

Better Beginnings

ASSESSING RISK AMONG FAMILIES
ENROLLED IN HOME-BASED
EARLY LEARNING SERVICES IN
EAST YAKIMA AND WHITE CENTER

*Kristin Hallgren
Diane Paulsell
Alice Anigacz
Kimberly Boller*

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Home-Based Early Learning Services Within the Early Learning Initiative

In 2006, the Gates Foundation launched the Early Learning Initiative to improve the school readiness of Washington State's children. To achieve this goal, the Gates Foundation and other private funders and state officials formed a statewide public-private partnership—Thrive By Five Washington (Thrive). One of Thrive's primary activities is developing successful community-wide early learning initiatives in two demonstration communities in Washington State—East Yakima and White Center. Thrive has worked with an intermediary agency in each community to develop and implement the initiative. Ready by Five (Rb5) serves as intermediary in East Yakima. In White Center, Puget Sound Educational Services District (PSESD) operates the White Center Early Learning Initiative (WCELI).

During the planning phase in 2007, both communities identified home-based early learning (HBEL) services as a key component on a continuum of early learning services for families in the target area with pregnant mothers, children from birth to age 5, or both. In particular, Rb5 and WCELI sought to meet the needs of families with pregnant women, infants, and toddlers; immigrant families with diverse cultural backgrounds; and families who speak a language other than English at home. Although Rb5 and WCELI shared many of the same goals and selected some of the same home visiting programs, the continuum of HBEL services reflected each community's unique needs.

Both communities selected Nurse Family Partnership (NFP) as an intervention for first-time mothers because it has a strong evidence base and uses a relationship-based approach, and both communities had positive prior experiences with it. Many women in the target population, however, would not be eligible for NFP, because they were not in their first pregnancy or did not speak English or Spanish. Therefore, Rb5 and WCELI selected additional programs to address the needs of families in their communities. The two communities worked together to develop Partnering with Families for Early Learning (PFEL), a relationship-based program for Medicaid-eligible pregnant and postpartum women that extends services through the child's second birthday. Rb5 also implemented Parents as Teachers (PAT) to serve families from pregnancy until the child enters kindergarten as well as families with younger children who did not enroll in NFP or PFEL but would like to receive services. WCELI developed the Outreach Doula program, which is based on the PFEL curriculum, to serve women from the Somali and Hispanic communities.

More in-depth information about the selection, implementation, and components of each home visiting program can be found in briefs available on the Thrive by Five website. A brief describing the development of the HBEL programs (Hallgren et al. 2010a) is available at http://www.thrivebyfivewa.org/downloadables/HBEL_Brief_041410final.pdf. For a brief about home visit observations of the PFEL program (Hallgren et al. 2010b), see <http://www.thrivebyfivewa.org/downloadables/HOVRSObservationsBriefFinal.pdf>.

Home visiting staff in Early Learning Initiative (ELI) communities developed a tool, called the Universal Risk Assessment (URA), to assess families' needs and refer them for appropriate services.

Assessing Risk Among Families Enrolled in Home-Based Early Learning Services in East Yakima and White Center

Overview: Why Assess Risk?

Assessing the environmental and psychosocial risks young children face is important because challenges in the home environment and difficulties in caregiver-child relationships have the potential to negatively affect children's developmental outcomes and long-term adult health outcomes such as heart disease (Barth et al. 2007; Danese et al. 2008; Dong et al. 2004; Felitti et al. 1998). For example, researchers have found that as the number of families' risk factors increased, the likelihood of a child scoring below expected levels on developmental assessments at age 3 increased; with 6 to 7 risks there was a 90 to 100 percent chance of scoring below expected levels on developmental assessments (Barth et al. 2007). Early intervention, through home visiting or other programs, may be a key factor in addressing this problem.

At its simplest, risk data can describe key characteristics of families being served by home visiting programs. At its most complex, these data can help staff determine families' needs and coordinate appropriate services. A risk index combines a variety of indicators to categorize families and children into levels of potential risk for not achieving desired outcomes. This type of index converts risk data into binary risk indicators and produces counts of identified risks. Some indexes stratify the level of risk as low, moderate, or high, depending on the number of risk indicators present; other indexes create binary categories for at risk and not at risk.

