

OCTOBER 18, 2008

Best Practices in Providing Communication & Educational Services to Students with AS (and other severe disabilities) in Inclusive Settings

Workshop presented 10/18/08 in San Diego

Sponsored by the

Angelman Syndrome Foundation

DR STEPHEN CALCULATOR

Communication Intervention Considerations

Augmentative and Alternative Communication (AAC)

- **Augments** (Supplements) existing methods of communication
 - All individuals communicate
 - May be subtle
 - May be nonconventional
 - Often successful (especially with parents)

- **Alternatives for existing methods of communication**
 - Challenging behaviors
 - Idea of functional equivalence
 - Functional communication training

mouthng something

- request
- sensory
- attention
- escape

Best Practices

How would you respond to a parent who argues his daughter does not need AAC; *he and his child can interact effectively since he has no difficulty reading her body language and vocalizations?* This little girl exhibits frequent behavior problems at school which you feel stem from her lack of effective means of communication.

Teachers, parents, SLPs

grandparents,

all kids communicate all kids

express needs & wants, clash

goal: be able to communicate
in more situations & listeners
(impact on others)

"what is she trying to communicate?"
fulfilling communicative needs...
function or purpose

Effective interaction - not global

Not functional in other environments

Behavior problems - might be
helped through AAC

Vision: be able to communicate
as much as possible with
as many people and in as
many situations as possible

the story
of John
and
kicking to
escape
give them
an outlet

Best Practices

Students with AS and other Severe Disabilities

- AAC is primary mode of communication
 - Little or no functional speech
- Severe cognitive challenges
- Require significant levels of assistance (partial participation) with life skills – adaptive behaviors
- Frequently co-occurring challenges (sensory, emotional, motor, health, etc.)

Best Practices

"principal = bad guy / gal"
How might you respond to a principal's contention that a particular student is too severely involved to benefit from AAC?

- pushing things
- knocking things over
- if child can't speak they can benefit from AAC

Socialism – outgoing.

No prejudice.

They make kids feel good.

Ability awareness

Communication Intervention Considerations

Remember, AAC is a 'SYSTEM' and not a 'THING'

Props vs. Tools

4 AAC Components

- Symbols (Objects -> Printed words)
- Aids
- Strategies (Icon prediction and dynamic displays)
- Techniques (Usually direct selection)

Devices are not the key, and they will reject it if they don't see it as helping or abandonment

Devices → advantage, mini MP, cheap talk symbols

Picture this → photographs first
(probably before symbols)

present ability versus future ability
objects before photos before symbols

Mayer
Johnson
symbols

I want
observations
- data analysis
- trending studies

Assessment Considerations

MODELS OF AAC

- *Communication Needs Model*
 - Document students' communication needs
 - **Ecological Inventory**
 - What doing, with whom, where, and when?

follow, in-situ,

"authentic assessment" is the goal, collect data to reflect child's abilities

Assessment

- Determine how many of these needs are met through current communication techniques
- Reduce number of unmet communication needs through AAC interventions

collecting data

Is she getting better or not at the skill?

Assessment

- *Participation Model*
 - Identify participation patterns and communication needs
 - Types of partners (peers, teachers, etc.)
 - Familiar with student/familiar with AAC system

1. collect data on J.

2. tabulate every week

3. look at rates of change (slow)

4. to predict changes/impacts

3. not standardized tests no good.

distorted, low expectations
very wrong ...

no law that says you need

standardized tests

playground examples

- 1. turn-taking
- 2. asking for help (need a push)
- 3. not eat sand ...
- 4. sharing/greeting

watch the child in the real environment meet the real challenges

foster real participation

get the kids to program the AAC devices (4st, 2nd)

Assessment

- Assess opportunity barriers
 - Policies (union policies)
 - Practices (not permitted in PE?)
 - Knowledge
 - Skills

Assessment

- Attitudes – expectations of student
- Access – environmental adaptations
 - Operational requirements
 - What does the AAC device or system require?

Critical Thinking

- What are the operational requirements associated with a single switch speech generating device (e.g. the BIGmack) that has a symbol appended to it?

how will she
really use this?

