Building Better Oral Health Behaviors:

Motivating Head Start Parents to Focus on Childhood Oral Health Care

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February 24, 2008

Submitted to Torie Baker in partial fulfillment
Of the requirements of
NURS 4207 Public Health Nursing
University of Colorado Denver
School of Nursing
Spring 2008 Block I
Introduction

The Denver’s Great Kids Head Start Vision Statement reads:

“The vision of Denver’s Great Kids is to prepare enrolled three to five year olds to enter kindergarten confidently with the social, physical, emotional and cognitive skills and competencies necessary for continuing school success.” (Mayor’s Office For Education and Children Vision 2008).

Denver’s Great Kids Head Start (DGKHS) programs provide services through federal grant money in the metro Denver area. The program is made up of five delegate agencies: Catholic Charities, Clayton Family Futures, Denver Public Schools, Mile High Montessori Early Learning Centers and Volunteers of America. Each of these delegate agencies work closely with one another as well as the community to effectively provide both health and school readiness education.

Population

At the request of Gloria Richardson, DGKHS Heath Administrator we have included specifics related to our population. In the 2006-2007 school year, DGKHS served 1,433 children and funded the enrollment of 1,083 children. Almost seventy percent of the children enrolled were in their first year at Head Start. Ethnically speaking, almost sixty-six percent of the children were Hispanic/Latino, with over forty-four percent being primarily Spanish speakers. Racial demographics for 2006-2007 include over fifty-three percent are White, twenty-three percent are Black or African-American. Other races represented include, bi-racial or multiracial children, American Indian/Alaska Native, and Asian, with fourteen percent listed as unspecified race. This data comes from Heat Start Program Information Report for the 2006-2007 Program Year.
Included in the Head Start Program Information Report for 2006-2007, health issues are highlighted as problems for some Head Start children. Over 10 percent have been treated or are receiving treatment related to being overweight. Nearly 5 percent of the students enrolled are receiving treatment for asthma. Four and a half percent have vision problems, and less than 1 percent are being treated for hearing problems. Over 38 percent of these children who received dental screening were diagnosed as needing treatment.

Additionally, according to the Summary of Dental Care Needs in the 2004-2006 Colorado Child Health Survey, in the Denver Metro area, 7.9% of children ages one to fourteen needed dental care but did not get dental care, only 44% of children in this age group received and “Excellent” rating on the condition of their teeth, 27.9% received “Very Good,” 17.5% received “Good,” 8.5% received “Fair,” and 2.2% received “Poor.”

**Problem**

From the Executive Summary for Denver’s Great Kids Head Start: Denver Metropolitan Head Start Community Needs Assessment for 2008 document dental care is listed as an important need. The US Census recently reported that 56 percent of Coloradoans do not have dental coverage. Further research into Head Start eligible families found that 19.8 percent found accessing dental care for their children to be difficult. Over 93 percent of Head Start Family Service workers found problems when attempting to help families get dental care for their children. (Executive Summary for Denver’s Great Kids Head Start 2008 pg vii).

Historically, dental health care for children has been managed through referrals for dental providers, dental screenings, fluoride applications at the dentist, and fluoridated
water. In the past many years, parents have been told that their children need these things, with little explanation as to why it is so important. In the past many years it has been recognized that more can be done for children and families related to oral health education. “State and national epidemiologic data show that an estimated four to five million children experience untreated dental disease sufficiently extensive and severe enough to cause chronic dental pain” (Edelstein 2000 pg. 1179). Further, research has shown that children are most susceptible to the beginnings of poor dental health starting between eighteen to thirty-six months of age. These times are when they are most in need of fluoride applications as well as at greatest risk of cariogenic infection from caregiver’s to infants (Nowak and Warren, 2000). Since most children enter Head Start at approximately three years of age (thirty-six months), they are at great risk for problems. Due to the astounding numbers of children affected by cavities and other oral health issues, DGKHS has made it a core mission to improve oral health care among the children they provide care for.

In the past, this has been accomplished by enlisting Dental Trackers to manage information regarding each child’s dental visits and dental history. The goal from the federal level is to have 100% of children screened by dentists. DGKHS has gone to great lengths to make sure that their children are seen by dentists, but have not yet met the level of 100% of children per year. Dental Trackers make phone calls to families and follow up regularly to see if dental screening have occurred. They keep track of data as well as monitor records related to each child’s medical history. It has been of help to the agency, however, they are looking for more success and to do more to change ambivalent behaviors and attitudes expressed by parents. Many parents have expressed a lack of
understanding as to why dental screenings are necessary for their children starting at age one. Further, they are met with challenges in receiving care, due to insurance problems, out of pocket costs, time away from work needed for appointments and more.

The current goal is to utilize many different educational tools, including handouts, brochures and motivational interviewing to further encourage better oral care. Historically, the education piece from Head Start employees has been the responsibility of the staff RN. Through Oral Health Care Steering Committee meetings, it has been determined that a broader approach is necessary. The general feeling is that if all staff, including Family Service Workers, Teachers, Aides, etc. work to encourage better oral health care, then behaviors will be more likely to change.

**Intervention: Literature Review**

As there are so many aspects to providing education, we will focus on the introduction of Motivational Interviewing to elicit behavior change among parents of children in the DGKHS program. This intervention is expected to be ongoing, and occur between class times, when staff have access to parents, as well as during parent-teacher meetings held throughout the year. Dental Tracking will still occur, so the nurses will still shoulder some responsibility to reinforce the information already given by other staff members.

Motivational interviewing (MI) is defined as “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” (Motivational Interviewing homepage, 2007). It was originally created to reduce ambivalence among substance abusers, mainly alcohol and drug abuse. It has been applied to other aspects of behavior with success in health and addictive behaviors,
including but not limited to diabetes, HIV, and eating disorders (Hettema, Steele, & Miller, 2005). In the article by Hettema et al. (2005), the researchers chose to use meta-analysis of controlled clinical trials to determine the overall effectiveness of MI. In their conclusion, it was determined that MI is effective as both an individual brief intervention, but more effective when used in conjunction with other treatment approaches (Hettema, Steele & Miller, 2005). This information is useful for DGKHS as staff members have made clear their concern that they do not have a great deal of time allotted for one-on-one conversations with parents regarding health or dental care.

