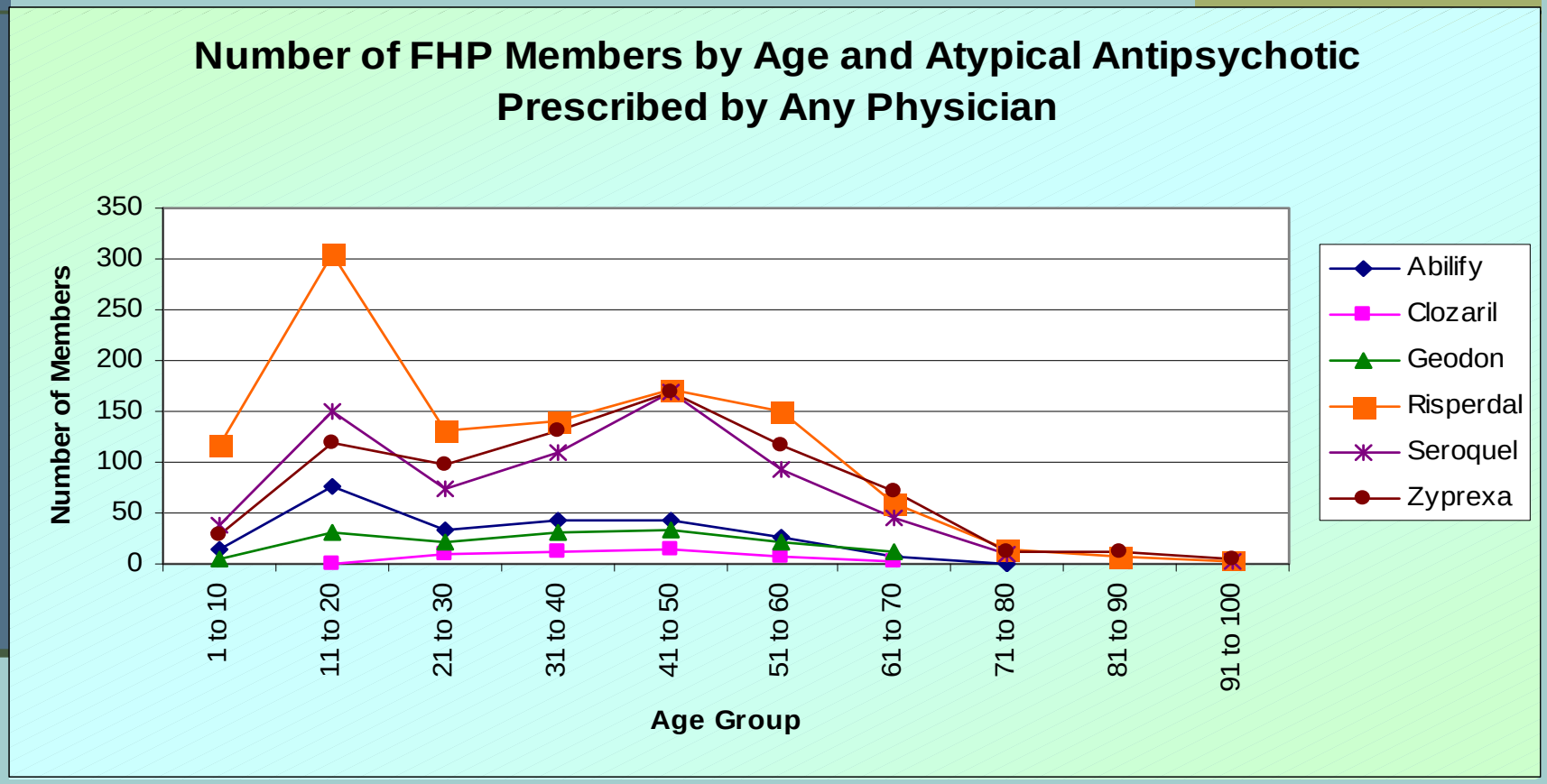
Children On Psychotropic Medications

Considerations for Systematic Care of Children Using Rational Psychopharmacology as Part of an Overall Treatment Strategy

