical or Occupational Therapist

Psychologist

Others *(LCSW, Audiologists…)*

Provider Demand – Diagnosis
Diagnosis is considered best achieved through a multidisciplinary team approach. What is the appropriate number of teams required to support demand in the CBSA?

- According to provider interviews, the ideal age to diagnose autism is between the ages of two and three, directly following the child's 24-month developmental disorder screening with their general pediatrician

  - With this being said, in an ideal world the number of diagnoses given per year would be 100% of the children with autism in that age group

- Given that there are roughly ~30,000 births in the San Antonio CBSA per year, the yearly occurrence of autism (incidence) can be estimated at ~390 cases

Gender	Births per Year	Yearly Incidence
Male	14,684	302
Female	15,105	88
Total	29,789	391

Assessment Team Yearly Diagnosis Capacity: 163 Children

Teams Needed
1.9
0.5
2.4

- On average, a full-time diagnostic team can assess 250 children per year. However, an average of 35% of these assessments do not result in an autism diagnosis. Thus, on average, a diagnostic team has a diagnosis capacity of ~163 actual ASD patients

- With this productivity, Bexar County would need 2.4 teams to deliver diagnoses to all children in a given year

CAPITAL HEALTHCARE PLANNING

Provider Demand – Diagnosis

Diagnosis is considered best achieved through a multidisciplinary team approach. What is the appropriate number of teams required to support demand in the CBSA?

- The need for diagnosis is likely to be understated using this ideal model. Various factors impact the true number of assessment teams that are needed in the market such as:

  - In migration from surrounding areas– As a "hub" for exceptional families, San Antonio likely sees a great number of children from outlying areas where there are few diagnosis resources available

    - Number of teams needed to support CBSA and these areas is ~5.7

  - Backlog– Missed diagnoses in earlier years further increases demand

    - Difficult to determine the number of undiagnosed children still seeking diagnosis

  - Provider productivity and assessment model variations – Variations in testing methodology (ex. Arena model vs referral model), time spent on evaluation, etc.

    - Model used in this analysis is considered to be a best practice
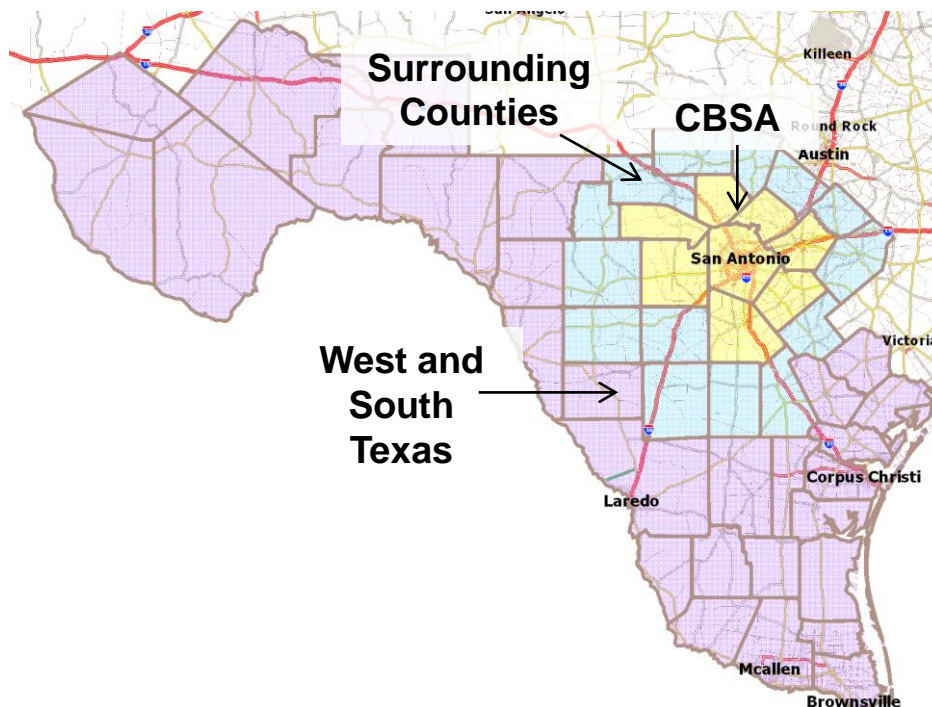
Area	Births per Year	Children with Autism	Teams Needed
Bexar County CBSA	29,789	391	2.4
Surrounding Counties	4,802	67	0.4
West and South Texas	39,020	467	2.9
All Areas	**73,611**	**925**	**5.7**

Provider Demand – Diagnosis

Diagnosis is considered best achieved through a multidisciplinary team approach. Will the need for these teams change in the future?