Other research related to adolescent diabetes has shown success as well related to MI. One study looked at changes in HbA1c levels among adolescents undergoing MI. It found that the majority of clients made at least one healthy behavior change related to their condition as well as reduced their fear of hypoglycemia (Channon, Smith, & Gregory, 2003). In another pilot study looking at adolescents with eating disorders, it was found that, “It appears that motivation can be measured and improved at one interview and subsequently, on average young people can make significant progress in six weeks, both in terms of cognition and behavior” (Gowers and Smyth 2004 pg 91).

In a research study that looked specifically at MI and childhood caries, it was determined that MI counseling is more effective than other traditional methods of education (Weinstein, Harrison & Benton, 2004). It was also noted in this same study that, although it took practice, MI was utilized with minimal training by non-professional staff (Weinstein, Harrison & Benton, 2004). Further, the population of this study was South Asian Immigrants living in British Columbia showing its success across cultures (Weinstein, Harrison & Benton, 2004). This study as well as others provides strong
evidence that MI would be an effective tool within Head Start, not only for dental issues, but any health issue that the staff is looking to target with families. Because this broadens the scope of use, it immediately makes it a more cost-effective tool for the DGKHS.

**Interviews**

In an attempt to begin facilitating our intervention, we interviewed Paul Cook with the UCD School of Nursing regarding Motivational Interviewing. From his experience, MI training usually lasts one to three days depending on the needs of the group involved. Further, the individuals to be trained in MI are expected to be those individuals in the program who have more time available to talk to parents. This time can be brief (10-15 minute contact time throughout a long-term working relationship), but it should consist of individuals with good opportunities for face-to-face interaction and a good working relationship with the children and parents. Paul Cook went on to say that paraprofessionals do a great job in this capacity. For anyone using theses skill sets practice is of utmost importance. It would also be possible with this model to “train the trainer”. This would allow DGKHS to send a certain number of staff from each delegate who can learn the initial training by the paid MI staff to return to work and teach other staff. This helps with the concern related to budget. Initial costs are not minimal. Information regarding cost was requested to be included in our report by Gloria Richardson, DGKHS Heath Administrator. One-day trainings start around $1,000.00 by a MINT certified trainer named Bill Miller. It is possible Paul Cook would be able to teach a course for less money, however, he would have to be hired through the SON that attaches additional fees for service that are non-negotiable. He is not a certified trainer.
through the MINT network; therefore he could provide similar training called “Health Behavior Change”.

The limitations he has discovered with MI relate to the fact that most MI research is focused on motivating the individual needing the behavior change. In this situation, parents are needed to be motivated to provide better dental care for their children. Because there is less research related to effectiveness, it is possible that results will not be seen as quickly. Typically, with MI, results can be seen within three to twelve months. Without the ability to do a randomized control trial, it is possible to see results from this by looking at pre-MI counseling results and post-MI counseling results to evaluate change. (For a look at the full interview, see Appendix C).

One of the other concerns that came out of a meeting with Shelby Chapman, the dental tracker for Catholic Charities’ Head Start Program, is the idea of buy-in from staff members. Staff members at DGKHS are quite busy with unlimited numbers of duties already. In order to make this process work effectively, it needs to be made clear that MI is an opportunity to make changes in parental behavior related to dental health, nutrition, exercise and other health related issues. This component might cause the research results to take longer to show any improvements in dental health. It is not only the parental behavior and motivations that need to change but also staff.

That being said, it appears from the breadth of research and interviews that MI is a feasible path to elicit change in parents. It may be a slow change initially, but slow change is better than no change at this point for these children.
**Assessment**

The target population of our intervention includes children and parents involved in Denver Great Kids Head Start programs. The assets of this population include their commitment to better their children’s lives by enrolling them in Head Start. Though these families face many barriers in providing for their children, their association with Head Start provides them with links to services, such as health and dental care that they may otherwise be unable to obtain. The families we are targeting in this intervention have many needs and obstacles in obtaining dental care for their children. Head Start serves those in lower socioeconomic statuses, as well as many families that do not primarily speak English. Many children are covered by Medicaid, but fewer than 10% of dentists accept these patients (Milgrom, Weinstein, Huebner, Graves, & Tut, 2008). Many times, children first enrolling in Head Start already have dental problems. High rates of dental caries are correlated with low income, minority status, and limited parental education (Edelstein, 2000). These factors are all common limitations experienced by families enrolled in Head Start programs.

Other obstacles these families face are those historically associated with low socioeconomic status including transportation difficulties, location and accessibility of dental providers, and language barriers (Edelstein, 2000). In addition, families who are working long hours or multiple jobs have difficulty finding time to take their children to the dentist for follow-up care. When vulnerable and high-risk families are struggling to provide food and shelter for their children, dental care is often considered a luxury that they simply cannot afford.
Behavioral Change Model

Promoting change in people is a complex process, and is far from a linear progression through discrete stages. Prochaska, DiClemente, and Norcross (1992) developed their Stages of Change Model to explain self-initiated and professionally assisted changes. This model presents five stages that people generally go through when initiating a change in their lives. The stages are as follows:

1. Precontemplation- the stage where there is no intention to change behavior
2. Contemplation- the stage where a person is aware of a problem and has begun to think about changing, but has not yet committed to the change
3. Preparation- the stage where some reduction is made in problem behavior, and the intention to take effective action is solidified
4. Action- the stage where a person modifies their behavior in a specific way to overcome their problem (one day to six months of altered behavior)
5. Maintenance- the stage where relapse prevention and consolidation of gains are attained

In this behavioral change model, people sometimes advance to one stage only to relapse into the previous stage. This is an expected progression, and does not indicate failure. Most people will recycle multiple times within the stages before they achieve long-term maintenance, so providers using this model must not become frustrated when this occurs. Specifically relating this model of change to our current intervention, we are targeting people in the pre-contemplative stage. “Applying the MI counseling approach helps uncover motivation and leads patients from the precontemplative to the contemplative stage” (Weinstein, Harrison, & Benton, 2004, p. 732). Traditional health
education has not been successful in this population, and needs to be supplemented with a less confrontational approach such as motivational interviewing. There is also a strong possibility that “…direct persuasion, whatever the patient’s or parent’s degree of readiness to change, pushes him or her into a defensive position” (Weinstein, Harrison, & Benton, 2004). Motivational interviewing is an approach that promotes change by resolving ambivalence, in turn moving people from inaction to action.