Best Practices

Support Model of AAC and Inclusive Education (Calculator)

- Providing *supports* to children, teachers, peers and others
- *Participation* in curriculum (gen. ed. and other)
- Addressing individual needs *appropriately* and *systematically*
- *Defining* 'severe disabilities' in terms of *level of support* required by children and also others

push for natural
supports

"Why don't we try?

Here's one way ...

Best Practices in AAC Services

Factors Parents Cited as Most Important in **Fostering** Best Practices in Inclusive Settings (Themes)

Collaboration	Classroom Modifications
Involvement of classmates	Parent involvement ("squeaky wheel")
Competent SLP w/ vested interest	Shared philosophy of inclusion
Caring educators	Administrative support

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Angelman kids are different
and to take preferences & styles
into account will probably
be more successful

Best Practices in AAC Services

Factors Parents Cited as Most Important in **Impeding** Best Practices in Inclusive Settings (10 Common Themes)

Quality of paraprofessional	Limited time for collaboration
Educators' lack of knowledge about AS	Lack of a clear vision
Lack of administrative support	Lack access to consultants
Low expectations	Lack of knowledge about AAC
Money	How much child is actually learning

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Assessment

Implications for assessment:

- Beware of standardized tests?
- **Authentic Assessment**
 - Discrepancy analyses over time
 - Changes in attitudes over time
 - Ability to benefit from instruction
 - Rate of Change
 - Trajectory of Change (predicting future)



don't take data week-to-week
look on longer timescales

Assessment

- Need to assess for today as well as tomorrow
- Need for ongoing assessment, especially with changes in partners and settings

dreams / nightmares

Some
dreams
and
fears
as
typical
lady

Best Practices

Implications for assessment (continued):

Avoid Device abandonment

- Match features of AAC systems to capabilities and needs of kids:
 - Cognitive
 - Motor (? Ability to isolate a finger for pointing)
 - Social (Take advantage of interests in other children)
 - Stress increased levels of PARTICIPATION

worst case
safety, loneliness, inactivity

best case

social life, work, on their own
(semi independently)

keep your eyes on the prize
outcome

"Factored chaining"
very effective

Talking picture albums —
Attachment® me

Angelina kids really understand social context that is a strength, try tagging give more time to process

- Language
- Behavior
 - Motivation to communicate
 - Reasons and Opportunities
 - Learned helplessness

A DOS a good test, play-based federal dollars require accountability for programming

Best Practices

How might feature matching be a useful assessment strategy that lessens the likelihood a student will abandon an AAC system?

Neural ophthalmologist (SDCH)
vision in AS-folks

Souvenir books, more pictures,
What do you do between hi & bye
relating information about interests
and experiences

Communication Intervention Considerations

- Some factors that influence students' using AAC systems when they have access to them (Johnston et al. 2004)
 - **Response effort** (Physical and cognitive)
 - **Rate of reinforcement** (frequency; valued and ecologically valid)
 - **Immediacy of reinforcement** (relates to responsiveness of partners)
 - **Quality of reinforcement** (better outcomes when you use your AAC system)
 - **Interactions** between these other variables

Access to AAC fosters development of speech.

15. two minute activities matching your child's attention span

foreign language courses are great.

as they get older they are able to focus & attend

doing test for sake of testing, very damaging
these tests are not effective, not helpful

PTI - a good test to not penalize
for motor ability, do not pigeon-hole
do not limit

Vision testing hard ophthalmologist

functional vision assessment -

visual impairment advocates
older kids with AS
studying their eye problems

communicatively lazy ...

ecologically study choices

ABA training

Question of the day. Making conversation with Johanna. Let the other kids use the AAC and model ...

Communication Intervention Considerations

- **Least dangerous assumption** (Donnellan, 1984)
 - Make assumptions that, if wrong, will have least negative effect on student.
 - Aim high in selection of AAC systems
 - Challenge students beyond their comfort level
 - Begin with systems that will have immediate impact on quality of life
 - Consequences of a limited vocabulary set?

don't set limits or constraints

Best Practices

Assessment (continued)

Dreams and Nightmares

can help clarify what
should and should not be
in IEP

Best Practices

Why is it important to actively seek *parents' priorities* in determining the content of an AAC program?

How might this influence the likelihood of *device abandonment*?