In This Brief

Home visiting staff in Early Learning Initiative (ELI) communities developed a tool, called the Universal Risk Assessment (URA), to assess families' needs and refer them for appropriate services. Data from the URA would also be used to track risk levels of families enrolling in HBEL programs and assess the success of efforts to reach out to families in need. This brief provides background information about the URA and describes the characteristics of families who enrolled in HBEL programs and completed a URA, including an assessment of families' levels of demographic risk. It concludes with three considerations for conducting risk assessments.

Assessing Risk in Early Childhood Studies

We conducted a literature review to identify risk indexes that have been correlated with child development and educational outcomes in recent early childhood studies. We then applied the risk indexes to assess the risk experiences of families enrolled in HBEL programs. These risk indexes include:

- **Family Risk Index.** Zill and West (2001) used several family background characteristics that have been associated with lower educational outcomes to develop a family risk factor index for a descriptive study on entering kindergarteners.
- **Maternal Demographic Risk Index and Economic Risk Index.** Love et al. (2002) used these indexes for the Early Head Start (EHS) Research and Evaluation Project as measures of risk for suboptimal child development and educational outcomes. The descriptive study of EHS also used these indexes to describe families enrolled in EHS (Vogel et al. forthcoming).
- **Family Risk Index for ELI Communities.** Boller et al. (2008a, 2008b) used this risk index to describe the risk levels of families in the East Yakima and White Center communities in the kindergarten-readiness baseline reports at the beginning of the Early Learning Initiative. The risk index was correlated with several child development and progress outcomes.

We also identified two risk indexes that correlated risk experiences with health outcomes, including the Maternal Health Index (U.S. Department of Health and Human Services 2006) and the Adverse Childhood Experiences survey (ACEs) (Felitti et al. 1998). However, the URA did not collect enough information needed to apply these indexes to assess HBEL families' risk.

HBEL planners from both communities, in partnership with Thrive, the Gates Foundation, members of the Mathematica evaluation team, and Dr. Deborah Daro from the Chapin Hall Center for Children at the University of Chicago, developed the URA.

About the URA

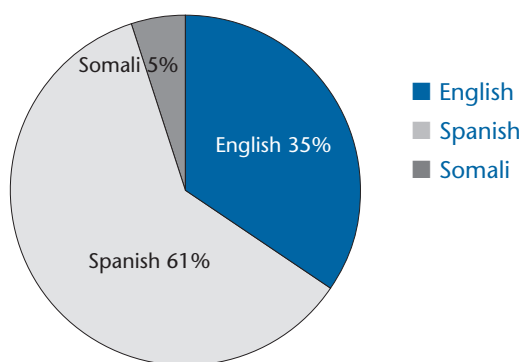
HBEL planners from both communities, in partnership with Thrive, the Gates Foundation, members of the Mathematica evaluation team, and Dr. Deborah Daro from the Chapin Hall Center for Children at the University of Chicago, developed the URA. The team identified important characteristics—such as maternal health, educational background, and income support—that needed to be captured for each family, and then drafted original questions or modified questions from other program screening forms to develop the tool.

Home visitors began using the URA in August 2008 and continued to use and revise it during the first 18 months of HBEL implementation. During this time, the URA was modified seven times, resulting in seven versions of the instrument. Mathematica staff also prepared a manual to guide home visitors in administering the URA.¹ In both communities, home visitors participated in a two-hour training session on administering the URA. The training session included an overview of each question, discussions about preventing biased responses, strategies for eliciting accurate responses, and instructions on interpreting and recording responses.

¹ The final versions of the URA instrument and manual are publicly available through the Thrive website at <http://www.thrivebyfiveva.org/URA.html>.

Analyses presented in this brief are based on URAs administered in person with 347 families between August 2008 and February 2010.² The URA took approximately 20 to 25 minutes per family to administer.³ In all but one family, the primary caregiver responding to the URA questions was the mother of the focus child enrolled in HBEL programs. Sixty-one percent of URAs were administered in Spanish, and about 40 percent of URAs were administered in English or Somali (Figure 1).

Figure 1. Language of URA interviews (Percentages)



Source: Universal Risk Assessment.

Note: Missing = 89 from Rb5 and 3 from WCELL. Numbers have been rounded to the nearest whole number.