Levels of Prevention

Primary prevention “refers to interventions that promote health and prevent the occurrence of disease, injury or disability” (Stanhope and Lancaster, 2006, p. 168). In the context of dental health promotion amongst Head Start enrollees and their parents, primary prevention occurs by teaching parents appropriate measures to prevent tooth decay, such as fluoride treatments, proper brushing, and limiting use of sugary drinks and foods.

Secondary prevention consists of “…interventions designed to increase the probability that a person with a disease will have that condition diagnosed early enough that treatment is likely to result in cure” (Stanhope and Lancaster, 2006, p. 169). Our intervention is designed to motivate parents to take their children for regular dental screenings, so that any decay can be caught early and treated. This results in less invasive, painful procedures associated with advanced disease. This also promotes the benefits of regular, scheduled dental screenings. Parents of low-income families repeatedly wait until the decay becomes symptomatic before taking their children to the dentist, resulting in more intensive procedures. After having a bad experience, parents often avoid subsequent treatment until the situation again becomes severe (Weinstein,
Our intervention aims at breaking this cycle through prevention and early detection.

Additionally, our intervention provides tertiary prevention, which encompasses “…medical treatment, physical and occupational therapy, and rehabilitation” (Stanhope and Lancaster, 2006, p. 169). Since many of the children in Head Start come into the program with moderate or severe dental needs, these children get the necessary treatment from dentists affiliated with the program. After their immediate needs are taken care of, the use of motivational interviewing will be used in order to prevent future dental caries and invasive dental procedures.

Spectrum of Prevention

The Spectrum of Prevention is a tool that can help practitioners “…achieve broad community goals through injury prevention strategies that include policy development” (Cohen and Swift, 1999, p. 203). There are six levels in the spectrum:

1. Strengthening Individual Knowledge and Skills
2. Promoting Community Education
3. Educating Providers
4. Fostering Coalitions and Networks
5. Changing Organizational Practices
6. Influencing Policy and Legislation

Our intervention addresses the first level by providing education and skills to parents of Head Start children, which in turn increases their resources and knowledge base to prevent dental caries. “In a trusting relationship with a person who is perceived to have expertise or authority, even brief comments have a lasting impact, particularly when
reinforced over time or through community norms and practices (Cohen and Swift, 1999, p. 205). Our intervention provides the multitude of Head Start staff interacting with parents a standardized “language” to address oral health, thus reinforcing the importance of the information being given.

Secondly, our intervention addresses level three of the Spectrum of Prevention by educating providers. The motivational interviewing techniques that could be taught to nurses and other staff members increase their communication skills and teach them ways to motivate their target population. Additionally, our intervention addresses level four of the spectrum, which emphasizes the importance of groups working together to reach a common goal. “Coalitions are useful for accomplishing a broad range of goals that reach beyond the capacity of any individual member organization” (Cohen and Swift, 1999, p. 207). Our intervention aims at standardizing the language used when speaking to parents about dental health, and requires the cooperation of teachers, nurses, dentists, and family service workers. These professionals represent a multitude of organizations all working together to provide dental care to Head Start children.

To speculate on interventions on other levels of the spectrum that would complement our intervention, the main level we would target is level two, community education. Using mass media to reach our target population would be an effective strategy to promote community awareness of issues relating to dental care. Health fairs and TV interviews with local dental experts would be two ways in which our message could be delivered to a wide array of people who we may not otherwise be able to reach. Also, level five of the spectrum could be addressed by future changes in Head Start policy regarding oral health promotion. If future groups working on this project notice a
practice which contributes to the poor oral health of Head Start participants, they could propose a change in the actual policy of the organization. Finally, level six of the spectrum involves influencing policy and legislation. An example pertaining to our intervention would be legislation providing more dental practices with reimbursement in order to accept a greater proportion of Medicaid patients.

**Purpose of Intervention**

The purpose of using motivational interviewing (MI) for oral health promotion is to motivate parents to become proactive in their children’s oral health as a means to achieving the overall goal of excellent oral health in the children of the Head Start program. Using motivational interviewing, specifically, will enable the parents to see the importance of oral health both for their children and also for themselves. Using MI will enable the nurses and teachers working in the Head Start program to not only educate the parents about good oral practices such as fluoride treatments, taking their children to the dentist twice a year, good general nutrition, prevention of baby bottle decay, and brushing twice daily, it will also help the parents see the importance behind these practices and motivate them to want to practice these habits. Previous groups have identified MI as being the most successful way of relaying this information and getting parents motivated to go to referrals, screenings, and making behavioral changes at home.

The hope is that through motivating parents to go to referrals and screenings and making behavior changes at home, the kids in the HS program will have improved oral health. The objectives that will lead to improved oral health will be an increase in the number of visits to the dentist each year, seeing an increase in times children in need of
dental care actually went to get it, an increase in number of children brushing twice a day, an increase in the number of “excellent” oral health-rated children in the Colorado Child Health Survey, and an overall improvement in self-rated home nutrition.