How might we solicit *input from the children themselves*, directly and/or indirectly?

parents need to reinforce usage of AAC

Best Practices

- "The purpose of all our interventions, programs, indeed schooling in general is to enable all students to actively participate in their communities so that others care enough about what happens to them to look for ways to include them as part of their community." (Ferguson)

Best Practices

- What types of supports are you and other members of your team providing that are consistent with Ferguson's vision? (e.g. using AAC to develop friendships)
- How are you and your team possibly impeding this vision? (e.g. teaching my child to request things already within his or her reach).

Best Practices

- In selecting AAC methods make sure to consider:
 - **Present** as well as **future needs**
 - Means of fostering **language acquisition**
 - Full range of **communication needs** (not just requesting)
 - Go beyond 'more' 'eat' 'drink' and 'toilet'
 - **Ease of acquisition**
 - Short and long term (multiple AAC methods)
 - **Portability** (transporting aids from place to place)
 - Consider leaving different systems in different locations

ask questions w/ device

when you are in school from 3-21

It means you need to have skills
that the community will value
Your child will be segregated, no
one will help with jobs...

- impeding a vision (asking for things
already in view)

re-defining the help sign

Renting/mo/less
Leasing beyond trial...
Meet future needs...

doesn't get people close to you.

Communication Intervention Considerations

- In selecting AAC methods make sure to consider:
 - **Comprehensibility** for full range of listeners, especially peers
 - Be careful with unaided systems (especially signs)
 - *Modified signs* (generalizability and understandability with other interaction partners)
 - *Communication dictionaries*
 - *Enhanced Natural Gestures*



↳ from Dr. Calculator

stephen.calculator@uh.edu

motor planning is problem for
AS kids so sign language
actually isolates the child.

what does it mean when

Communication Intervention Considerations

In selecting AAC methods make sure to consider:

- **Acceptability**
 - to child and family
 - to teachers and others
- **Speed**
- **Supports** for set-up and maintenance
 - Use natural supports whenever possible

help make friends..

Communication Intervention Considerations

In selecting AAC methods make sure to consider:

- **Availability** whenever necessary
- Supports learning of the **curriculum**
 - Integrated objectives (more on this later)
- **Places, places, places**
- Fostering of **friendships** (Show "Voices of Friendship")

Mainstreaming...

Best Practices

Inclusive Education revisited from previous discussions

- Providing supports to Ks, teachers, and others
- Active and meaningful participation in general education curriculum (defined broadly)
- Individualized needs are addressed appropriately and systematically

Teachers have a role, teachers need support & information.

Are they receiving supports they need to make progress goals & ..

Best Practices

Why Inclusive Education?

- Increased *opportunities & motivation* for communication
- Greater access to *responsive partners*
- Interaction with *persons likely to encounter in community*
- Access to partners who provide *social validation* of functional value of AAC applications

Best Practices

Why Inclusive Education?

- *Systematic and sequential curriculum* (general education)
- Goals and objectives *aligned with general education curriculum*
- **NCLBA and IDEA**
- Need to align Sp. Ed. goals with local and state-wide standards
- Law supports raising expectations (Cushing et al. 2005) – (continued)

Best Practices

Why Inclusive Education?

- Sp. Ed teachers report *context for skill development*, especially in relation to AAC use
- Increased *interaction* with peers; increased *social participation*
 - More social interactions and communication opportunities
- *Access* to general curriculum
- Improved *quality* of instructional objectives
- *Perceived* as more capable and "normal"
- Solicit higher academic *expectations*

(Kent-Walsh & Light, 2003; Soto et al. 2001)

Best Practices

Alternative way of viewing inclusive education – beyond mere placement

- *Individualized needs are not compromised*
- *General education classrooms as "contexts" where:*
 - Individualize needs are met (Integrated objectives)
- **Zero exclusion** (from inclusive education)
 - Should not first need to demonstrate ability to benefit
 - Should not need to possess certain skills for candidacy
 - Fitting schools to meet needs of ALL students (Flem et al. 2004)
- Placement in general education classroom is a *necessary but not sufficient component* of inclusion (Beukelman & Mirenda, 2005)

Writing with symbols
Mayer Johnson

Best Practices

Some indicators of effective inclusion

- Availability of appropriate supports
- Curriculum modifications
 - Teachers and others are clear about what to expect and how student is benefiting from exposure to general education curriculum

Be agents of change.

