

## Preservice training of speech language pathologists in evidence-based AAC services

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## The problem

- There is a critical shortage of speech language pathologists (SLPs) who have the competencies required to
  - Implement evidence-based practices (EBPs) in AAC to improve services and results for children with complex communication needs (CCN)
  - Implement appropriate & effective services for high need children with CCN
    - e.g., children who are English language learners and/or live in poverty

## Prevalence of complex communication needs

- More than 12% of children receiving special education services have CCN (Binger & Light, 2006)
  - More than 834,000 children in the United States
  - Children with autism spectrum disorders, cerebral palsy, Down syndrome, traumatic brain injury, multiple disabilities, etc.
- Moreover the prevalence of children with CCN is increasing (Light & McNaughton, 2012)
  - Improved survival rates for children with developmental & acquired disabilities
  - Increased incidence of autism spectrum disorders, cerebral palsy, etc.

## Children with high needs

- Many children with CCN have high needs
  - Are English language learners
    - 40-44% of children served through IDEA come from families of diverse cultural and linguistic backgrounds
  - Live in poverty
    - 21% of children in the USA live in poverty and are at risk in their education & development as a result
    - Poverty creates conditions that lead to increased vulnerability to disability

## Augmentative and Alternative Communication

- AAC offers the potential for children with CCN to
  - Enhance communication
  - Increase participation at home and school
  - Improve educational achievement
- AAC includes
  - Unaided AAC systems
    - e.g., signs, gestures, etc.
  - Aided AAC systems
    - e.g., low tech communication boards, speech generating devices, etc.

## Lack of high quality AAC services

- Unfortunately many children with CCN do not receive the evidence-based AAC services that they require due to
  - Lack of practicing SLPs with expertise in AAC
  - Lack of preservice SLP programs offering training in AAC
  - Lack of effective service provision is particularly acute for high need children who require AAC

## Negative impact on children with CCN

- Without effective research-based AAC interventions, children with CCN
  - Are limited in their attainment of communicative competence
  - Are severely restricted in their participation at home, at school and in the community
  - Are at significant risk for reduced educational expectations and exclusion from an appropriate education

## Shortage of practicing SLPs with competencies in AAC

- 53% of SLPs in the schools serve children who have limited speech (ASHA, 2010)
- Many of these SLPs lack the competencies required to provide effective AAC services
  - 81-93% of practicing SLPs report that they did not complete a single course focused on the needs of children with CCN (Costigan & Light, 2010)
  - SLPs report that lack of training in applications of AAC /AT & in services for English language learners are their "greatest professional challenge" (ASHA, 2010)

## Lack of preservice training in AAC

- According to national surveys of preservice training (Costigan & Light, 2010; Ratcliff, Koul, & Lloyd, 2008)
  - 18-35% of preservice programs do not offer any coursework at all in AAC
  - Many of the programs that offer training in AAC, do so on a limited basis
    - 1-4 hours of AAC content infused in other courses
  - Only a small percentage of programs offer full courses in AAC
    - Approximately half of these are not required courses

## Lack of quality preservice training

- According to national surveys of preservice training (Costigan & Light, 2010; Ratcliff, Koul, & Lloyd, 2008)
  - 54-71% of preservice programs for SLPs do not employ faculty with expertise in AAC
  - 64% of programs report that faculty who are not experts in AAC typically teach the AAC courses

## Impact of lack of preservice training

- Both the quantity & the quality of preservice training in AAC is severely compromised
  - As a result, current graduates are often ill prepared to meet the needs of children with CCN
- Ironically SLP preservice programs provide the least amount of training to meet the needs of the children who present with the most complex communication needs

## The Penn State Children's Communicative Competence Project

- The Penn State Children's Communicative Competence Project is designed to prepare MS scholars to
  - Attain all of the standard competencies required of SLPs for ASHA certification
  - Develop specialized competencies in the delivery of high quality evidence-based AAC services
  - Develop specialized competencies in the delivery of culturally appropriate services to high need children with CCN