**Description**

There is varying data regarding the amount of time needed for MI to be effective. According to a study by Channon, Smith, and Gregory (2003), motivational interviewing is most effective when used for at least three months. It is important to note that one study looking at MI with substance and alcohol use noted that when used for a brief time, MI was documented to be only as effective as merely providing educational information (Marsden, Stillwell, Barlow, Boys, Taylor, Hunt, and Farrell 2006). However, the study by Weinstein, Harrison, and Benton (2004), which looked at MI with preventing caries, showed success after having only one 45 minute counseling session coupled with educational information (pamphlet and video), followed by two follow-up phone calls. As suggested in the interview with Paul Cook, a certified MINT trainer, an appropriate MI schedule could be ten to fifteen minute sessions with parents for as little as three to five times. In this setting at DGKHS, because the resources of time, money and trained personnel are limited, the use of motivational interviewing would probably occur in group settings such as classrooms, parent-teacher conferences, and newsletters (open-ended questions could be posed in a “Food for Thought” section of the newsletter). The nature of MI involves open-ended questions; therefore, it is difficult to give a list of standard questions that will be used during these person-to-person sessions. The questions will be posed based on the individual perceptions and situations of the individual parents. Because research indicates that the most successful way of
implementing behavior change is coupling MI with educational information (Hettema, Steele, & Miller, 2005; Weinstein et al., 2004), in addition to the MI session provided to the parents, parents would also continue to receive the educational brochures that dental trackers, nurses, and teachers have been giving.

**Evaluation**

Evaluation of the success of MI will come in multiple forms. Feedback from parents after the counseling sessions and follow-up phone calls would come in the form of a questionnaire. Answering questions such as, “On a scale of one to ten, one being least likely, ten being most likely, how likely is it that you will take your children to the dentist twice this year for an oral exam and tooth cleaning?” The questionnaire will gather information on the extent of motivation the parents have for visiting the dentist for referrals, cleanings, exams and fluoride treatments, it will evaluate how likely a parent feels he/she will be to take their child to the dentist when in need of dental care, how often they are having their children brush twice a day, and how healthfully they feel their children are eating at home. Evaluating these outcomes of MI could be in the form of an intake questionnaire (please refer to Appendix D for a sample of questions that could appear on this questionnaire). We will also be able to evaluate objectively how well MI is working when we look at the next three years’ Colorado Child Health Survey’s summary of dental care needs (did we see an increase in number of “excellent” oral health-rated children, or fewer “poor” rated children). Through this survey, we can determine if the measured outcomes has affected the overall goal of improved oral health in the Head Start program. It is important to note here that because the children are in the Head Start program for such a limited time, evaluating the effectiveness of MI should
continue into kindergarten and first grade. Along with measuring these outcomes over time, we suggest also comparing the data to families that did not receive MI in order to point out MI as the reason for improved oral health.

Evaluating MI will also be on the professional level. The first evaluation of this project will be its review by the necessary committees including the Health Services Advisory Committee and any other committee that is deemed necessary by Gloria Richardson, the DGKHS coordinator and health administrator. The second level of professional evaluation will be from feedback received from the teachers and nurses regarding practical application of MI. They will also be given a feedback questionnaire asking such questions as “On a scale of one to ten how open were the parents to MI?,” “Were you able to implement MI in a reasonable amount of time?”, etc.

**Results**

Evaluation of MI will not be completed until MI has been implemented for at a full school year. Therefore, the results of these evaluations will not be gathered by the due date of this report. At the conclusion of this clinical, this team will be presenting this report to the Health Services Advisory Committee, however, feedback from this presentation will not be in time to be included in this report.

It is our hypothesis that MI will effect a positive change in the behavior of the Head Start parents. It is further hypothesized that this positive change will result in an increase in the number of visits to the dentist each year, an increase in times children in need of dental care actually go to the dentist to receive care, an increase in number of children brushing twice a day, an increase in the number of “excellent” oral health-rated children, and an overall improvement in self-rated home nutrition. If, indeed, these
results do manifest, the population of benefit will not only be the children in the Head
Start program, but the parents and entire families as well.

Suggestions for future groups and ways to further the oral health education
include setting up an MI trainer to come and train the appropriate personnel, develop the
actual questionnaires that will be distributed for evaluation of MI, and propose the format
for a “Nurse’s Corner” in the newsletter which would highlight health and dental focuses.
References


Executive Summary

for Denver Great Kids Head Start

Denver Great Kids (with the City and County of Denver as the Head Start Grantee) provides services through 5 delegate agencies, serves all of the city of Denver outside of the Rocky Mountain SER (RMSER) service area in northwest Denver and serves a population of 453,661 (estimate derived from 2000 and 2006 Census data). The people living in the service area represent 9.5 percent of the Colorado population, and 13.8 percent of the Colorado population 5 and under and living in poverty level households (2000 US Census).

The Number of Head Start Income Eligible Children and All Preschool Age Children in the Denver Great Kids Head Start Service Area

The number of Head Start eligible children ages 0 to 5 (and not yet kindergarten age) in the Denver Great Kids Head Start (DGKHS) Service Area is estimated to be 8,459.

- In the 2000 Census, 6,100 children ages 0 to 5 lived in households with incomes below the poverty level.
- Since the 2000 Census, additional Head Start income-eligible children can be identified. Approximately, 1,098 more children are now living in poverty in Denver County, based upon changes in a number of key demographic variables including births, deaths, migration and increases in child poverty in Denver County. These changes are tracked by the Small Area Income and Poverty Estimates program of the US Census Bureau. Most of these changes are from increases in births and increases in child poverty in Denver County. This estimate has also been adjusted for deaths though there are few in this age group. The population of Denver County for children in this age group has increased; however, the number of low income families migrating out of the city and into the suburbs has increased substantially over the last several years, as housing prices have increased in Denver County as compared to some parts of the suburban counties.
- Approximately 197 children were part of demographic groups historically undercounted by the Census, and these 197 children can be added to the estimate of Head Start income eligible children.
- Approximately 847 children have incomes above the poverty line, but have incomes from Social Security Income and Temporary Aid to Needy Families.
Because of their public assistance income, these children are also Head Start income-eligible.