- The need for diagnostic teams will not increase significantly in the future
  - Without the effect of backlog only 0.4 additional diagnostic teams would be needed to meet the need in 2026
  - Majority of need driven by the CBSA
- Slowing birth rates in West and South Texas actually lessen the need for future autism diagnoses
- The current number of diagnosis team leads in the market is insufficient
- Provider retirement and the need for additional diagnoses increase this need in the future

	2016	2021	2026
Demand	5.7	5.9	6.1
Supply	5.3	5.2	4.7
Need*	(0.4)	(0.7)	(1.4)

- **Does not include effects of backlog, provider productivity variations, or assessment model variations*
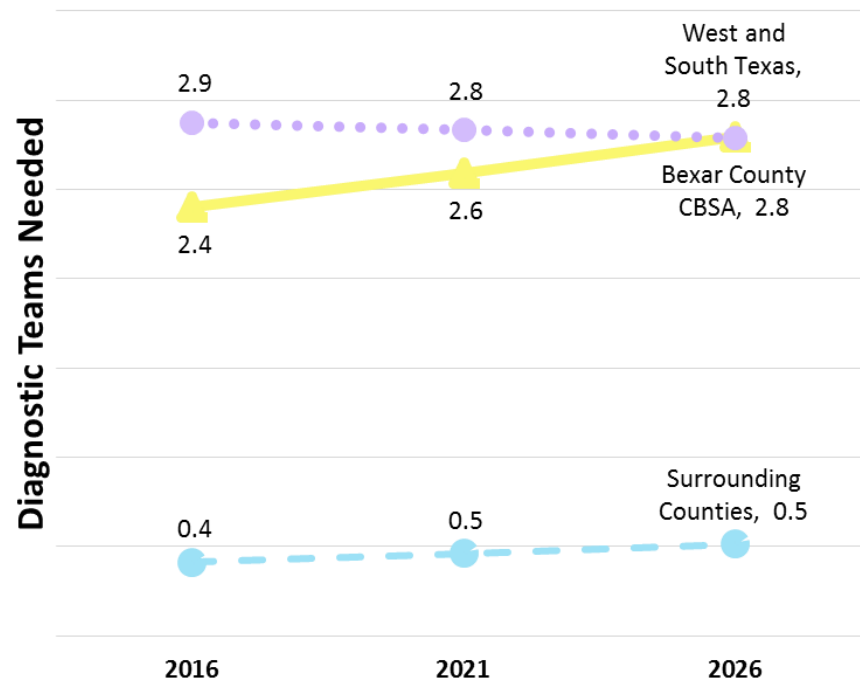
Area	Historic Birth Rate Trend	Teams Needed			10-Year Incremental Team Need
		2016	2021	2026	
Bexar County CBSA	7.8%	2.4	2.6	2.8	0.4
Surrounding Counties	11.6%	0.4	0.5	0.5	0.1
West and South Texas	-1.5%	2.9	2.8	2.8	-0.1
All Areas	**2.9%**	**5.7**	**5.9**	**6.1**	**0.4**

Provider Demand – Treatment – ABA Therapy

Early and comprehensive ABA therapy is viewed as one of the most effective interventions/treatments for ASD

- Although there is limited conclusive research, top interventions which could be considered "educational or behavioral" currently being used in the U.S. for children with ASD include[1]:
  - Speech Therapy;
  - Visual Schedules;
  - Applied Behavioral Analysis (ABA);
  - Social Stories; and
  - Picture Exchange Communication System (PECS).
- Our analysis seeks to better understand and estimate demand for ABA services
- Applied Behavior Analysis (ABA) is the application of the principles of learning and motivation from Behavior Analysis, and the procedures and technology derived from those principles, to the solution of problems of social significance[2].
- ABA is almost exclusively provided by Board Certified Behavioral Analysts (BCBA, BCBA-D)

Provider Demand – Treatment – ABA Therapy
Limitations of time, funding, service availability, and other factors often make following an ideal ABA schedule unrealistic.