## Recruitment of MS students

- The Penn State Children's Communicative Competence Project provides funding support for a total of 21 MS students over a 6-year period
  - Full tuition support
  - Monthly stipend
- Students are recruited on a national basis

## Curriculum

- The Children's Communicative Competence Project curriculum is designed to provide scholars with training in EBPs for children who require AAC including those with high needs through
  - Academic coursework
  - Research experiences
  - Clinical practicum
  - Web-based instructional modules

## Academic courses in AAC

- MS scholars complete academic courses to build expertise in AAC evidence based practices:
  - AAC assessment and intervention planning for individuals with CCN
  - Research-based interventions for beginning communicators with CCN
  - Research-based interventions to build communicative competence, literacy skills, & educational achievement with school-aged children with CCN;
  - Culturally appropriate research-based services for high need children with CCN;

## Academic courses in AAC

- Academic courses in AAC evidence-based practices
  - Hands on lab in assistive technologies to promote communication and participation;
  - Universal design for learning and curriculum adaptation to foster educational achievement of children with CCN;
  - Effective strategies to work with consumers who use AAC and families of children with CCN;
  - Research-based AAC services in early intervention & school programs, including collaboration with educators as members of multidisciplinary teams

## Training in AAC research

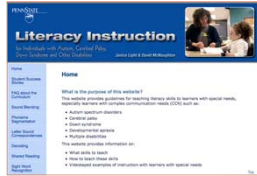
- Academic coursework in research methods
- Training in responsible conduct of research
- Mentored research experiences
  - To increase EBPs and
  - To improve outcomes for children with CCN

## Clinical training in AAC

- Extended practicum experiences
  - Provide opportunities to translate research into effective EBPs with children with CCN
- 15-week full-time externship in early intervention /public schools reflecting wide diversity

## Web-based instructional modules

- Web-based instructional modules in EBPs in AAC providing
  - Step by step intervention
  - Video examples
- Web-based modules for use in
  - Preservice training
  - Inservice training



## Partnerships

- The Penn State Children's Communicative Competence Project curriculum was developed in partnership with
  - Consumers who use AAC
  - Parents /families of children with CCN
  - Departments of Education and technical assistance programs
  - Exemplary early intervention and school programs that serve high need children with CCN

## Anticipated grant outcomes

- The Children's Communicative Competence Project will result in
  - 21 fully credentialed SLPs with specialized competencies to assume leadership roles in the provision of EBPs for children with CCN
  - More than 100 additional SLPs who develop competencies in EBPs in AAC through courses, research and/or clinical experiences
  - More than 5,000 SLPs /educators who increase their knowledge of EBPs in AAC through the web-based modules

## Anticipated grant outcomes

- The project will also result in
  - Increased research in EBPs in AAC
    - 100% of scholars complete a research paper/ thesis to improve outcomes for children with CCN
    - A minimum of 21 research papers/ theses in AAC

## Preliminary outcome data

- Preliminary outcome data demonstrate that the grant is on track to meet its projected outcomes
- 100% of scholars have graduated or are on track to graduate
- 100% passed their praxis exams
- 100% are fully qualified

## Preliminary outcome data

- 100% of graduates are employed in early intervention/ schools providing evidence-based AAC services to children with CCN
- 91% of the goal attainment data for the children demonstrate positive progress
- 100% of children & families express satisfaction with services

## Preliminary outcome data

- 100% of scholars have completed AAC research papers/ theses
- 85% have served as authors on peer-reviewed research papers or presentations at national/ international conferences

## Preliminary outcome data



- In the past year, more than 75,500 preservice & inservice professionals & other stakeholders have accessed the Penn State web resources to increase their knowledge of EBPs in AAC

## Benefits for children who require AAC

- Increased research in AAC results in improved EBPs for children with CCN
- Increased numbers of SLPs and other professionals with competencies in AAC result in
  - Improved evidence-based practices for children with CCN, including those with high needs
  - Improved outcomes for children with CCN and their families

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