ity and reward programs for achieving accountable higher levels. Usually they're called Star programs, 3-star programs or 4-star or 5-star programs. I believe that these programs set the stage for additional Federal efforts.

CCDBG already commits to quality through the mandatory 4 percent set-aside, which has affected quality. But you asked how you could do more. I believe there are a number of ways you could make quality the baseline, as opposed to an add-on, in CCDBG. It could include policies to encourage States to develop their QRIS programs, and for those that already have QRIS, to increase participation in the QRIS program.

You could require States to evaluate their funded quality improvement programs to assure they are meeting their goals. Payment levels for children and child care subsidy could be tied to the

tier of quality that the child is attending.

Turnover could be reduced, as Eric mentioned, and I know that Charlotte will talk about this. Turnover could be reduced by having longer periods of eligibility. CCDBG could encourage collaboration in pursuit of quality across many of the auspices of care, child care, Head Start and pre-K, by asking States to report through these reporting mechanisms do you have common linkages across your standards, across your quality improvement programs. So you

could try through reporting to make States focus on it.

In short, quality for children from low-income families could become a more central goal of CCDBG. I'm quite impressed by a study that came out last year showing that over 1,000 children in almost 700 pre-K programs that children from low-income families make no gains in programs of low quality, no cognitive language or social/emotional development gains over the course of a year spent in low-quality care. They do make gains, however, at the high end of quality, and the higher the quality, the more gain the child makes. I think all low-income parents should be able to obtain a subsidy that lets their child enroll in one of these higher-quality programs.

Thank you for letting me speak today.

[The prepared statement of Ms. Bryant follows:]

PREPARED STATEMENT OF DONNA M. BRYANT, Ph.D.

SUMMARY

Extensive evidence shows that the quality of a child's early care and education experiences influence the child's language, cognitive and social outcomes, effects that are more pronounced for children of low-income families. We have broad agreement about what constitutes "quality" and we know how to measure it.

Improving quality is a different matter. Predictors of quality include child-teacher ratios, group size, teacher beliefs and motivation, professional development and training, good supervision, and wages; the evidence on teacher education is not as clear-cut—as in K-12, the content and quality of professional preparation and ongo-

ing professional development seem to be most important.

Based on these predictors, many programs have been developed to improve quality, including salary supplements to reduce turnover; scholarships for teachers to obtain more education; and on-site professional development through consultation, coaching, mentoring, or technical assistance. No single intervention or approach will help a State improve quality across large numbers of early education programs, so some States have implemented more comprehensive, coordinated interventions (e.g., NC's Smart Start). The most promising and comprehensive quality improvement effort has been the development in about half the States of Quality Rating and Im-

provement Systems (QRIS), tiered systems of quality that build the capacity for quality and reward programs for achieving accountable higher levels of quality

quality and reward programs for achieving accountable higher levels of quality. The existing Child Care and Development Block Grant (CCDBG) commitment to quality via the 4 percent minimum set-aside requirement could be increased by several efforts that would make quality the floor of CCDBG. This could be accomplished by encouraging States to develop QRIS and motivating those that have QRIS to increase QRIS participation; to evaluate their funded quality improvement programs to assure that they are meeting goals; to tie payment levels for children in child care subsidy to the tier of quality their program provides; and to reduce child turnover by establishing longer periods for eligibility determination (i.e., a year). CCDBG could encourage collaboration in pursuit of quality across child care sectors by requiring States to report on whether they have common standards across auspices (child care, Head Start, pre-K) and whether their quality support efforts are aligned with their standards.

In short, quality for children from low-income families could become a more central goal of CCDBG, rather than a secondary or tertiary goal. Research shows that below certain thresholds of quality, children from low-income families make no cognitive, language or social gains, but they do make gains at the higher levels of quality. Low-income parents should be able to obtain a subsidy that would pay for their children to enroll in care that is not only safe but that helps them grow and develop.