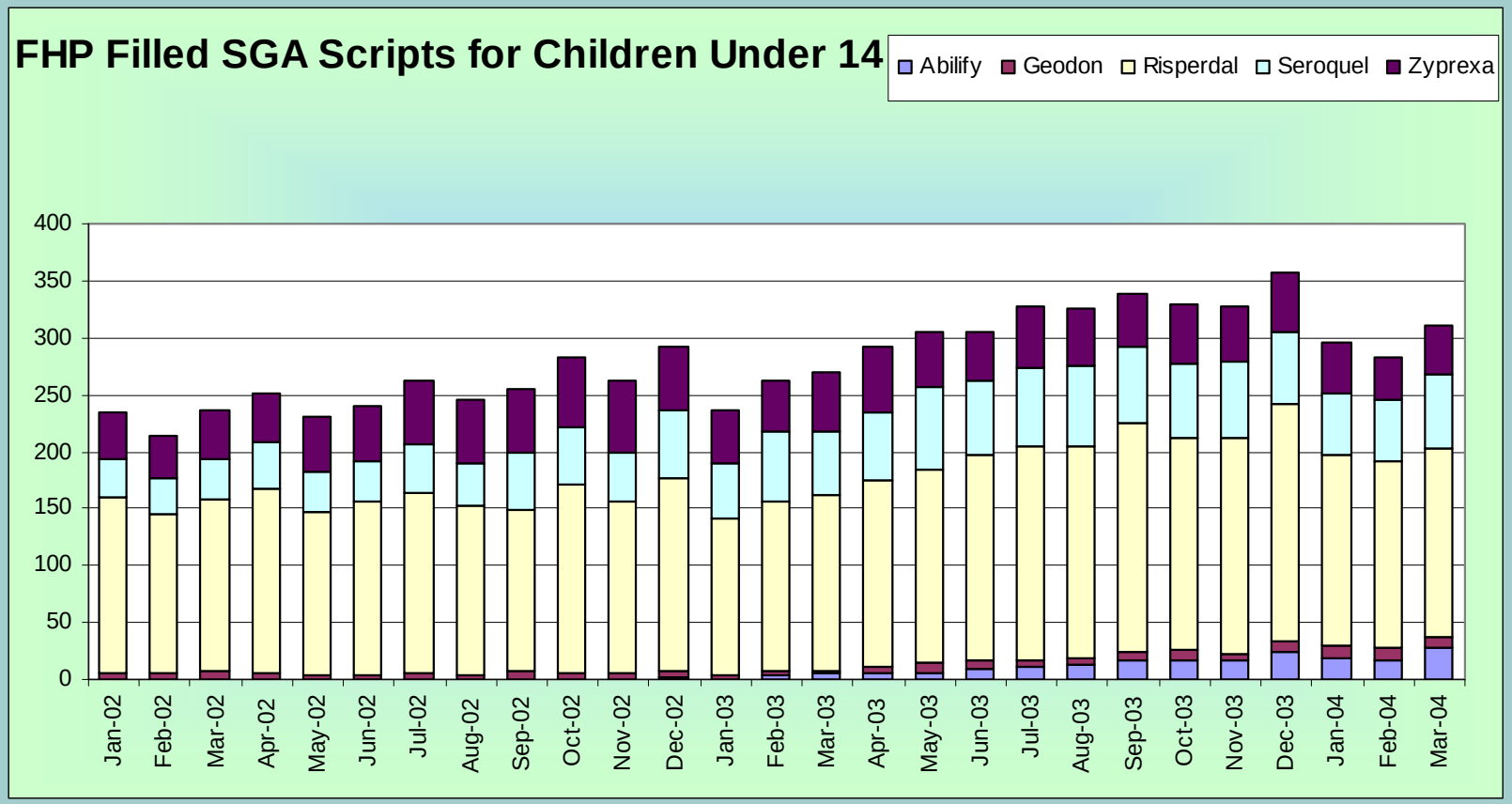
Presented to Gabriel Myers Workgroup by Dr. J. David Moore, M.D.,DFAPA, Medical Director, ValueOptions, July 24,2009

Community Trends: The Increased Use of Atypicals in Children Under Fourteen



In 2004, the staff at the TRSC began reviewing atypical antipsychotic use by age groups. It was at that time that we noticed a significant peak in the child population.

Community Trends: The Increased Use of Atypicals in Children Under Fourteen



Upon further investigation, we found the number of prescriptions for children under fourteen was increasing.

Defining the sample and developing the tools

- A population of 478 children under the age of fourteen was identified as having filled a prescription for an atypical antipsychotic and having a medication management visit at a Regional Care Center within 60 (+/-) days of the fill date.
- A sample of 234 audits of complete treatment records was used to establish a 95% confidence level (+/-5%).
- In 2004, an automated tool was developed and used to capture treatment record data on the defined sample.