- Approximately 217 children are in foster care and live in families with incomes above the poverty line. Because of their foster care status, these children are also Head Start income-eligible.
- Based upon these adjustments, the Community Assessment estimates that 8,459 children are Head Start age and income-eligible in the DGKHS service area. Based upon birth trends over the last 5 years and current Census estimates, the number of Head Start income eligible children ages 3 to 5 would be 3,175, and the number of Head Start income eligible children ages 0 to 2 would be 4,248.
- The number of Head Start eligible children will likely remain fairly stable in the next few years based upon birth trends over the last several years for children who are now 0, 1 and 2. Between 2003 and 2006, the number of children born in Denver County has only varied by 2.3 percent from a low of 10,200 in 2006 to a high of 10,438 in 2004. The larger impacts on the number of Head Start income eligible children will be increases in child poverty (which may increase with an upcoming economic downturn) and the continued outward migration of children with lower incomes as older housing stock is demolished and new housing stock is built.
- If the program were to serve children from families with incomes up to 130 percent of poverty, the program would likely be able to serve 40 percent more children, based upon Census 2000 information. Making adjustments for over-income children already accounted for in foster care and public assistance (about 12.5 percent of the total estimate), an estimated 2,960 more children ages 0 to 5 could be served in Denver County. This would include 1,110 children ages 3 to 5 (and not yet in kindergarten), and 1,485 children ages 0 to 2.

There are 43,234 children ages 0 to 5 in Denver County, according to Census 2000. 2006 Census estimates indicate that there was a 34.6 percent growth in the age group between 2000 and 2006. Census 2000 data indicated that there were 32,378 children ages 0 to 5 from all income groups in the DGKHS service area. Assuming a 34.6 percent growth rate between 2000 and 2006, there were approximately 43,581 children ages 0 to 5 in the DGKHS service area in 2006, and 58,193 children in Denver County in 2006.

Racial, Ethnic and Other Demographic Characteristics

The demographic characteristics of Head Start income eligible children in the Denver Great Kids Head Start Service area are based upon information from Census 2000.

- In 2000, 62.4 percent of children who were ages 0 to 5 and who lived in households with incomes below the poverty line were Hispanic or Latino. 10.8 percent were White and non-Hispanic, 21.6 percent were Black or African American, 1.7 percent were American Indian or Alaska Native, and 2.3 percent were Asian.
- Estimates of the language spoken at home are not adjusted for income and information on children under age 4 is not collected by the US Census. The Community Assessment assumes the characteristics of children ages 5 to 17 are
similar to those for younger children. In the DGKHS service area based upon 2000 Census data, 24.5 percent of children ages 5 to 17 spoke Spanish as their primary language at home, and 71.5 percent spoke English as their primary language at home. In Denver County, less than 1.3 percent of children ages 5 to 17 spoke some other European language at home and 1.7 percent spoke an Asian language at home.

**Available Early Childhood Education Resources in Denver County**

With approximately 58,193 children ages 0 to 5 in Denver County in 2006 and with a labor force participation rate of 54.6 percent for families with children in this age group, the demand for quality early childhood education is nearly 32,000 children.

For the 10,543 Head Start income-eligible children in Denver County, three primary resources of early childhood education are available.

- **Denver Public Schools (DPS)** provides preschool funded by parents paying tuition (on a sliding scale basis), by using Colorado Preschool Program funds, and by using Title 1 funds. DPS is a delegate agency of DGKHS and has 255 Head Start funded enrollment slots. DPS provide preschool to approximately 554 children from families with incomes below 100 percent of poverty and approximately 775 children from families with incomes below 130 percent of poverty. DPS provided preschool to 3,636 children in October 2006. These children are primarily age 4 and 5 (and not yet kindergarten age).

- **The Colorado Childcare Assistance Program (CCCAP)** provides resources to pay for childcare for low income children. CCCAP provides resources to approximately 2,046 children (ages 0 to 5 and pre-kindergarten) with incomes below the poverty level and 2,577 children (ages 0 to 5 and pre-kindergarten) with incomes below 130 percent of the poverty level. CCCAP provided resources to approximately 2,810 children ages 0 to 5 and pre-kindergarten.

- **Head Start** is provided by 5 grantee agencies in Denver County. Together, these 5 grantees served 2,898 children in Head Start (with a funded enrollment of 2,188) in SY 2007.
  - DGKHS provides services through 5 delegate agencies, has a funded enrollment of 1,083 and served 1,433 children in SY 2007.
  - Rocky Mountain SER has a funded enrollment of 812 and served 987 children in SY 2007.
  - Early Head Start is provided by three grantee agencies in Denver County. The Clayton Foundation has a funded enrollment of 110 and served 178 children in SY 2007. Catholic Charities EHS has a funded enrollment of 108 and served 172 children in SY 2007. Family Star has a funded enrollment of 75 and served 128 children in SY 2007.
In addition to these three major public funded and provided programs, licensed childcare is the primary resource for most of the 32,000 children needing quality early childhood education in Denver County. 16,255 licensed child care slots are available in Denver County (desired capacity). Licensed childcare in Denver County is provided by 205 licensed child care centers, 223 homes, 123 preschools and 103 school age programs. Most of these slots are for children ages 2 to 5 (pre-kindergarten) -- 13,521 slots. Another 1,062 slots are available for children under age one, and 1,672 are available for children who are age 1.

Gaps in Early Childhood Education Resources

- For 3,175 Head Start income-eligible children (with incomes below the poverty level) ages 3 to 5 in the DGKHS Service area, these three key resources provide early childhood education services or resources to approximately 1,865 of these 3,175 children. This includes 430 Head Start income-eligible children in DPS preschools, including 255 who are in Head Start. 605 of these children ages 3 to 5 with incomes below the poverty level are using CCCAP resources to pay for childcare. Of the 1,433 children served by DGKHS in SY 2007, 24.3 percent also used either CCCAP or Colorado Preschool and Kindergarten Program (CPKP) resources. Thus, we estimate that 1,865 children out of the 3,175 children had early childhood education provided by one of these programs. Though 59 percent of the Head Start income eligible children ages 3 to 5 in the DGKHS service area used these resources, 41 percent did not have access to Head Start or other public resources to meet their early childhood education needs.