- A key factor in determining the demand for BCBAs is the number of ABA therapy hours recommended per child

- In an ideal situation, children with autism would attend ABA therapy sessions on a full-time or nearly full-time basis, as early intervention can significantly impact outcomes. Therapy would continue part time throughout school and transition years for children with IDD

Age	Ideal ABA Hrs / Wk		Realistic ABA Hrs / Wk		Current Avg Hrs / Wk	
	Low Funtioning	High Funtioning	Low Funtioning	High Funtioning	Low Funtioning	High Funtioning
0-3	40	30	30	10		
4-6	30	15	8	4		
7-11	12	-	4	-		
12-18	12	-	4	-		
18-25	30	-	8	-		
26+	-	-	-	-		

- Unfortunately, this ideal situation is not easily achieved. Factors such as payment pressures and time commitments often make this schedule impractical

- Realistic schedules are not likely typical of children in the CBSA. Access to services, particularly in after school time slots, can require years on waiting lists to achieve

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Provider Demand – Treatment – ABA Therapy

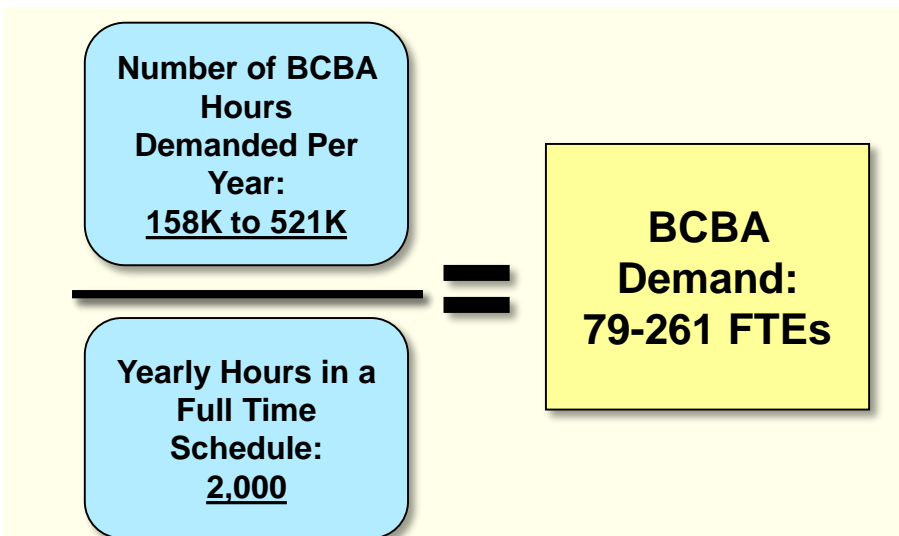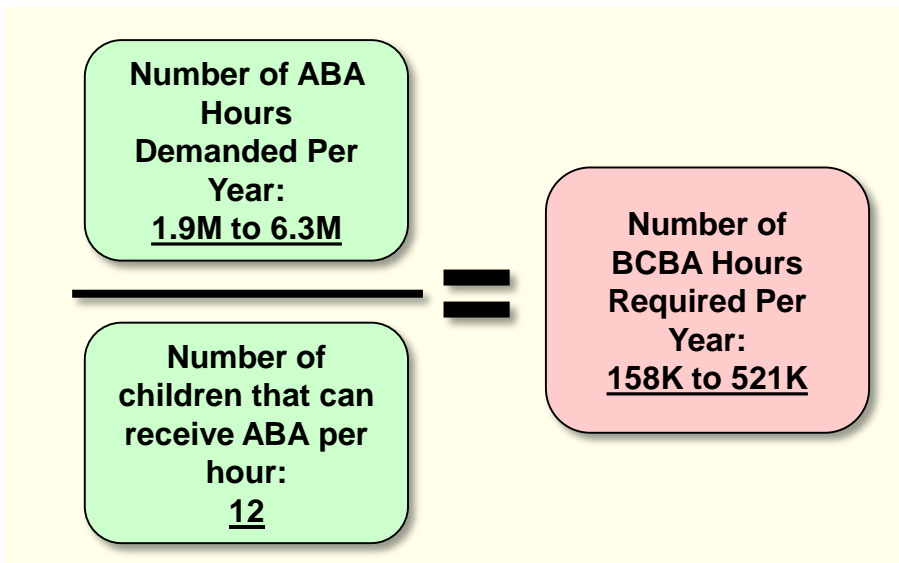*The San Antonio CBSA has a need for between 2 and 6 million hours of ABA therapy per year*