Diagnoses Found in Charts

PRIMARY DX (n = 233)		
ADHD	138	59%
Other Mood Disorders	19	8%
Other Mental Disorders	18	8%
Disruptive Behavior Disorder	15	6%
Bipolar Disorder	12	5%
Stress Disorder	6	3%
Developmental Disorder	8	3%
Depression	6	3%
Other Psychotic Disorders	4	2%
Misc	5	2%
Anxiety Disorder	2	1%

The top diagnoses for boys and girls of all races was ADHD.

No significant difference was found when analyzing this data by race.

Secondary Diagnoses found in Charts

SECONDARY DX (n = 166)		
Disruptive Behavior Disorder	45	27%
ADHD	34	20%
Other Mental Disorder	20	12%
Other Mood Disorder	14	8%
Misc	12	7%
Bipolar	11	7%
Other Psychotic Disorder	10	6%
Stress Disorder	9	5%
Developmental Disorder	6	4%
Anxiety Disorder	5	3%

- **33% of children with a primary diagnosis of ADHD who had documented secondary diagnoses were diagnosed with Disruptive Behavior Disorder.**
- **Disruptive Behavior Disorder was the most frequent secondary diagnosis for boys and all racial groups. ADHD was most frequent for girls.**
- **24% of children with a secondary diagnosis of ADHD had a primary diagnosis of Bipolar Disorder.**

Axis II Conditions on Chart and not on Claims Forms

AXIS II (n = 211)

Deferred Diagnosis	136	64%
Other Conditions of Clinical Attention	37	18%
Mental Retardation	28	13%
Developmental	7	3%
Misc.	3	1%

Medical Conditions Documented in Charts

- **AXIS III (n = 107)**

Asthma	37	35%
Hearing problems	10	9%
Seizures	9	8%
Drug exposure	7	7%
Allergies	6	6%
Overweight/obese	6	6%
Enuresis	6	6%
Heart murmur	5	5%
Headache	4	4%
Speech problems	4	4%
Ear infections	4	4%
Diabetes	3	3%
Kidney problems	3	3%
Vision problems	3	3%
Failure to thrive	3	3%
Encopresis/bowel	3	3%
Eating problem	3	3%
Head Trauma	2	2%
High blood pressure	2	2%

35% of the total sample were diagnosed with asthma.

The diagnosis from the most recent medication visit was recorded, however in over 30% of the cases, documentation had not been updated in over a year .

6% had an Axis III diagnosis of obesity.

AXIS IV Issues (n = 140)

Primary Support Group	90	64%
Educational Problems	71	51%
Problems Related to the Social Environment	18	13%
Economic Problems	4	3%
Occupational Problems	3	2%
Problems Related to Interaction with the Legal System	2	1%
Other Psychosocial and Environmental Problems	2	1%

60% of children sampled had Axis IV documentation.

Of those, 64% had problems with their primary support group, most often with a history of abuse or family conflict.

Risk Factors: History of Diabetes and/or Cardiovascular Disease

- Of the 53 members with documentation of questions regarding a family history of diabetes, 28% indicated a relative did have diabetes. Three children were already diagnosed with diabetes at the time the atypical was prescribed.
- Of the 45 members with documentation of questions regarding a family history of cardiovascular disease, 27% indicated a relative did have heart problems. Five children were already diagnosed with cardiovascular disease at the time the atypical was prescribed.

Initial Medication Trials

Initial Meds		
Anti-anxiety Agents	11	5%
Anticonvulsants	22	9%
Antidepressants	64	27%
Antimanics	6	3%
Antiparkinson Agents	1	0%
Antipsychotics	102	44%
Blood Glucose Med	4	2%
Cardiac	43	18%
CNS Stimulants	103	44%

90 (38%) children were on 2 or more types of psychotropics.

18 (8%) were on 3 or more and 1% were on 4 types of psychotropic medications.
No racial or gender disparities existed.