- An estimated 4,285 children ages 3 to 5 are now income-eligible for Head Start at the 130 percent of poverty income level in the DGKHS service area. For these 4,285 children, DPS, Head Start and CCCAP provide early childhood education services or resources to approximately 2,158 of these 4,285 children. This includes 609 Head Start income-eligible children in DPS preschools, including 255 who are in Head Start. Approximately 719 children with income below 130 percent of poverty use CCCAP to pay for childcare. Of the 1,433 children served in DGKHS in SY 2007, 24.3 percent used either CCAP or CPP resources. Thus, we estimate that 2,158 children out of the 4,285 had early childhood education provided by one of these three services. Though about half of the Head Start income eligible children ages 3 to 5 and with incomes below 130 percent of poverty in the DGKHS service area used these resources, half were not served by any of these public provided or supported preschool and childcare subsidy programs.

- For Head Start income-eligible children in Denver County ages 0 to 2, CCCAP and Head Start provide resources to serve approximately 1,340 of the 6,027 Head Start income eligible children (at the 100 percent of poverty income level). An estimated 1,158 children under age 2 with incomes below the poverty level received CCCAP resources in Denver County. 478 children received Early Head Start program services. 4.8 percent (or 292) of these young children with incomes
below the poverty level received both Early Head Start and CCCAP resources in SY 2007. Accounting for children served by both CCCAP and Head Start, these resources provide 22.3 percent of all Head Start income-eligible children ages 0 to 2 at the 100 percent of poverty income level.

- Assuming another 40 percent more children would be served at an income level of 130 percent of poverty (and adjusting this estimate for children already accounted for in foster care and with public assistance incomes -- a 12.5 percent difference), approximately 8,136 children ages 0 to 2 would be Head Start income eligible at the 130 percent of poverty level in Denver County. An estimated 1,377 children under age 2 with incomes below 130 percent of the poverty level received CCCAP resources in Denver County. 478 children received Early Head Start program services. 292 of these young children received both Early Head Start and CCCAP resources in SY 2007. Accounting for children served by both CCCAP and Head Start, these resources provide 19 percent of all Head Start income-eligible children ages 0 to 2 at the 130 percent of poverty income level.

- For the approximately 32,000 children ages 0 to 5 in need of early childhood education resources in Denver County, just over half have access to licensed childcare –16,255 children. Approximately 12.5 percent are served in Kindergarten. CCCAP provides these resources to 2,811 of these children ages 0 to 5 (and pre-kindergarten). Head Start serves 2,898 of these children. DPS provides preschool to 3,636 children (mostly 4 year-olds). 663 children receive resources from Head Start and one of these other public provided childcare programs. Assuming these resources went to parents in the labor force, approximately 30 percent of children ages 0 to 5 (and not yet in kindergarten) could have access to some sort of public provided or supported preschool program either through DPS preschools, Head Start or CCCAP.

**Community Resources: Family Needs and Access and Availability Issues**

Using information from existing research on family needs and by analyzing survey data from parents of young children, the Community Assessment examined the health, nutrition, education and other service needs of families in the Denver metropolitan area. After assessing these needs, the Community Assessment analyzed survey data from parents, from Head Start Family Service Workers and from other community agency staff and leaders to identify those service areas where community services were not consistently available to meet family needs or where other access issues needed to be addressed.

Based upon the parent survey data, the areas where parents anticipated they had the highest needs included the following.

- **Having a Job:** 39.4 percent of Head Start income eligible families and over one-third of families with incomes higher than the poverty level indicated one of their top three concerns was having a job. This was the biggest concern for those families with incomes below the poverty level. Though a large percentage of parents had a concern for having a job, only about one third of
those indicated they wanted additional job training or education to keep their current job.

- **Health Care:** 39.0 percent of Head Start income eligible families and 36.9 percent of families with incomes higher than the poverty level indicated one of their top three concerns was health care. This was the second biggest concern for those families with incomes below the poverty level, and third highest concern for families with incomes over the poverty level. Nearly, half (49 percent) of all the parents surveyed in parent survey on family needs expected to need help paying for health care, whether for medical, dental or mental health needs. Low-income families in the survey indicated health services top the list of services they need or use most often.

- **Food Security:** 37.5 percent of Head Start income eligible families indicated one of their top three concerns was having enough food to feed their families. This was the third biggest concern for those families with incomes below the poverty level.

- **Housing:** 36.7 percent of Head Start income eligible families and 37.2 percent of families with incomes higher than the poverty level indicated one of their top three concerns was housing. This was the fourth highest rated top three concern for those families with incomes below the poverty level, and second highest concern for families with incomes over the poverty level. Twenty-three percent of families with incomes above poverty level had trouble covering housing costs one or more times in the last three years; this was true for 32 percent of families in poverty. Looking towards the coming year, 29 percent of moderate-income and 44 percent of low-income families surveyed expect to need help paying rent or making a house payment at least once.

- **Paying Utility Bills:** When asked to name their top three concerns for meeting their family’s needs, 34 percent of all Denver metro area families surveyed cited paying utility and home heating bills. This was the fifth highest rated top three concern for those families with incomes below the poverty level, and fourth highest concern for families with incomes over the poverty level. More than half of low-income families anticipate having trouble paying utilities in the year ahead, and 54 percent indicated that they have had problems paying these bills previously.

Of these top five service areas where families indicated they had the greatest concern for meeting their families’ needs, the following describes the access and availability issues for these service areas.

