Educating Dental Health Professionals about People with Intellectual and Developmental Disabilities

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Evaluating Dental Health Professionals about People with Intellectual and Developmental Disabilities

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Background
Dental schools and dental hygiene programs are required to incorporate specialized training in their programs to serve people with special needs, however people with intellectual and developmental disability (I/DD) continue to experience poor oral health outcomes. Access to clinicians with the desire and skill to care for people with I/DD remains a challenge. There is a need to understand the best approaches to improve access, and to reduce disparity in oral health, for this vulnerable population representing approximately 1-3% of the general population. Researchers are systematically investigating the literature to uncover evidence of effective approaches to improve access and to support good oral health behaviors. These approaches should be integrated into educational curricula.

The key question: “Do professional educational experiences impact providers (dentists, hygienists and others) attitudes toward (willingness), or ability to treat individuals with I/DD?”

Methods
The systematic review included databases such as PubMed, as well as gray literature. Broad search terms were used to uncover interventions to improve both access to oral health and support good oral health behaviors in individuals with I/DD. Initial results yielded 4,854 articles. Title and abstract screening for articles that specifically address the I/DD population, that describe a measurable intervention with measurable outcomes, and that were published after 1990 resulted in approximately 400 articles for full text review, and 125 for data abstraction. To uncover the state of evidence and outcomes as they relate to the educational exposure for allied dental health professionals, a targeted key question, on education for treatment and prevention directed at providers, was developed. This focused the review on the educational outcomes and the development of the evidence base for educational interventions.

Results
Fifteen articles were identified to have a clear I/DD population definition, intervention, and outcome. Articles were reviewed in detail with structured abstraction of results entered into the AHRQ Systematic Review Data Repository.

Interventions measured:
1. Assess educational experience/knowledge acquisition: curriculum for orthodontists, dentists, & hygienists
2. Assess attitudes toward treating persons with I/DD
3. Assess an educational model: virtual patient, service learning, interprofessional model
4. Assess comfort/satisfaction with technique or materials: behavior management, available information, experience

Interventions were delivered by lecture (3), virtual patient models (2), case base learning (1), service learning (1) and combination video/text based (1). Length of interventions ranged from a 45 minute lecture to an 8 hour practicum. Sample size ranged from 23 to 568 and studies surveyed a variety of student and professionals.

Quality of Evidence
Using questions adapted from The Community Guide Data Abstraction Form, clinical experts provided an interpretation of external validity, while a research methodologist accomplished a separate review of internal validity. Few studies rated “good” for both internal and external validity.

Conclusions
Exposure to individuals with I/DD, whether that be through curriculum, practical experience, or other means has a positive impact on a providers attitudes toward treating individuals and including individuals with I/DD in their practice. There are limited studies to describe the impact of educational interventions toward treating individuals and including individuals with I/DD in their practice. Further research and evaluation is needed.

Study Subjects # of Studies
Students (dental, hygiene) 6
Dentists 3
Individuals with I/DD 2
Orthodontists, Hygienists, Nurse Practitioners, Other health providers 1 each

Ten of the 15 studies were surveys, measuring 38 total outcomes.

Outcomes # of articles containing the outcome
Curriculum related (i.e., content, satisfaction) 9
Education/Knowledge (i.e., gained, experience) 6
Attitudes/Beliefs (i.e., perception) 5
Behavior Management (i.e., knowledge, experience, comfort) 4
Comfort level (i.e., comfort treating) 3
Expectation (i.e., of individuals with I/DD capabilities) 2
Other: communication skills, complete training, cooperation, awareness, etc. 1 each

Conclusion
Providers gained knowledge and/or a level of comfort in treating people with I/DD after meeting and working with them as part of training. Providers indicated they felt ill-prepared and expressed desire to have specific training. There are limited opportunities for structured exposure to this population in traditional dental curricula.