Why Prescribe an Atypical?
Outpatient Utilization

Type of Service (n = 234)	African American	Hispanic	Caucasian	Multi-Racial	All	All Kids <14		Female	Male
Assessment	7%	9%	8%	9%	8%	12%		10%	7%
Day Treatment	6%	2%	1%	0%	2%	1%		2%	3%
FARS / CFARS	5%	6%	5%	6%	5%	7%		7%	5%
HBRS	6%	1%	1%	6%	2%	4%		0%	3%
ITOS	3%	9%	5%	14%	5%	6%		4%	5%
Other Services	12%	11%	12%	7%	11%	14%		9%	12%
Outpatient Groups	3%	1%	3%	0%	3%	2%		2%	3%
Outpatient Individual and Family	9%	4%	10%	8%	9%	13%		12%	9%
Outpatient Meds	13%	13%	14%	13%	14%	11%		16%	13%
Rehab	0%	1%	0%	0%	0%	0%		0%	0%
Specialized Case Management	5%	4%	3%	3%	4%	3%		3%	4%

Children in the sample received more medication management and less outpatient therapy services than the rest of the population.

Why Prescribe an Atypical?
Target Symptoms

Target Symptoms (n = 208)		
Severe Aggressive Bx	96	46%
Anger	49	24%
Moody	47	23%
Impulsivity	40	19%
Psychotic Sympt	34	16%
Problems Sleeping	34	16%
O/D	34	16%
Hyperactive	23	11%
Suicidal Ideation	11	5%
Depression	6	3%
Concentration	3	1%
Sexually Inappropriate	3	1%
Obsessive/Compulsive	2	1%
Other	2	1%
Homicidal Ideation	1	0%

- **Target symptoms were used to explain why the atypical was prescribed.**
- **Some of the symptoms listed in the chart included: being admitted to the Crisis Stabilization Unit, torturing animals, chasing classmates with knives, school suspensions, self mutilation and repeated threats to burn others.**

Risk Factors:

Discussions with Parents/Guardians

- In 82% of the cases reviewed, there was no documentation of the parent/guardian receiving information about the illness or target symptoms for which the medication was prescribed.
- 70% of the records reviewed documented discussion of potential medication side effects.
- 15% of the charts reviewed provided documentation of discussion regarding the need to take the medication every day as prescribed and NOT to stop without discussing it with the physician.
- In 8% of the cases, there was documentation of the potential consequences of partial or non-compliance with medications.

Documentation of Important Physical Findings

Percentage of children who had wt & ht measured at least once (n = 234)			
Race/Gender	Members with Height & Weight	Total Members Reviewed	% with Measurable BMI
African American	12	59	20%
Asian	0	1	0%
Caucasian	28	124	23%
Hispanic	5	32	16%
Other/Multi-Racial	1	12	8%
Unknown	0	6	0%
Female	15	60	25%
Male	28	174	16%

- **Only 88 of the 234 cases reviewed (38%) had height and weight recorded at least once in the chart.**
- **Recording height and weight seemed to have more to do with where the child was seen rather than if the member was in a high risk category. 67% of members at one facility had height and weight recorded compared to 11% at another location.**

Risk Factors: BMI by Race and Gender

Percentage of children who ranked in the 85th percentile or higher on the BMI (n = 88)			
Race/Gender	Members in 85th Percentile	Members with Height & Weight	% with High BMI
African American	12	20	60%
Asian	0	0	N/A
Caucasian	28	51	55%
Hispanic	3	14	21%
Other/Multi-Racial	1	2	50%
Unknown	0	0	N/A
Female	15	23	65%
Male	28	65	43%

- Almost half of all children who received a height and weight measurement were ranked in the 85th percentile or higher for BMI.
- African Americans and girls were in the highest risk group for BMI.

Why Prescribe an Atypical? Outcomes:

CFARS Initial Assessment

Domain	Total Sample n = 206	Caucasian n = 107	All Minorities n = 99	African Americans n = 55	Hispanics n = 26	Members Served
Diagnostic Domain						
Depression	3.22	3.29	3.14	3.04	3.50	3.14
Anxiety	2.61	2.88	2.33	2.47	2.31	2.62
Hyperactivity	4.83	4.88	4.77	4.85	3.92	4.29
Thought Process	2.06	1.84	2.29	2.11	2.96	1.42
Cognitive Performance	3.76	3.56	3.97	3.96	4.00	3.48
Comorbid Domain						
Medical/Physical	1.97	1.91	2.04	2.00	2.08	1.86
Traumatic Stress	2.67	2.76	2.57	2.20	3.00	2.94
Substance Abuse	1.07	1.09	1.04	1.00	1.08	1.06
Psycho-Social Domain						
Family Relationships	3.69	3.69	3.70	3.69	3.77	3.17
Behavior in Home Setting	4.13	4.22	4.02	3.82	4.19	3.86
ADL Functioning	2.29	2.14	2.44	2.20	2.81	1.75
Socio/Legal	1.75	1.79	1.71	1.67	1.62	1.54
School	3.95	3.71	4.21	4.22	5.08	3.52
Risk Domain						
Danger to Self	1.82	1.83	1.80	1.78	1.85	1.54
Danger to Others	3.00	3.01	3.00	2.84	2.96	2.46
Security/Management Needs	2.66	2.58	2.74	2.38	3.15	2.10
Global Domain						
CGAS	50.51	52.37	48.49	48.75	45.54	52.48