HBEL staff expressed concerns about the intimate nature of some of the questions, especially because the URA was administered within one or two visits of the home visitor's initial meeting with a family. This concern prompted the addition of a series of questions to be completed by the home visitor after administering the URA as a way to assess the accuracy and quality of the URA data. Despite reporting that almost half of the URA respondents appeared ill at ease or uncomfortable while responding to the URA questions, almost all home visitors reported that families understood the URA questions, answered truthfully, and were interested in the interview (not shown).

Characteristics of Families Enrolled in HBEL Programs

This section presents the demographic characteristics of families enrolled in HBEL programs, including maternal and household characteristics, the families' languages spoken and countries of birth, families' financial difficulties and housing situations, and environmental and behavioral difficulties.

Maternal Characteristics

HBEL programs served families with mothers who were pregnant and who had multiple children. Most pregnant mothers had access to prenatal care and reported receiving prenatal care for most of their pregnancy. The average age of the focus child of primary caregivers who were not pregnant was about 14 months (Tables 1a and 1b).

² NFP home visitors did not administer URAs to women in their caseloads because they complete a similar needs assessment and enter it into NFP's Clinical Information System (CIS) data management system. Data are not available on the number of families enrolled in other HBEL Programs who refused to complete the URA during that time period.

³ The length of administration of the URA did not vary substantially between versions.

HBEL programs served families with mothers who were pregnant and who had multiple children.

TABLE 1a. Characteristics of Mothers Who Were Pregnant at Enrollment in HBEL Program

	All HBEL	Rb5	WCELI
Average age	26	26	27
Average number of weeks pregnant at enrollment	23	22	30
Average number of live births	2	2	1
First birth in United States (percentage)	28	28	27
Has OB provider (percentage)	96	95	97
Average number of weeks pregnant at first OB visit	9	9	2
Average number of children living outside the home	0	0	0
Sample Size^a	255	222	33

Source: Universal Risk Assessment.

Notes: Missing data ranged from 3 to 150 across items. For example, the item about first birth in the United States is missing 144 out of 150 responses because the question was not included in early versions of the URA. Numbers have been rounded to the nearest whole number.

^aThe pregnancy status of 18 WCELI participants could not be determined due to item nonresponse.

TABLE 1b. Characteristics of Primary Caregivers Who Enrolled in HBEL Program After Child's Birth

	All HBEL	Rb5	WCELI
Average age	28	29	26
Average number of live births	3	3	2
Average number of children living outside the home	0	0	0
Average age of focus child	14	19	3
Sample Size^a	40	29	11

Source: Universal Risk Assessment.

Notes: Missing data ranged from 0 to 6 across items. Numbers have been rounded to the nearest whole number.

^aThe pregnancy status of 18 WCELI participants could not be determined due to item nonresponse.

Household Characteristics

Families enrolled in HBEL programs were moderately sized, had low incomes, and had low levels of education. On average, households enrolled in HBEL programs had two adults and two children, and most had one primary contributor to the household income. More than two-thirds of households enrolled in HBEL programs reported a median household income of \$17,500 or less and fell below the federal guidelines for the poverty level. Most primary caregivers had low education levels, and many respondents reported that they had not worked steadily in the six months before completing the URA⁴ (Table 2).

⁴Almost all URA respondents were mothers who were likely at home with young children when responding to the URA questions. The URA did not collect information about the employment status of other household members.

Families enrolled in HBEL programs were moderately sized, had low incomes, and had low levels of education.

TABLE 2. Household Characteristics (Percentages Unless Indicated)

	All HBEL	Rb5	WCELI
Household Size and Marital Status			
Average household size ^a	4	4	5
Mean number of adults in household	2	2	2
Mean number of children in household	2	2	3
Married to father of child	47	43	62
Partnered to father of child	53	57	38
Household Income			
\$0–\$10,000	23	24	20
\$10,001–\$17,500	43	47	31
\$17,501–\$24,999	20	19	22
\$25,000 or more	13	10	27
Average household income	\$16,566	\$15,365	\$21,393
Average number of people contributing to household income	1	1	1
Household Income as Percentage of the Poverty Level^b			
0–50	27	29	25
51–100	51	52	50
101–130	12	13	10
131–higher	10	6	15
Highest Education Completed^c			
Less than high school diploma or equivalent	66	70	47
High school diploma or equivalent	17	16	22
Some college	9	8	13
A.A., B.A., or higher	8	6	18
Percentage completing highest education in United States	33	33	18
Education Enrollment and Employment Status			
Has taken a class in past six months	23	23	21
Plans on taking class in next six months	56	58	48
Has worked for pay in past six months	45	46	41
Plans on working for pay in next six months	61	61	64
Sample Size	347	285	62

Source: Universal Risk Assessment.