Just putting a kid in a room is not inclusion.

When will Johanna [redacted] learn math?

From the paraprofessional... a lot of debate about that being impossible and costing \$[Calc] dissects the argument refutes the issues, parents cheer!]

It does not cost more. You can be more effective by changing procedures and methods.. Blocking time next week no units

Do not support bad existing policy that contradicts current evidence.

Best Practices

Challenges including Ks with severe disabilities

Teacher Reports (attributed largely to insufficient preparation and lack of access to ongoing supports) (Kent-Walsh & Light, 2003)

- Teacher concerns about lack of educational gains
- Social exclusion outside school
- Unequal status relationships
- Disruptions in other students' learning
- Excessive time needed to support student

[Skipped]

Best Practices

Challenges including Ks w/ AS and other severe disabilities

General education teachers are often confused about why some students are placed in their classroom

Don't grasp how student is intended to benefit from placement in their classes since they do not expect them to keep up with gen ed. curriculum (Downing, 2005)

Good to clarify Gen Ed teacher's roles in relation to special educators'

[Skipped]

Best Practices

■ Inclusive Practices Involving AAC

- Employs **criterion of ultimate functioning** (Brown et al. 1976)
 - Address life goals
 - If a child fails to acquire a skill, will someone else have to perform it for him or her in the future?

[I skipped]

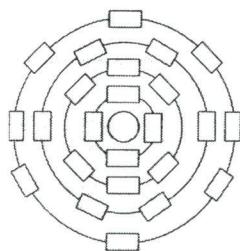
Best Practices

- Inclusive Practices Involving AAC
 - Stresses importance of friendships as well as establishment and maintenance of relationships.

[skipped?]

Best Practices in AAC Services

- Circle of Friends



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[done]

Best Practices

EXERCISE

Circles of Support and Friendship

(SEE HANDOUT)

[done]

Best Practices**Inclusive Practices Involving AAC (continued)****Fosters self-determination**

- Sample *Goal*: Increase self-determination

- *Objective*: Kaitlin will identify which one of two assistants will typically assist her when she needs help with her personal care (e.g. changing her pull-ups)

critical

Best Practices**Support Model for Examining Disabilities**

- *Level of disability* is indicated by the corresponding level of support required by students, along with teachers and others who are assisting them.

Communication Intervention Considerations**Vision After School**

"The purpose of all our interventions, programs, indeed schooling in general is to enable all students to actively participate in their communities so that others care enough about what happens to them to look for ways to include them as part of their community." (Diane Ferguson)

Best Practices

■ Inclusive Practices Involving AAC (continued)

- Uses **natural supports** (Jorgensen, 1992) whenever possible
 - Who would a typical individual turn to in a similar situation?
 - *Least to most intrusive*
 - Aide assists in removing coat, classmate escorts student to desk, classmate sets up the AAC device

Communication Intervention Considerations

Sample of **integrated objectives** that incorporate **natural supports**:

- A classmate will offer Sarah a choice of two books, either of which she is prepared to read to her during silent reading.
- In response to a classmate offering an open hand during Show 'N Tell, Tiffany will relinquish an object in her possession (Sharing and turn-taking)
- Given a friend abruptly ceases pushing him on a swing, Manny will indicate his desire to resume the activity (Recurrence)
- Sean will use his AAC device during free play to request his prone stander, thus providing access to the water table. (RA)

Communication Intervention Considerations

- Lauren will compliment a classmate on a job well done (Near the end of art class she will approach a classmate and use her VOCA to comment on a classmate's drawing) (Social closeness)
- Kaitlin will use her VOCA to indicate she is uncomfortable and wishes to have her position changed (RA)

Communication Intervention Considerations

Teachers and others as *natural supports*:

- Encourage to rely more on comments than questions 
- Model total communication
 - Reinforce notion that all methods of communication are valued (vs. mode devaluation "Help" with bag of chips)
 - Don't ask parents to extinguish successful methods of communication
- Incorporate students' AAC systems into instruction (with students' permission)
- Create opportunities for communication and interaction
- Be responsive to communication attempts

"you look like you had a rough day today ..."

try different types of AAC
in the classroom get people used to it...