Thank you Senator Mikulski, Senator Burr and other members of the committee for inviting me to speak today on what research tells us about child care quality and the implications for policies in the Child Care and Development Block Grant. My name is Donna Bryant and I am a Senior Scientist at the Frank Porter Graham (FPG) Child Development Institute at the University of North Carolina at Chapel Hill.

When I started at FPG 33 years ago, the Abecedarian children were ages 1–6 and they filled the classrooms in our building. I worked on the studies that came after Abecedarian—studies of home visiting, Head Start, and public pre-k; and evaluations of North Carolina's comprehensive Smart Start early childhood program and several States' child care Quality Rating and Improvement Systems (QRIS). My current work is to help evaluate a network of 12 very high-quality early childhood schools around the country called Educare.

Today I have four points to share with you. First, quality early learning matters to young children. Second, we can define what we mean by quality and we know many of the factors that lead to it. Third, States have been experimenting with a variety of large-scale quality improvement initiatives and have set the stage, especially with Quality Rating and Improvement Systems (QRIS), for additional Federal efforts. And fourth, as you fulfill your charge to consider policy options within the Child Care and Development Block Grant, there are ways to integrate quality as part of the baseline, rather than an add-on. These ways could build on current public policy work in the States and our science of early development.

I. QUALITY MATTERS FOR YOUNG CHILDREN

At previous hearings this subcommittee has heard about the important difference that receiving high-quality early care and educational experiences can make in the lives of all children and especially in the lives of children from low-income families. The Abecedarian Project and the Perry Preschool Project showed that high-quality child care experiences yield good cognitive and social outcomes for children from low-income families, outcomes that translate into life-long savings in terms of increased education and employment and decreased criminal activities (Campbell, et al., 2002; Schweinhart, et al., 2005). These pioneering studies have been followed by dozens of other studies of early childhood programs that were of much larger scale than Abecedarian and Perry—programs for children from low-income families such as Early Head Start, Head Start, and public pre-k, as well as community-based child care and nursery school programs for children from families with all levels of income. Extensive evidence links the quality of these types of child care with children's academic and social development (Lamb, 1998; Vandell, 2004), although the effects are typically not as strong as Abecedarian and Perry because the programs are generally not as good. In addition, many studies show that children from low-income families make even greater gains than non-poor children in community care (e.g. Burchinal, et al., 2000; Peisner-Feinberg, et al., 2001) and pre-kindergartens (Gormley, et al., 2005).

The conclusion from these studies is that better programs lead to better outcomes for children, especially for children from low-income families.

II. WHAT IS QUALITY AND WHAT ARE ITS PRECURSORS?

"Quality" is a broad but commonly used term that encompasses many inter-related components of a good child care and early learning experience for infants, toddlers, or preschoolers—learning and developing in a stimulating and safe environment with an interesting variety of materials and with teachers who frequently

ronment with an interesting variety of materials and with teachers who frequently interact with them with positive, responsive language and intentionally teach them new words, concepts and skills throughout the day. Teachers should be covering language, early numeracy, science, social studies, and be especially attuned to every opportunity to promote socio-emotional and behavioral development. We have several widely-used observational measures of quality, all of them known by acronyms: the CIS (Caregiver Interaction Scale, Arnett, 1989), the CLASS (Classroom Assessment Scoring System, Pianta, 2007), the ECERS-R (Early Childhood Environment Rating Scale-Revised, Harms, 1998), the ITERS-R (Infant-Toddler Environment Rating Scale-Revised, Harms, 2003), and the POA (Program Quality Assertable). vironment Rating Scale-Revised, Harms, 1998), the FIERS-R (Infant-Toddier Environment Rating Scale-Revised, Harms, 2003), and the PQA (Program Quality Assessment, High/Scope, 2003). There are even more. Trained researchers can observe a classroom with these scales and arrive at a "quality" score. We know from research that these measures predict children's cognitive, language and social out-

search that these measures predict children's cognitive, language and social outcomes. Even after we take into account the many other factors that we know influence a child's development, such as parents' education, family income, and mother's age (teen mom), their child care quality helps predict their outcomes.