Notes: Missing data ranged from 2 to 296 across items. For example, the item about income as a percentage of the poverty level is missing 296 responses because creation of the variable required reports of annual income and household size. If either item was missing, income as a percentage of the poverty level could not be calculated. Because all but one URA respondent was the mother, these percentages primarily represent the mother's level of education and employment status. Numbers have been rounded to the nearest whole number.

^aCalculated by summing reported number of adults and reported number of children living in the household.

^bCalculated by dividing the reported household income by the average household size.

^cBecause all but one URA respondent was the mother, these percentages primarily represent the mother's level of education and employment status.

A.A. = associate's degree; B.A. = bachelor's degree.

Although many primary caregivers reported that they had lived in the United States for more than four years, they felt most comfortable with a language other than English and reported some difficulty with the English language.

Countries of Birth and Languages Spoken

HBEL programs in both communities serve an ethnically and linguistically diverse population. Most primary caregivers were born in Spanish-speaking countries and spoke Spanish as their home language. URA data suggest that, although many primary caregivers reported that they had lived in the United States for more than four years, they felt most comfortable with a language other than English and reported some difficulty with the English language. However, many respondents reported being able to read or write well or very well in their first language (Table 3).

TABLE 3. Country of Birth and Languages Spoken (Percentages)

	All HBEL	Rb5	WCELI
Birth Country			
United States	25	26	20
Mexico	66	71	43
Central or South American country	2	1	7
Somalia	3	0	20
Asian country	1	1	5
Other country	2	1	7
First Language			
English	20	4	18
Spanish	72	78	47
Somali	4	0	19
Other	4	1	16
Time in United States, if Born Elsewhere^a			
Three years or fewer	23	21	31
Four to six years	20	25	24
More than six years	52	54	45
English Language Skills			
Understands English well or very well	46	46	48
Speaks English well or very well	43	42	45
Reads English well or very well	44	43	47
Writes in English well or very well	41	41	44
If English Is Not First Language,^b			
Reads in first language well or very well	89	90	84
Writes in first language well or very well	87	88	80
Sample Size	347	285	62

Source: Universal Risk Assessment.

Notes: Missing data ranged from 2 to 14 across items. Numbers have been rounded to the nearest whole number.

^aSample size for families who were born outside the United States is 207 from Rb5 and 49 from WCELI.

^bSample size for families for whom English is not their first language is 215 for Rb5 and 51 for WCELI.

According to URA data, more than one-third of families struggled with food insecurity, and all primary caregivers enrolled in HBEL programs reported receiving WIC and Medicaid most often to meet their needs.

Food Insecurity, Public Assistance, and Housing Situations

According to URA data, more than one-third of families struggled with food insecurity, and all primary caregivers enrolled in HBEL programs reported receiving WIC and Medicaid most often to meet their needs. Some primary caregivers experienced a somewhat unstable housing situation, as about one-third of primary caregivers reported that they had moved within six months of completing the URA and almost 20 percent of respondents reported that they had lived in shared housing at least once in the six months prior to completing the URA (Table 4).

TABLE 4. Food Insecurity, Public Assistance, and Housing Situation (Percentages Unless Otherwise Indicated)

	All HBEL	Rb5	WCELI
Food Insecurity			
Did not have enough food and did not have enough money to buy more	35	35	30
Public Assistance Receipt			
Any public assistance	100	100	100
TANF or welfare	25	28	13
Unemployment insurance	6	5	7
Food stamps	59	61	49
WIC	93	94	89
Child support	7	7	5
SSI	8	9	2
Medicaid	83	82	86
Housing assistance	8	7	15
Housing Situation, Moving (past six months)			
Family has moved in past six months	32	33	23
If family has moved, average number of times moved ^a	1	1	1
Temporary Housing Situation (past six months)			
Emergency shelter	1	1	0
Transitional housing	2	2	2
Shared housing with friend or relative	17	17	15
Car, on the street, or in a public place	1	1	0
Sample Size	347	285	62

Source: Universal Risk Assessment.

