



# CARE FOR KIDS



Early & Periodic Screening, Diagnosis & Treatment

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## Adverse Childhood Experiences and the Pediatrician's Responsibility

*The foundations of lifelong health are built in early childhood*

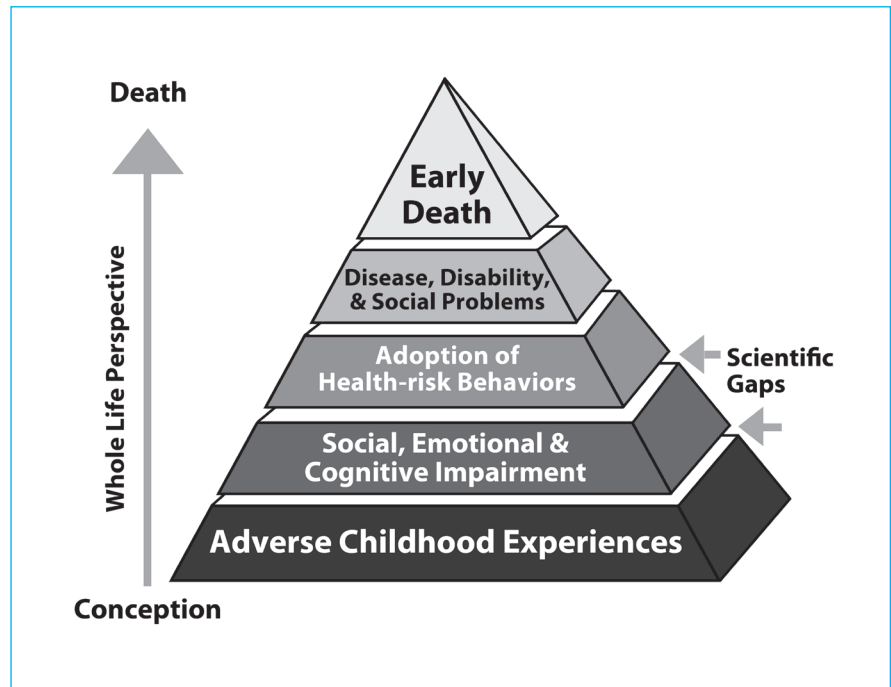
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The first years of a child's life can have a profound impact on child development, future learning, behavior, and overall well being since biological systems are strengthened by positive early experiences and good health provides a foundation for healthy and strong brain architecture. On the other hand adverse childhood experiences (ACEs) can lead to developmental and biological disruptions and may lead to setting the stress response system on an "on-all-the-time" mode, with subsequent risks of acute and chronic diseases as well as of shortened life span.<sup>(1)</sup> (Figure 1)

Environmental influences may surpass the role of genetic determinations leading to epigenetic transfer of vulnerabilities created by the interaction between genetic



**FIGURE 1: Pyramid of the Impact of Adverse Childhood Experiences**

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capacity and adversity in childhood from generation to generation. Thus, adult health promotion and disease prevention policies should start focusing on reducing type and amount of childhood adversities and mitigating toxic stress arising from them.<sup>(2)</sup>

The original ACEs study examined the relationship between ACEs and adult health outcomes in more than 17,000 middle class adults in the 1990s.<sup>(3)</sup> (Tables 1 and 2) The survey screened the population for **household dysfunction** (parental separation, household mental illness, household substance abuse, household domestic violence, household criminal activity), **child abuse** (physical, sexual, or emotional), and **child neglect** (physical or emotional). The study proved that childhood adversity occurred in clusters, was widespread and significantly influential on adult health. Nearly two-thirds of participants reported at least one ACE and more than one in five reported three or more ACEs.

In 2010, five states collected ACEs information on the Behavioral Risk Factor Surveillance Survey (BRFSS) which gave very similar results. The same year, Iowa ACEs steering committee was established to study the prevalence of ACEs in Iowa in order to guide stakeholders to develop appropriate policies to prevent ACEs and build resilience in families afflicted by them.<sup>(2)</sup>

Iowa data from 2012 that was collected through the BRFSS on child abuse and household dysfunction parameters revealed startling facts (Figure 2). This study revealed 55 percent of the Iowa adult population had experienced at least one ACE and 15 percent reported four or more ACEs.<sup>(2)</sup>