Given that we know how to measure quality, how do we increase our numbers of higher quality programs? First, one needs to know the research on predictors of quality, summarized recently by Peisner-Feinberg and Yazejian (2010). The quality predictors are: better teacher-child ratios (e.g., 1 teacher/4 babies rather than 1/6) and smaller class size (e.g., 16 preschoolers rather than 20), although class size is not as important if the ratio is good: strong professional preparation and engaging not as important if the ratio is good; strong professional preparation and ongoing development (strong pre-service professional preparation and annual professional development in areas appropriate to the age-group they are teaching); good super-

vision and support from the director, higher wages, and low teacher turnover. If I were a director and could only do one thing, I would say that it is to hire the right people, but there is no screening test to help a director pick out the best people. Research shows that teacher beliefs and motivation influence the quality of child care. Some studies show that more education is related to quality, but more recent studies do not. One explanation for these contradictory findings—which are comparable to what has been found in K-12 education—may be that educational attainment is part of a complex system and cannot be reduced to a single variable (BA/no BA) (Peisner-Feinberg & Yazejian, 2010).

The educational attainment puzzle—the lack of a clear prediction of education level to quality—means that degrees and credentials alone are not sufficient to achieve quality. It is likely that the *content* of the education matters, as well as the context in which it was obtained. Child development is complex; strategies for teaching infants, toddlers and preschoolers are different and many children need individualized attention. A teacher needs to know how to observe and assess to best meet each child's needs. Partnering with parents assures a stronger mutual focus on the child's development and learning. This set of teaching behaviors is what is needed. A director's most important job is to find and hire teachers and assistant teachers who can do these things.

Even though there is not a clear recipe to follow to achieve quality, research has shown us many of the ingredients. We also know that thousands of directors across the country run great programs for young children (for example, the Educare programs that I currently work with) and that new directors can take a mediocre program and turn it around. This process is facilitated if the program is in a region or a State that has a coordinated system for assisting, recognizing and rewarding

quality improvement.

III. STATE EFFORTS TO IMPROVE CHILD CARE QUALITY

No single intervention or approach will help a State improve quality across large numbers of early childhood education programs. However, let me describe for you the traditional method of increasing quality and then outline for you some areas where we have seen creativity on the part of States that have decided to focus on quality.

Regulation

States typically regulate child care facilities. A blunt method—but an incomplete one—is for a State to require more stringent structural characteristics for child care, based on the research I cited earlier. A State can undertake improvements in areas such as the regulations about ratios of teachers/children and hours and types of teacher training. Each of these may bear some relation to child care quality, and we have known for quite awhile that States that have more stringent structural regulations do have higher observed quality in classrooms (CQO Study Team, 1995). However, these types of regulatory improvements alone will not likely get a State where it wants to be in terms of quality.

Systematic Quality Improvement Initiatives

In addition to regulations that apply to all child care programs, beginning in the 1990s States began to implement a variety of quality improvement initiatives that were based on the research linking specific factors to child care quality, initiatives that were more focused on quality. These early initiatives tended to focus on just one part of the quality equation. They did not necessarily try to change the underlying problem and they were not comprehensive. For example, State quality initiatives offered child care teachers scholarships in order to increase their education or implemented supplementary compensation and benefits programs in order to reduce staff turnover. My State, North Carolina, was an early innovator, so I will describe a few of its initiatives and the research findings.

Programs to Increase Education

The T.E.A.C.H. Early Childhood® program (Teacher Education and Compensation Helps) began in North Carolina and is now implemented in 26 States. T.E.A.C.H.® provides scholarships to assist child care teachers, assistant teachers, and leaders with the costs of attending college including tuition, books, travel, and work release time. Participants agree to continue their employment for a specified time and receive a bonus or pay increase when their educational goals are met. A 2009 survey of T.E.A.C.H.® States reported turnover of 11 percent or less (CCSA, 2010), a rate far lower than the national rate of 30 percent (Whitebook, et al., 2001) and even better than the public school teacher turnover rate which is 17 percent nationally (NCTAF, 2006).