Notes: Missing data ranged from 0 to 20 across items. Numbers have been rounded to the nearest whole number.

^aThe sample size for families that moved in the past six months is 94 for Rb5 and 14 for WCELI. TANF = Temporary Assistance for Needy Families; WIC = Special Supplemental program for Women, Infants, and Children; SSI = Supplemental Security Income.

Families enrolled in HBEL programs faced a range of environmental or behavioral challenges.

Environmental or Behavioral Challenges

Families enrolled in HBEL programs faced a range of environmental or behavioral challenges. For example, half of the mothers responding to the URA became parents as teenagers, and although most primary caregivers were at no risk for depression, almost half (44 percent) of primary caregivers enrolled in HBEL programs reported experiencing at least some depressive symptoms. Other behavioral challenges included use of alcohol during pregnancy (16 percent of mothers), reports that the child's caregiver had problems with drugs (7 percent), experiencing an instance of domestic violence (14 percent), involvement with Child Protective Services (CPS) (14 percent), and incarceration of the father of the child (22 percent) (Table 5).

TABLE 5. Environmental and Behavioral Challenges (Percentages)

	All HBEL	Rb5	WCELI
Age Becoming Parent for First Time			
19 or younger	50	53	33
20 or older	50	47	67
Risk for Depression			
Severe risk	15	17	8
Moderate risk	10	10	11
Mild risk	19	18	20
No risk	56	55	61
CPS Involvement			
Any involvement with CPS	14	15	9
As a parent	8	15	0
As a child	7	7	9
Imprisonment			
Primary caregiver has been in jail	11	12	8
Father of child has been in jail	22	22	20
Domestic Violence			
Experienced domestic violence	14	13	18
Alcohol Use			
Mother used alcohol during pregnancy	16	16	17
Caregiver has had problem with alcohol	5	5	5
Someone in household has problem with alcohol	1	2	0
Drug Use			
Mother used drugs during pregnancy	3	3	2
Caregiver has had problem with drugs	7	7	5
Someone in household has problem with drugs	1	2	0
Sample Size	347	285	62

Source: Universal Risk Assessment.

Notes: Missing data ranged from 0 to 145 across items. For example, the item about whether the father of the child has been in jail is missing 133 out of 145 responses because the question was not included in early versions of the URA. Numbers have been rounded to the nearest whole number. CPS = Child Protective Services.

The most common risks—reported by 80 percent or more of the families enrolled in HBEL—include receiving public assistance and speaking a primary language other than English.

Risk Assessment of Families Enrolled in HBEL Programs

The most common risks—reported by 80 percent or more of the families enrolled in HBEL—include receiving public assistance and speaking a primary language other than English. Two-thirds of HBEL families reported low levels of education, and at least half of the mothers enrolled in HBEL became a parent as a teenager. In addition, at least one-third of HBEL families reported depression, not being employed or in school, or unstable housing (Table 6).

TABLE 6. Experiences of Risk Among Families Enrolled in HBEL Programs (Percentages)

	All HBEL	Rb5	WCELI
Receiving public assistance	100	100	100
Parents' primary language is not English	80	79	82
Family income below federal poverty line	78	81	75
Lacking high school diploma or GED	66	70	47
Teenage parent	50	53	33
Depressive symptoms	44	45	39
Not employed or in school	41	40	45
Food insecurity	35	36	30
Unstable housing	32	33	23
Alcohol use	19	19	20
Domestic violence	14	13	18
Single-parent family	14	15	12
Imprisonment	11	12	8
Drug use	9	9	5
Involvement with CPS as a parent	8	15	0
Lack of prenatal care	2	3	0
Sample Size	347	285	62

Source: Universal Risk Assessment.

Notes: Missing data ranged from 0 to 296 across items. For example, the item about income as a percentage of the poverty level is missing 296 responses because creation of the variable required reports of annual income and household size. If either item was missing, income as a percentage of the poverty level could not be calculated. Numbers have been rounded to the nearest whole number.