Communication Intervention Considerations

Teachers and others as *natural supports*:

- Need to identify communication demands of the curriculum, which is loosely defined (e.g. a school job).
- Need to identify communication opportunities (environmental engineering)
 - Communication/Interaction/Participation

e.g. "Maximizing Independence at Meal times"

a guiding goal ^{under} which all members of the team put objectives ^{under} for that goal.

Best Practices

Teachers and others as *natural supports*:

- Ensure vocabulary of curriculum is accessible
- Modify language input as necessary based on students' cognitive and linguistic abilities
- Create opportunities for communication and interaction
- Be responsive to communication attempts

Best Practices

Consider:

- Who are the students' conversational partners?
- +/- Familiarity with student?
- +/- Familiarity with AAC system?
- Unaided (modified signs vs. enhanced natural gestures) and aided (indiscriminate pointing)
- Places, places, places
- Natural consequences
- Emphasis on natural supports

Best Practices

Credo of Support

Tracy Latimer

[done]

Communication Intervention Considerations

Natural and Integrated Supports

- Teach AAC skills in conjunction with **skill clusters** (Guess & Helmstetter, 1986)
 - Lunch as a skill cluster
 - Multiple related service providers may view video and identify integrated objectives

work on goals that are umbrellas so that the aide & para professional can watch for some SLP goals on Mon, OT goals on Tue, PT on wed, etc., but they all help get to more independence into lunch time

Best Practices

■ Circle time in pre-school

- Transfer from standing to sitting on floor (**PT**)
- Maintain good, independent sitting posture on floor (**PT**)
- Visually orient to and track stimuli (**OT**)
- Decrease tactile defensiveness during show and tell (**OT**)
- Request objects and share novel information (**SLP**)
- Transfer from sitting to standing (**PT**)

[Skipped]

Best Practices

See if you can tease out the skill cluster associated with participation in the school band. Make sure to delineate at least two skills typically associated with:

1. *Communication*
2. *Occupational therapy*
3. *Physical therapy*

drill

Best Practices

Inclusive Practices Involving AAC

- *Recognize communication pervades all aspects of curriculum*
 - Math, science, reading, lunch all require communication skills
- *Consider more flexible rather than fixed scheduling*
 - Swap units of time
 - Move to collaborative-consultative models and away from direct instruction

Best Practices

Other strategies for efficient management of **time**:

- *Block scheduling* (students donate units of time to one another)
- Employ *natural supports* (vs. SLP directed)
 - Identify all supports that are available
- *Integrate instruction* throughout the day (matrices)
- *Environmental probes for generalization*
- *Teach others* (e.g. classmates) to program and troubleshoot AAC

Best Practices

Some principles in selecting priority instructional goals:

- Multiple opportunities to use and practice
- Valued by student, family, and others
- Ease of acquisition (When do we stop experimentation with alternative systems?)
- Walking the CA/MA line of age appropriateness

Lou Brown
"Criteria for Ultimate Functioning"

Chronologically Appropriate(Age)
Developmentally Appropriate

Best Practices

Some principles in selecting & prioritizing goals:

- Enhanced status
- Functionality in multiple settings
- Skill will be required as an adult
- Least dangerous assumption (already discussed)
- Criterion of ultimate functioning
- Fosters self-determination

Best Practices

Inclusive Practices Involving AAC

Fosters self-determination

- *Sample Goal:* Increase self-determination
 - *Objective:* Sam will communicate his need to take a break, relying on a conventional method of communication.

great way to get kids into
games - inclusive

Best Practices

Formulate 2 AAC objectives that would likely foster a student's self-determination:

- A. In the school cafeteria (2 objectives)
- A. In art class (2 objectives)

Best Practices

Inclusive Practices Involving AAC

- **Target communication objectives throughout day rather than at discrete times**
 - *Choice making 'program' vs. opportunities to make choices all day long*
 - *Use of instructional matrices* (Calculator, 2008; Cushing et al. 2005).
 - Described later



Best Practices

Inclusive Practices Involving AAC

■ Careful selection of instructional contexts

- View the entire school as the "classroom"
- Always select the "**least restrictive environment**"
- Two lunch periods, two recess periods, music 3 X per week
- Bracket one grade level higher and lower than student's

erg. "may not learn math but learn other objectives from IEP"