- **223 children were initially assessed for functional impairment. Overall results showed moderate problems in hyperactivity and behavior in the home setting categories.**

Why Prescribe an Atypical? Outcomes:

CFARS Initial Assessment

Domain	Total Sample n = 223	Members Served N = 3637
Diagnostic Domain		
Depression	3.18	3.14
Anxiety	2.63	2.62
Hyperactivity	4.81	4.29
Thought Process	2.09	1.42
Cognitive Performance	3.74	3.48
Comorbid Domain		
Medical/Physical	1.93	1.86
Traumatic Stress	2.62	2.94
Substance Abuse	1.06	1.06
Psycho-Social Domain		
Family Relationships	3.65	3.17
Behavior in Home Setting	4.11	3.86
ADL Functioning	2.25	1.75
Socio/Legal	1.80	1.54
School	3.73	3.52
Risk Domain		
Danger to Self	1.84	1.54
Danger to Others	2.95	2.46
Security/Management Needs	2.63	2.10
Global Domain		
CGAS	50.49	52.48

- The initial results were compared with the initial assessments of all children under fourteen. With the exception of substance abuse and traumatic stress, the children in the sample scored more severe in every functional area.
- The largest differences were noted in thought process, hyperactivity and security / management needs.

Changing Practice Patterns and Lowering Risk: Interventions

Allergies _____
PCP _____
Phone number _____

Family History: Diabetes _____
Obesity _____
Heart Disease _____
Hypertension _____

Record on All Medications During Every Visit											Record if Risk Factors Warrant			
Date	Medication /Dosage	Freq	Target Symptoms	Physician	D/C	Weight	Height	Abd Girth or BMI	Blood Pressure	Heart Rate	Blood Sugar	Lipid Profile	Other Labs	AIMS

Created by Manatee Glens Corporation. Draft revision by FHP 10/2004

Current Prescribing Issues and Changes

Psychotropics for Children 0-5 for Past 6 Months

Antianxiety Drugs	Antidepressants	Antipsychotics/ Antimanics	Mood Stabilizers	Stimulants
1280-Average age 2.65	122-Average age 4.35	159-Average age 4.44	714-Average age 3.43	914-Average age 4.6
1212 kids prescribed Hydroxyzine	Mirtazapine most common (n=33)	132 kids on Risperidone	Includes Keppra as most common	210 kids on Focalin as most common

Current Prescribing Issues and Changes

Psychotropics for Children 6-13 for Past 6 Months

Antianxiety Drugs	Antidepressants	Antipsychotics/ Antimanics	Mood Stabilizers	Stimulants
1349- Average age 9.4	2063- Average age 10.21	2967- Average age 9.89	2377- Average age 9.79	10,113- Average age 9.55
1098 kids prescribed Hydroxyzine	Fluoxetine most common (n=447) and Mirtazapine (n=435)	1507 kids on Risperidone (191 kids age 6 on Risperidone)	Includes Keppra as most common	Most common was some type of Amphetamine and Methylin

Recommendations

- Focus Efforts on the appropriate use of medications for the clinically meaningful target symptoms as clearly defined by the child and the legal guardian.
- Have a thorough assessment (to include the comprehensive assessments if done) available prior to/at the time of Medication Evaluations
- At every medication management visit, the adult guardian (with authority to sign for treatment) must be present and an ACTIVE member of the treatment team for the child
- Develop educational trainings for prescribers, case managers, and other treatment team members on the Florida Guidelines for the Psychopharmacological Treatment of Children (http://flmedicaidbh.fmhi.usf.edu)

Recommendations

- Encourage the use of non-pharmacological treatments that are recognized as effective and are paid for by payors!
- Assist the Legislature, Judges, parents, schools, agencies, and all others that approved or off-label prescribing of psychotropic medications should be at the end of the line for treatment of children and not at the front whenever possible.
- Poisons in/Poisons out—It should be the responsibility of all concerned when we are prescribing these medications to children.
- Documentation from everyone with coordination being the responsibility of everyone involved with the child