CPS = Child Protective Services; GED = General Educational Development

Risk Indicators Collected Using the URA

Defining risk variables is an important step in assessing families' risk levels. We used the following definitions to conduct the risk assessment described in this brief:

- **Alcohol use.** Mother reports using alcohol during pregnancy or reports a problem with alcohol.
- **Depressive symptoms.** Primary caregiver has a score greater than 5 on the Center for Epidemiologic Studies–Depression Scale (CES-D) scale (Radloff 1977).
- **Drug use.** Mother reports using drugs during pregnancy or reports a problem with drugs.
- **Domestic violence.** Primary caregiver reports experiencing a domestic violence situation with his or her partner.
- **Employment or education status.** Primary caregiver reports not being employed (including self-employment) or enrolled in school in the past six months.
- **Family income below federal poverty line.** Household income is less than 100 percent of the poverty level (based on household size); includes families with a household income greater than 130 percent of the poverty level that have not received public assistance.
- **Food insecurity.** Primary caregiver reports being unable to provide food and not having enough resources for food at some point in the past six months.
- **Imprisonment.** Primary caregiver has been in jail.
- **Involvement with Child Protective Services (CPS).** Primary caregiver has been involved with CPS as a parent regarding his or her current children.
- **Lack of prenatal care.** Mother does not have an OB provider.
- **Lacking high school diploma or GED.** Primary caregiver reports not earning a high school diploma or GED.
- **Primary language other than English.** Primary caregiver reports speaking a primary language that is not English.
- **Public assistance receipt.** Primary caregiver or anyone contributing to the household reports receiving some form of public assistance (TANF or welfare, unemployment insurance, food stamps/Electronic Benefits Transfer, WIC, child support, SSI, Medicaid, or housing assistance) in the past six months.
- **Single parent.** Primary caregiver reports not being married to father/mother of the child.
- **Teenage pregnancy.** Mother reports being a teenager at first birth, regardless of whether her first child was the HBEL focus child. Teenage mother is defined as age 19 or younger at time of first birth.
- **Unstable housing.** Primary caregiver reports moving at least once in past six months.

Overall, the risk assessment based on all URA risk indicators suggests that HBEL programs appear to be serving a moderately at-risk population.

Overall, the risk assessment based on all URA risk indicators suggests that HBEL programs appear to be serving a moderately at-risk population (Table 7). The assessment of risk using existing risk indexes (see text box on page 4) yielded similar results (not shown).

Table 7. Risk Assessment for Families Enrolled in HBEL Programs Using All URA Risk Indicators (Percentages)

	All HBEL	Rb5	WCELI
Percentage of Families with^a			
0–1 risk indicators	0	0	0
2–5 risk indicators	74	73	77
Families with 2 risk indicators	2	6	10
Families with 3 risk indicators	12	12	12
Families with 4 risk indicators	41	41	40
Families with 5 risk indicators	15	15	15
6–9 risk indicators	26	27	23
Families with 6 risk indicators	13	13	15
Families with 7 risk indicators	7	7	4
Families with 8 risk indicators	5	6	2
Families with 9 risk indicators	1	1	2
10–16 risk indicators	0	0	0
Sample Size	347	285	62

Source: Universal Risk Assessment.

^aIf fewer than 25 percent of the 16 risk indicators were missing, then we calculated the family's risk score by multiplying the risk score gathered from the variables that were not missing by the total number of risk indicators. We then divided by the number of indicators that were not missing. We were able to calculate the risk level for 86 percent of the families completing the URA. The sample size for calculating the percentage of families within a category of risks is 248 from Rb5 and 52 from WCELI.

Considerations for Conducting Risk Assessments

Staff from other home visiting programs might be considering whether to conduct risk assessments of the populations served by their programs. Key considerations include:

- **Identify a risk index for conducting the risk assessment.** Staff might decide to create a risk index that comprises risk indicators based on programmatic goals. The risk index could be cross-checked using an existing risk index (see text box on page 4).
- **Develop and refine a data collection instrument that captures risk indicators.** Staff can draw from existing instruments and staff knowledge to develop questions that capture families' experiences of risk. Piloting the instrument helps ensure quality data collection and accuracy of subsequent data analysis.
- **Take steps to ensure consistent data collection.** Regularly train staff who administer the instrument, especially new staff. Encourage staff to enter data as soon as possible after administering the instrument. Provide a clear space for notes and offer staff directions about when to include notes.

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