- Under the assumption that 40% of the population with autism has a intellectual disability[1,2,3], there are an estimated 12,100 low functioning and 18,200 high functioning individuals with ASD

- Multiplying each age group by its corresponding number of ABA hours results in a total need of ~2-6 million hours per year in the San Antonio CBSA

- The total number of ABA hours is over 3.25 times more under an ideal model than under a realistic model

Age	Total Pop with ASD	ABA Hrs / Wk		Total ABA Hrs/ Week		ABA Hrs/Yr (Millions)	
		Low Funtioning	High Funtioning	Realistic	Ideal	Realistic	Ideal
0-3	889	30 - 40	10 - 30	16,006	30,233	0.8	1.6
4-6	1,123	8 - 30	4 - 15	6,290	23,589	0.3	1.2
7-11	2,276	4 - 12	-	3,642	10,927	0.2	0.6
12-18	3,288	4 - 12	-	5,261	15,784	0.3	0.8
19-25	3,310	4 - 30	-	5,297	39,725	0.3	2.1
26+	19,450	-	-	-	-	-	-
Total	30,338			36,496	120,258	1.9	6.3

Provider Demand – Treatment – ABA Therapy
The number of BCBAs needed to provide the minimum number of hours of ABA therapy in the CBSA is likely well over 80 FTEs

- ABA therapy is often provided though a leverage model
  - BCBAs supervise extenders including registered behavior technicians (RBTs) and BCBA assistants (BCaBAs) that provide one on one therapy with children
  - According to interviews the generally accepted maximum number of extenders per BCBA is 12
- Under this model the total number of children that can receive ABA therapy under a fully leveraged BCBA is 12
- Between 79 (realistic) and 261 (ideal) fully leveraged BCBAs would be able to support market demand for ABA therapy. This demand may be understated due to variations including:
  - Number of extenders per BCBA
  - Percentage of time spent supervising therapy (ex. 80% supervision, 20% administrative duties)

Number of ABA Hours Demanded Per Year: **1.9M to 6.3M**

Number of children that can receive ABA per hour: **12**

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Number of BCBA Hours Required Per Year: **158K to 521K**

Number of BCBA Hours Demanded Per Year: **158K to 521K**

Yearly Hours in a Full Time Schedule: **2,000**

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BCBA Demand: 79-261 FTEs

Provider Demand – Treatment – ABA Therapy
Population growth will drive an increased need for ABA therapy in the future