Best Practices

Often begins with opportunities and reasons

■ **Recess**

- Communication *demands* for participation
- Existing *opportunities* for interaction
- Discrepancy Analysis (next slide)

Best Practices

Inclusive Practices Involving AAC

- Use of **discrepancy analyses** (Brown et al. 1984; Calculator, 2000)
 - ID setting or activity in which communication challenges limit or preclude participation
 - Inventory communication skills of typical peers
 - ID skills our student is lacking

(continued)

U go grl

Communication Intervention Considerations

Discrepancy Analysis Outcomes (e.g. for Art)

I. May teach communication skills exhibited by classmates

- Like her peers, Tia selects paints by color from peers
- Like her peers, Tia 'comments' on other students' work
- Plugs into Matrix

Best Practices

II. May teach a related skill in the same activity

- ID art as an ideal situation in which to work on greetings, making other choices, indicating when 'finished'.
- Plugs into Matrix (see handout)

Communication Intervention Considerations

III. May depart from general ed. curriculum

- Controversial – may determine activity can not be modified and provides little or no educational value for Tia to justify her participation; spectator role.
 - School job; extra physical education class.
 - Opportunities to reinforce communication and other skills

Plugs into Matrix

Best Practices

Matrix including IEP goals, classroom schedule, and levels of support (F-Full, P-Partial, S-Some) necessary needed to foster student success over multiple trials

Student _____ Date _____

IEP GOALS	Morning Meeting		Art (1)	Math	Music	Lunch	Recess	Art (2)	Health	Science
	Morning	Meeting								
Meets individual needs & wants	X			X	PFS		X	PFS		X
Shows increased attention to task	F-FP				PFS	X	PFS			X
Request continuation of a pleasurable activity						X	PFS			
Seeks help from teacher	X						X	PPP		
Wishes for independence		X							X	PFS
Participates and interacts with communication partner and peers	SFS			X	PFS		X	SFS		
As AAC device communicates or acts independently		X		PFS			X	SFS		X
Enters the classroom						X	SFS			

DO THIS show lack of progress get 1-1

Best Practices

Use of the matrix

- Sp.Ed. and Gen.Ed. staff collaborate to determine curriculum content, materials used, etc.
- SLP helps identify communication goals to be targeted at different times of the day

DO THIS show lack of progress get 1-1

Best Practices

Recess

- Goal:** Making choices
- Objective:** Given a peer presents Tara a choice of two apparatuses on the playground with which she will provide assistance, Tara will select one using her AAC device.
- Goal:** Request continuation of a pleasurable activity
- Objective:** Given a peer is pushing her on a swing and the activity is temporarily ceased, Tara will communicate her desire to resume being pushed.

DO THIS show lack of progress get 1-1

Pls. remind me to ask Dorella who her supervisor is. Maybe I should look on-line. How to start process

Best Practices

- Note levels of prompting (*full, partial, none*)
- Rotate goals and objectives from one week to the next

Best Practices**Inclusive Practices Involving AAC****Ensure accountability** (e.g. data collection and review)

- Parents' concerns when moving to consultative model
- Ensuring child's needs continue to be met
- Implementation of programs by individuals with no formal AAC training
- Are individual needs being met?
- SLP must retain responsibility for program integrity

Best Practices**Ensure accountability**■ Use of **matrix**

- Shows *frequency* with which AAC goals are being targeted
- Variety of *people* implementing them
- Diversity of *settings* in which they are targeted

■ Carry out **systematic probes** in natural settings

Best Practices in AAC Services

Project funded by the  to:

1. Identify possible best practices in the education/communication instruction of children with Angelman Syndrome.
2. Socially validate these practices
 - Parents***

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Best Practices in AAC Services

EVIDENCE-BASED PRACTICE (EBP):

"The goal of EBP is the integration of: (a) clinical expertise, (b) best current evidence, and (c) client values to provide high-quality services reflecting the interests, values, needs, and choices of the individuals we serve." (ASHA 2004)



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Best Practices

Go to Calculator, Black & Fraas (in prep):

Review practices in **Appendix**

Highlight differences (*MI vs. MS*) - **Table 1**