Professional Development Through Consultation, Coaching, Mentoring, and Technical Assistance (TA)

States also have recognized the value of site-based professional development and program quality improvement strategies, variously called consultation, coaching, mentoring, or TA. This help is provided by individuals with a wide variety of qualifications and competencies, and the State child care agency—which may use Federal as well as State child care dollars to finance this work—has discretion to set appropriate standards (or not) for this type of strategy. These consultants focus on a variety of content and visit their clients anywhere from just a few on-site visits to much more frequently. The majority of these programs use a classroom observational tool, followed by one-on-one consultation visits with the teacher and/or director to discuss and help with areas of needed improvement. In a recent study with colleagues in 5 States, we randomly assigned 101 consultants from 24 agencies to use a particular model of consultation or to use their agencies' typical approach to consultation. We found that the child care teachers helped by these consultants made significant gains in their classroom quality regardless of the approach used by the consultant (Bryant, et al., 2009). The gains were significant, but modest.

Professional Development/Training Plus Consultation

Other studies have combined training plus consultation to improve the quality of Head Start classrooms (Farmer-Dougan, et al., 1999; Peisner-Feinberg, 1998) as well as improvements in specific content areas such as the teaching of math (Clements & Sarama, 2008) or literacy (Smith, et al., 2008). My Teaching Partner is an innovative web-based consultation intervention developed by Bob Pianta and colleagues (Pianta, et al., 2008) that gives teachers access to video clips of high-quality teaching and web-based consultation that provides ongoing feedback to teachers through a protocol that focuses on specific dimension of the CLASS observation measure. In random studies of these interventions, the group of teachers that received the special training and consultation made significant gains on the quality measures used in the studies. The gains were typically of the same magnitude as in our study of in-person consultation—statistically significant but not huge.

My summary of the widely used consultation approach to improving early child-

My summary of the widely used consultation approach to improving early child-hood quality is that it is not a silver bullet, but one of the better ones we have because it begins where the teacher is, builds on strengths, and can address weaknesses. Consultation should be based on research; grounded in observation; tied to early learning, program, and professional development standards; individualized for the client, and given time to work. We need to be realistic about the amount of change to expect from consultation, but indeed quality improvements can be made.

Comprehensive Statewide Initiatives

Some States have recognized the valid but piecemeal approaches described above cannot have the type of systemic impact that they are seeking for improved quality and outcomes for young children, particularly their low-income and at-risk children. As a result, some States have developed organized systems of early childhood programs.

North Carolina pioneered a comprehensive approach to early childhood health and development. Beginning in 1993, NC's Smart Start initiative created a unified approach to governance that involved State and regional leadership and accountability, and started to work more systematically to address improved quality in early learning. A variety of efforts received funding, and the State meaningfully increased its State contribution on top of the Federal CCDBG funds. All of the efforts I described above were included and, in addition, because of the broad-based understanding of child development, home visiting and health interventions were also part of this comprehensive approach. Over half the funds were devoted to child care quality and access. Four statewide assessments of early childhood classroom quality from 1994 to 2001 showed significantly improved quality over time (Bryant, Maxwell, & Burchinal, 1999; Bryant, Bernier, Peisner-Feinberg, & Maxwell, 2002). Although the Smart Start evaluation showed that programs participating in more of the quality enhancement opportunities made greater gains on quality measures, particular interventions that made the most difference in quality could not be identified. [The Smart Start evaluation also positively linked higher classroom quality to preschoolers' receptive language, literacy, math, and social skills. (Bryant, Maxwell, Poe, & Taylor 2003)].