- **Medical Care and Health Insurance for Children and Adults:** As indicated above health care was one of the biggest concerns facing both families in poverty and those families with incomes above poverty. Because of the high cost of medical care and because of complications with paying for health care, families experience a number of access problems when seeking health care for any family member. As would be expected, families, Head Start Family Service Workers, and other community agency staff and leaders indicated access to health care is a major issue for many Denver metropolitan area families.
According to the family needs survey for this Community Assessment, nearly 1 in 4 parents (24 percent) living in poverty indicated they have had problems accessing health care for their children in the last year. 27.7 percent indicated problems with accessing health care services for adults.

Families with incomes above the poverty line also experienced problems accessing health care. 1 in 8 (12.6 percent) had problems accessing health care for children, and 16.8 percent experience health care access problems for adults.

35.5 percent of the Head Start Family Service Workers surveyed indicated access to medical care for children can be a problem at times, and 58.1 percent indicated these services were not available for the families they served. 52.1 percent of the community leaders and other agency staff surveyed indicated access to medical care services can be a problem at times, and 10.7 percent indicated these services were not available. Both Head Start Family Service Workers and other agency leaders and staff indicated access and availability problems for adults as well.

Dental Care: Dental resources are limited for children and even more limited for uninsured adults. While problems with medical care can seem overwhelming for parents, unmet dental care needs in some ways are even greater. The Colorado Department of Health and Environment report on “Colorado’s School Readiness Indicators: Making Progress for Young Children” stated that diseases of the mouth are the number one chronic childhood disease. The real problem for most families is that dental care is expensive and few families have dental care coverage or any other way to easily pay for these expenses. The US Census recently reported that 56 percent of Coloradoans have no dental coverage in their health insurance plan (as compared to 17 percent of Coloradoans with no medical insurance). As a result of these extensive health care needs and due to the challenge of paying for needed dental care, Head Start families and those who work with them indicated extensive access issues for dental care.

19.8 percent of Head Start income-eligible families report difficulty in accessing dental care for children while 14.4 percent of families with incomes over the poverty line have reported access problems with dental care in the last year.

Ninety percent of Denver metro area community agency leaders and staff surveyed identified dental care for adults as either unavailable or difficult to access. Fifty-four percent describe getting dental care for children as a challenge, and 19 percent say services for children are not available. 93.3 percent of Head Start Family Service workers indicated problems with helping families access or find dental care for their children.

Services to Strengthen Families and Mental Health Care: Many families are not always forthcoming about their need for mental health care or help in strengthening their families. Issues around child abuse and neglect are not
revealed easily. And, many parents do not realize they need help in strengthening their parenting skills. In spite of this, 27.5 percent of parents from the Colorado Child Health Survey expressed a concern about the child’s difficulties with emotions, concentration or getting along with others. Nearly 30 percent of the Head Start income-eligible families surveyed in the fall 2007 parent needs survey expected to need help with family problems in the coming year at least one time, and 8 percent of all parents surveyed expected to seek help for a family member’s mental health care in the year ahead. Twenty-one percent of families said they will seek help with parenting issues in the next year. Though the need for services relating to mental health care and strengthening families is extensive, access to these services can be a challenge.

- 68.6 percent of metro area community agency leaders believe that mental health care for children is either challenging to access or unavailable, and 73.6 percent say that about adult access to mental health care. Similar results were expressed for family counseling services.
- Over 45 percent of the Head Start Family Service Workers surveyed indicated access to these services can be a problem at times for children, and another 48 percent indicated mental health care was simply not available for children.

- **Job Services, English Classes and Job Training:** While many parents of young children are interested in adult education opportunities, they face a number of barriers to accessing these services.
  - While about one third of the all of the surveyed families indicated a need for these types of services, 10.5 percent of all surveyed families indicated they had an access problem with job training and adult education services in the last year. In other words, about 1 in three families who need these services have had access problems in the last year.
  - Focus group participants indicate that a number of barriers often make it impossible for parents of young children to take advantage of education programs. These barriers include the cost of childcare, lack of evening childcare, the lack of time and money to take classes, inconvenient schedules and transportation problems. Persons speaking Spanish face additional challenges, including the lack of classes offered in Spanish and not being aware of opportunities for ESL, GED and other job training opportunities.
  - 38.7 percent of the Head Start Family Service Workers surveyed indicated access to these services can be a problem at times, and over half indicated these services were not available for the families they served. 47.3 percent of the community leaders and other agency staff surveyed indicated access to these services can be a problem at times, but only 12.2 percent indicated these services were not available.

- **Energy Assistance:** Though housing and energy assistance programs are available for metro area residents, accessing these programs can be difficult.
• Head Start families participating in fall 2007 focus groups indicated that many families are not aware of how to get assistance. Twenty-one percent of low-income families surveyed said energy assistance as difficult to access.

• 48.4 percent of the Head Start Family Service Workers surveyed indicated access to these services can be a problem at times, and 45.2 percent indicated these services were not available for the families they served. 44.6 percent of the community leaders and other agency staff surveyed indicated access to these services can be a problem at times, but only 6.6 percent indicated these services were not available.

• **Housing:** A common concern among moderate and low-income families is the high cost of housing. As problems with paying mortgages continue to increase, access to these services remain and will likely become even more of a problem.

  • 17.5 percent of families living in poverty have had problems accessing services related to housing assistance in the last year. 8.2 percent of families with incomes above the poverty line have had problems accessing these services.

  • According to the most recent study by the Colorado Division of Housing, fewer than 40 percent of low-income renters will have the opportunity to receive some sort of housing assistance.

  • 67.7 percent of the Head Start Family Service Workers surveyed indicated access to these services can be a problem at times, and 22.6 percent indicated these services were not available for the families they served. 49.6 percent of the community leaders and other agency staff surveyed indicated access to these services can be a problem at times, and 14.9 percent indicated these services were not available.
Appendix B: Interview with Paul Cook, Research, UCD SON

1. Who within the Head Start staff would be the appropriate people to train in MI? (There are nurses, but they have limited contact with parents. There are many other staff including paraprofessionals, teachers and family service workers that we are considering.)