Future BCBA Demand – San Antonio CBSA
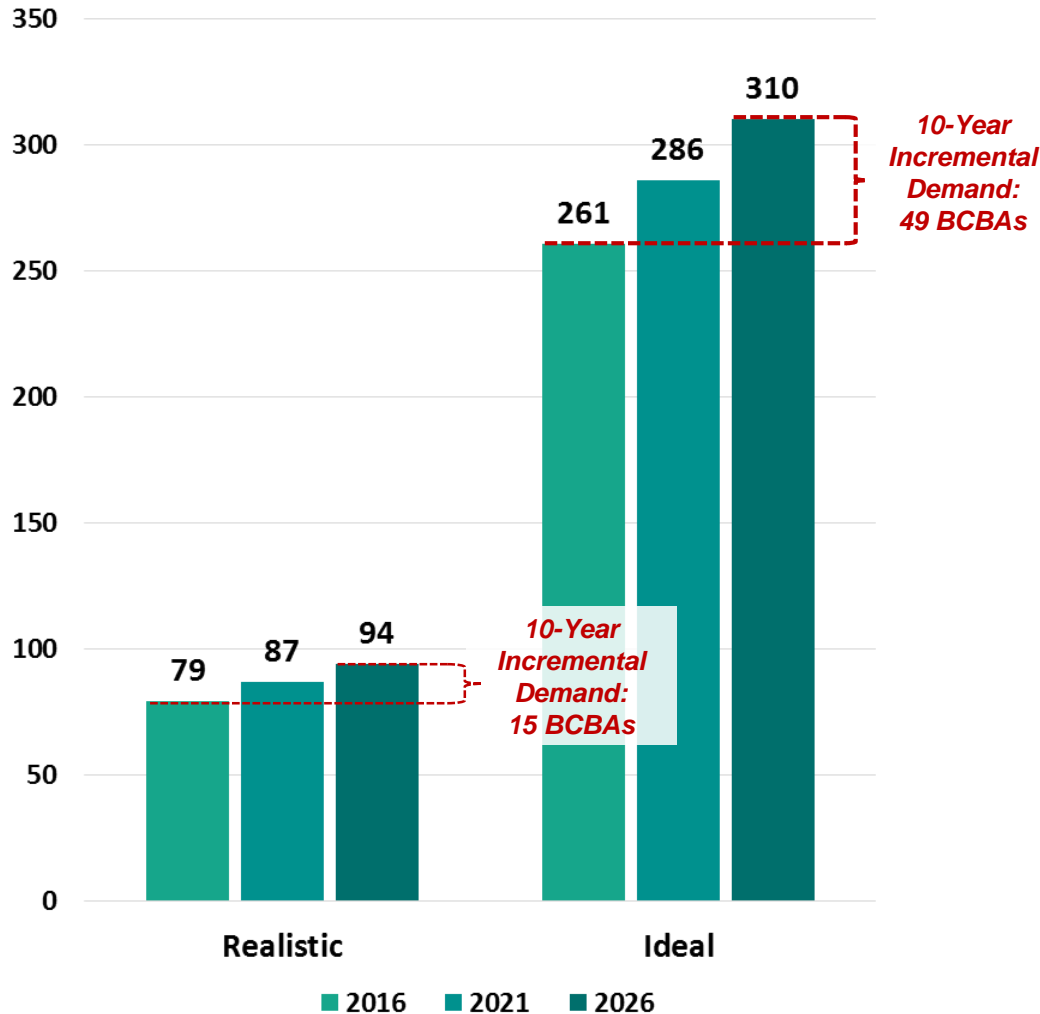
- By 2026, the San Antonio CBSA will need between 94 and 310 fully extended BCBAs in the market to meet the need for ABA therapy

  - 15 – 49 incremental providers needed to serve the ~5,000 additional people with ASD

- Demand will increase by ~10% in just 5 years

- Need increases most significantly under the ideal model

  - Due to the greater number of hours required per person

Provider Demand – Treatment – ABA Therapy

The current supply of BCBAs in the market is not sufficient to meet the future or current need for ABA therapy

- Even under a realistic model, the supply of BCBAs in the San Antonio CBSA is not adequately meeting the demand for ABA therapy

  - Undersupplied by 11 providers

  - 86% of need met

- Over 190 BCBAs would be needed to provide the recommended number of ABA hours to everyone with ASD