QRIS As the Framework for Quality

The last decade has seen the development of a very promising State strategy to improve child care quality—statewide Quality Rating and Improvement Systems (QRIS). A QRIS is a systematic approach "to assess, improve, and communicate the level of quality in early care and education programs" (Mitchell, 2005, p. 4) that can bring together a fragmented set of resources to build an aligned and comprehensive system of early care and education. Oklahoma (1998) and North Carolina (1999) were the first and now 25 States have a QRIS with all five important elements used to create stepping stones to increasingly higher levels of quality. These components are: (1) quality standards (child, program, practitioner); (2) accountability measures to monitor the standards; (3) outreach and support to programs and practitioners; (4) financial incentives; and (5) dissemination of ratings and information to parents to raise awareness and market demand for quality.

A QRIS develops levels or steps between basic licensing quality and high quality, usually with 3, 4 or 5 steps or levels. These steps then become the structure for aligning funding to programs by a variety of important methods, including increasing child care subsidies (with rates increasing at higher quality levels); requiring all programs participating in child care subsidy to participate in the QRIS; merit or grant awards to programs as they achieve higher levels of quality; support awards to get to another level of quality; priority access to professional development support such as T.E.A.C.H.® and coaching, mentoring and professional development. Even though most State QRIS systems are relatively new, a few studies already have shown that quality improvement has occurred over time (summarized in Tout & Maxwell, 2010).

States are able to customize their QRIS to their own political and economic context. With a few exceptions, most States invite centers and FCC homes to participate voluntarily. States that have put relatively more resources into their QRIS can afford to hire independent observers to validate the quality of the programs at the higher levels; States with fewer resources rely on self-report or accept the reports of other validators (e.g. accepting NAEYC accreditation or a Head Start program's 3-year site-visit report). Some States offer significant financial rewards for attaining a higher star level while others offer much smaller amounts. States differentiate award levels based on the enrollment of at-risk children into the program (i.e. children from the subsidy program or those who have a developmental delay or disability). Many States increase the child care subsidy rates for children in programs with more stars, although the amounts differ. States may prioritize access to professional development and other quality improvement supports in order to assure an integrated approach to quality improvement.

One study of these naturally occurring differences between States is underway, but more research on QRISs would lead to better understanding of how to weight various components in the system, how to better match quality improvement interventions to programs at different levels, and how to persuade all programs (especially those of low quality) to participate in the QRIS and receive quality improve-

ment help. Certainly the focus on QRIS in the Early Learning Challenge will help push and refine this work.

QRISs, Early Learning Standards, and Professional Development Systems

QRISs developed around the same time that the standards-based education movement began. All 50 States now have early learning standards for what preschoolers should know and be able to do, typically developed by departments of education (or wherever State pre-k resides) (Scott-Little, et al., 2010). Thirty-two States now have infant/toddler standards, half developed by the department of education and half developed by the State's department of human services (Scott-Little, et al., 2010). Simultaneously, many States developed early childhood professional development competencies, specifying the skills that people teaching young children should have. Community colleges, colleges and universities may or may not be required to teach these competencies. The QRIS systems have typically developed out of the departments of human resources/social services, where child care resides. The more sophisticated of these systems incorporate the early learning standards and the professional development competencies as part of the comprehensive vision. And then there are all of the Head Start and Early Head Start programs, which do not reside in education or health. As you can tell, many agencies are now involved in efforts to improve quality and their efforts would be more effective if they were better linked. This leads me to one of the questions you asked me to address.