I don't think it has to be nurses delivering the intervention - anyone who has enough face-to-face time and a good working relationship with the family could do it. MI was originally delivered by psychologists, but there are now lots of studies showing that people without any type of advanced training can learn to do it.

2. Could this be carried out in a "train the trainer" model, where key people are trained, and they in turn train other staff members?

Yes, I think that works particularly well. The research on MI training suggests that you can learn MI relatively quickly, but that it helps to then have ongoing supervision or consultation about cases as you start to actually apply it. I've seen this work well in a "team meeting" format, where people who are using MI get together once every week or every couple of weeks to compare notes. A train-the-trainer format could use "team leads" or some concept like that, and those people could facilitate the ongoing discussion.

3. For the initial training mentioned in question #1, how many training sessions would be necessary?

Most of the MI trainings seem to be 1-3 days (8 hours each). I have done trainings in a single 8-hour day, and I know someone locally who has done 4-hour or 8-hour MI trainings. Again, the research suggests that training plus follow-up is better than training alone. There didn't seem to be a difference in that study between an intensive "workshop" format and a more traditional class-type format with multiple sessions.

4. What would be the approximate cost to the organization? (Head Start has major budget constraints, so this is a huge issue for them.)

This depends on where you get the training. There is an official network of MI trainers (see www.motivationalinterview.com <http://www.motivationalinterview.com/> , and look for the link labeled "MINT"), who have been trained by Bill Miller (originator of MI) and who have his seal of approval. They seem to be relatively expensive and harder to access, because there aren't that many of them. The person I know locally (Steve Bentley) was trained by Miller but isn't one of the "official" trainers - he has done 1-day trainings for
around $1,000, I think. He presented at the Nurse Practitioner conference in Keystone last summer. I have done some trainings myself, although I call them "health behavior change" trainings (vs. MI), because I'm not an official MI trainer. My interest is mainly a research one, collecting data about the outcomes of training, whether some participants benefit more from the training than others, etc. The university always wants to be paid something for my time, but I'd be willing to talk some more about the project and see if this makes sense - I might be able to do something relatively cheaply. The advantage of Steve Bentley is that he's a private practitioner, not at the university. By the time the university adds on their overhead, it might not come out much cheaper for me to do it than Steve's consulting fee.

5. Is MI a good technique to use in brief interactions with the parents, or is a more in-depth conversation always involved?

One of the major strengths of MI is its brevity. A recent meta-analysis showed that MI could be done effectively in as little as 15-60 minutes, in one session or spread out over the course of several months. In that review, MI produced results as great as those seen after 4 months of once-weekly psychotherapy groups. My experience has mainly been training nurses to do MI over the phone in disease management programs, and they have gotten good results in a series of 3-5 phone calls that run 10-15 minutes each.

6. Are there any weaknesses of MI that you feel would impact the efficacy with this particular population? If so, are there complimentary techniques that staff could use?

The biggest potential issue I can see is the different dynamic with parents and kids. MI has been mostly tested in an adult population, where the client is also the one who has the health issue. Even if you are working primarily with the parents of very young children, the parent isn't the one whose dental health is at risk, so the parent's goals may be a little different (e.g., maybe it's more important to save face in front of an authority figure like a health care professional, so the parent won't admit to any problems). There's an interesting dynamic that you see in child psychotherapy - a lot of the time, the different people in the room don't agree on why everyone is there, and there is always some negotiation involved. There are some cognitive-behavioral and family systems interventions designed specifically for work with families, but I'm not sure how those would work in a brief interaction or in your type of setting. Also, those generally are administered by someone with more professional training. They might be worth exploring, however. I think a lot of the basic MI strategies would work, they would just have to be adapted, and it would be good to have a few other tricks up your sleeve.

7. What is the best way to evaluate the effectiveness of an MI intervention? What kind of time frame would you expect to start seeing results?

In terms of time frame, the meta-analysis showed good results over 3-12 months for the most part, so that is probably a reasonable expectation for when to start looking
at outcomes. The evaluation question is bigger, and depends on what your goal is. For research, a randomized controlled trial—where some families receive the intervention and others don't, and the group assignment is determined by the flip of a coin—would be the gold standard. But there are other evaluation methods that can be useful in an applied setting, like nonrandomized comparison groups or pre/post comparisons. It varies depending on who you expect will be the end consumer for the evaluation results, and what their interests are.

Here's the reference for the meta-analysis: Burke, et al. (2003). J Consult Clin Psych, 71(5), 843-861. There was also another, more updated one published in 2005, but I don't have the citation handy.

Hope this is helpful. I'd be happy to talk some more, or to give you Steve Bentley's contact info. Additionally, you might want to speak with Joan Nelson (also on the SON faculty) - she uses MI at Kaiser, and has done some staff training there. I don't know if she has done any work with parents on child health behavior issues, but it would be worth asking. I'm interested in these health behavior applications of MI, so please keep in touch regardless and let me know how the project works out.

Paul
Appendix C: Evaluation/ Sample Questionnaire Questions

Please rate the following questions on a scale of 1 to 10, 1 being least likely, 10 being most likely:

1) How likely is it that you will take your children to the dentist twice this year for an oral exam and tooth cleaning?
   1  2  3  4  5  6  7  8  9  10

2) How likely is it that you will take your child/children to get fluoride treatments?
   1  2  3  4  5  6  7  8  9  10

3) How important do you feel it is to take care of baby teeth (1= not important, 10= very important)
   1  2  3  4  5  6  7  8  9  10

4) How likely are you to visit the dentist when referred by the school nurse?
   1  2  3  4  5  6  7  8  9  10

5) If your child is in need of dental care (has a cavity forming), how likely are you to take your child to the dentist?
   1  2  3  4  5  6  7  8  9  10

6) How likely is it that you will have your children brush their teeth twice a day?
   1  2  3  4  5  6  7  8  9  10

7) How well do you feel you are feeding your children compared with the recommendations given by the school nurse (1= not well, 10= very well)?
   1  2  3  4  5  6  7  8  9  10