- The need for providers is even greater when accounting for future population growth
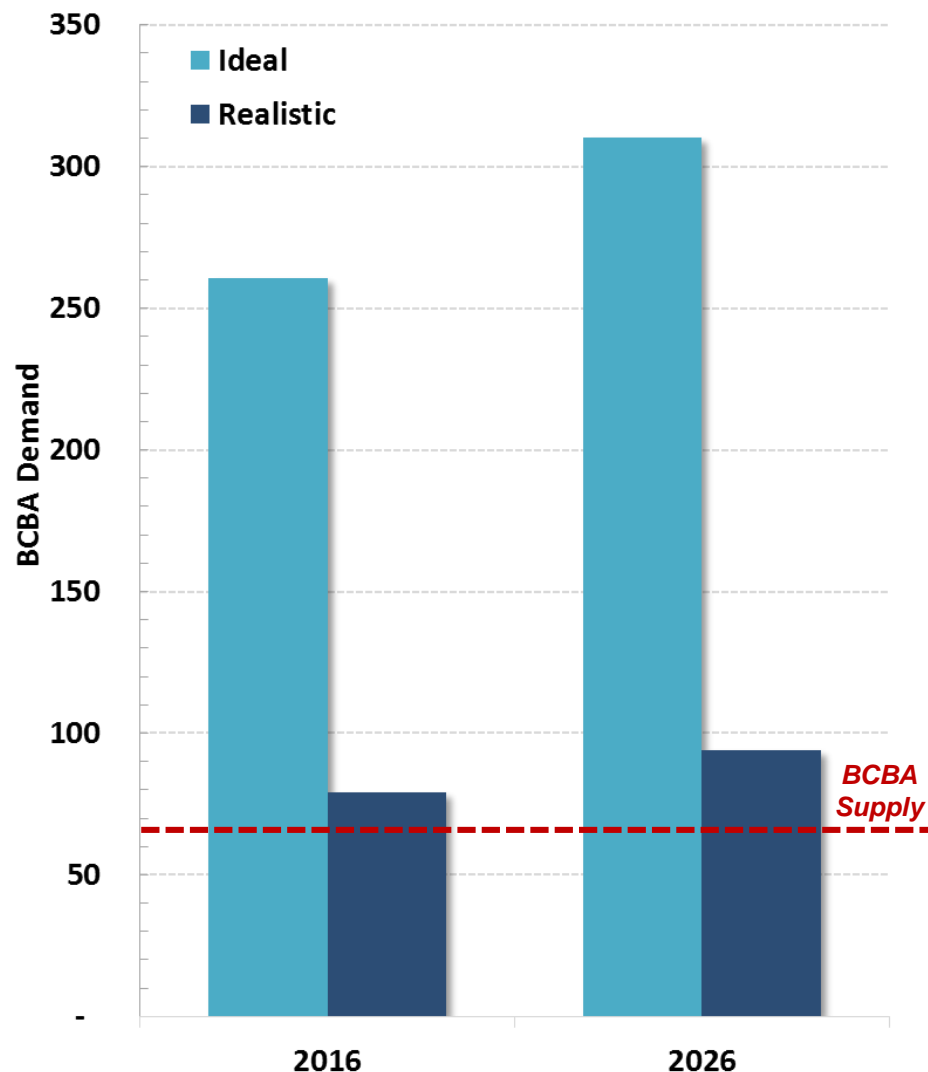
Model	Current Supply	Demand 2016	Demand 2026	Need 2016	Need 2026
Ideal	68	261	310	(193)	(218)
Realistic	68	79	94	(11)	(19)

Summary of Market Demand

- The ASD prevalence rate varies most significantly based on gender and race/ethnicity mix
  - CBSA average prevalence rate of 1 in 79 people
    - High: 1 in 45 Low: 1 in 100
    - Areas such as Lackland Airforce Base that are disproportionately male or white (not Hispanic or Latino) have higher than average prevalence rates
- A significant portion of the population in the San Antonio CBSA is living with ASD
  - An estimated 30,000 people across the CBSA with over 23,000 in Bexar County
  - Overall economic impact estimated at over $2 billion
- The current supply of key providers falls short of the market demand
  - 10-year incremental need of 0.4 diagnosis team leads FTEs and 11 – 193 BCBA FTEs
    - Likely greater due to unmeasurable variables including backlog, provider productivity, and extender use
- Provider need will increase as the number of people with ASD grows and existing providers retire
  - Population growth will drive an additional ~2,500 people with ASD every 5 years
  - Diagnosis team need will increase by 28% to 1.4 teams
  - Incremental need of 8 – 25 BCBAs
  - Market has not demonstrated ability to train/attract providers equivalent to market need