IV. WHAT CAN CCDBG DO TO IMPROVE QUALITY?

In your invitation, you asked for my recommendations on how to improve child care quality and safety within the existing CCDBG program. Given its commitment to quality through the 4 percent minimum set-aside requirement, Federal policy has already affected quality, but it could do much more. The minimum amount of quality set-aside could be raised—many States are already using a higher percentage for quality. Given the importance of quality to the children served by the block grant, an alternative strategy could be to make quality the basic floor of the program through the following possible strategies. States could be required to use their quality funds on interventions that have been shown to work, such as QRIS, that influence teaching and learning practices and with research evidence that links the practices to children's outcomes. States could be required to link their payment levels for children in child care subsidy to participation in these efforts

Knowing that continuity is important for children, you could establish longer periods for eligibility determination (i.e., a year) so children are not evicted from child care as soon as a parent earns a bit too much. The data and reporting requirements should also be aligned. (I believe Charlotte Brantley will address these two recommendations more thoroughly.) You could encourage those States without QRIS systems to develop them (as the Race to the Top/Early Learning Challenge Fund is doing). In short, you can embed pay for performance more strongly within the CCDBG, based on objective standards-based practices and their implementation. Quality for low-income children and families could be a more central goal, rather

than a tertiary goal

Change in the CCDBG should bring with it changes in Federal leadership for the other early childhood programs as well. We need to work harder at unifying the many early learning programs we fund. This will happen within those States fortunate enough to receive the Challenge funds, but that will leave out many States. I also hope that when the Federal Government provides CCDBG, IDEA, and Head Start programs would be asked to report on Start funds, the States and Head Start programs would be asked to report on whether they have common standards across programs, whether the system of teacher and provider supports is aligned with the quality standards, and whether it applies to all sectors of the early childhood system (child care, Head Start, pre-K, early intervention/preschool special education). If we measure collaboration, we will get more of it. This should help better leverage resources and most significantly, best serve the target population of high-risk children that these programs are de-

In closing, I want to be clear about why we should use public resources for improved quality for our children. Right now, CCDBG and the States' child care systems do not serve all of the at-risk children who qualify and we don't provide quality care to all of those we currently do serve. This situation seems to legitimize a discussion of trading off higher quality for more access. This is a choice that would

bewilder Solomon and we should not be asked to choose.

Let me describe a study that is relevant to this issue. Quality programs make a difference in the learning and social skills of all children, but for children from poor families, they make even more difference at the higher ranges of quality. Last year, my FPG colleague Peg Burchinal led a study of over 1,000 public pre-k children who all qualified for free or reduced price lunch, relating their language, math, and behavioral scores at the end of the school year to the quality of their classroom (Burchinal, et al., 2010). These children were in 670 preschool classrooms in 11 States. The study's purpose was to test whether there might be a minimal "justgood-enough" threshold of quality, above which the quality difference would not matter.

Not only did these authors find NO evidence of a just-good-enough threshold of quality, they found the opposite: for these poor children, below certain thresholds there were NO gains and the association between quality and children's gains was stronger at the higher quality levels than at the lower levels. Poor children, those who get the CCDBG subsidies, may get no social or academic benefit from attending low-quality care. Low-income parents should be able to obtain a subsidy that would pay for their children to enroll in care that is not only safe but that helps them grow and develop.

The Federal framework for the CCDBG does matter and there are approaches you can take to put more resources into quality improvement. I hope that we can move towards both goals-greater accessibility and higher quality-at the same time. But make no mistake about it, we will not realize a quality agenda if we don't find a better way to infuse quality into the floor of the CCDBG.

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Senator Mikulski. Thank you, Dr. Bryant. That was part of exactly what we wanted to hear, which is data-driven and evidencebased.

Ms. Brantley, we're going to turn to you, and I know I called you Dr. Brantley. I think you deserve one. If anybody hasn't given you an honorary doctorate, I'd like to do that today.

STATEMENT OF CHARLOTTE M. BRANTLEY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, CLAYTON EARLY LEARNING, DENVER, CO

Ms. Brantley. Thank you. I'll take the honorary doctorate.

Thank you very much.

Well, good morning, Senator Mikulski, Senator Burr, Senator Franken, and Senator Blumenthal. I very much appreciate the invitation to come today to address this issue that has certainly been near and dear to my heart and has actually helped frame a good portion of my career in the early childhood field.