ACE Category*		Women (N = 9,367)	Men (N = 7,970)	Total (N = 17,337)
Child Abuse	Emotional Abuse	13.1	7.6	10.6
	Physical Abuse	27.0	29.9	28.3
	Sexual Abuse	24.7	16.0	20.7
Child Neglect	Emotional Neglect	16.7	12.4	14.8
	Physical Neglect	9.2	10.7	9.9
Household Dysfunction	Mother Treated Violently	13.7	11.5	12.7
	Household Substance Abuse	29.5	23.8	26.9
	Household Mental Illness	23.3	14.8	19.4
	Parental Separation or Divorce	24.5	21.8	23.3
	Incarcerated Household Member	5.2	4.1	4.7

TABLE 1: Original ACEs Study Findings

Number of Adverse Childhood Experiences (ACE Score)	Women	Men	Total
0	34.5	38.0	36.1
1	24.5	27.9	26.0
2	15.5	16.4	15.9
3	10.3	8.6	9.5
4 or more	15.2	9.2	12.5

TABLE 2: Original ACEs Study Findings

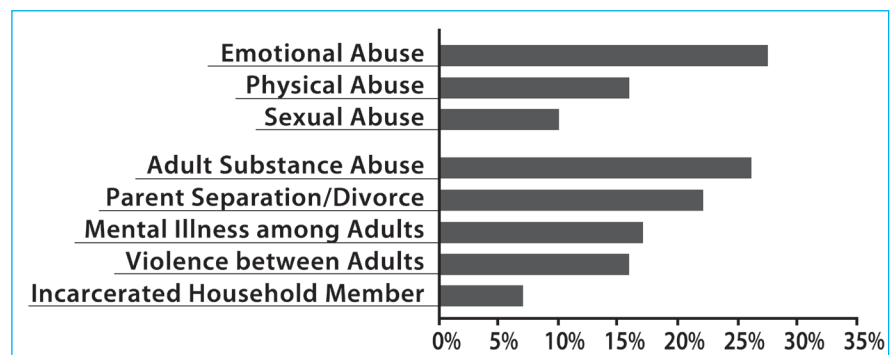


FIGURE 2: Prevalence of Individual ACEs in Iowa

Multiple studies conducted since the original ACEs study reported that the presence of four or more ACEs predicted the development of smoking, alcohol abuse, substance abuse, obesity, early and high-risk sexual activity, diabetes mellitus, heart disease, pulmonary disease,

kidney disease, and depression among others at higher rates.<sup>(3)</sup> In addition, people with six or more ACEs tend to die 20 years earlier than their peers with no ACEs. Considering the fact that 60 percent of the Iowa population is overweight, eight percent

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is diabetic, eight percent has cardiovascular disease, physical conditions that cost not only lives of many Iowans, but also significant tax payer dollars every year, pediatricians have significant responsibilities in recognizing and responding to ACEs.

### Pediatrician's responsibility

The American Academy of Pediatrics is well aware of the above evidence base that led to multifaceted efforts. These efforts usually focus on a threefold mission:

1) **To Prevent.** Prevention of toxic stress that arises from ACEs, certainly is the best approach that eradicates the ailment at its root. This can be accomplished by raising awareness among those who have the power to make a difference – from parents to professionals to politicians. Every pediatrician should participate in this awareness building effort locally, regionally, and nationally.

2) **To Screen.** This probably is the most important responsibility every pediatrician should incorporate into daily practice. Screening all children encountered for ACEs and its toxic stress may open new paths for pediatricians to help their clients and families improve their health trajectory. All Iowa pediatricians should strive toward making sure all independent licensed providers caring for children in Iowa know how to diagnose toxic stress. Primary care providers are invited to consider using the Bright Futures Pediatric Intake Form (see page four) for trauma screening in their clinical practices. In addition, in each encounter, when trauma history is related to a child and family is revealed, resiliency screening should also be performed. Please

visit the following web sites for the Family Empowerment Scale <http://psycnet.apa.org/psycinfo/1993-31894-001> and Protective Factors Survey. <http://friendsnrc.org/protective-factors-survey>

3) **To Heal.** Iowa pediatricians should strive toward learning about the best ways to heal children experiencing toxic stress. Thus, they will be able to both provide their clients with services to reduce if not eliminate ACEs and associated toxic stress and also to increase resiliency, which is a significant component that determines how a child will respond to toxic stress. Iowa pediatricians can utilize multiple resources for children who have multiple adversities in their lives including:

1) **Parenting education for parents:** <http://www.iowaaea.org/>; <http://www.extension.iastate.edu/linn/content/parenting-classes>; <http://www.aea10.k12.ia.us/pec/>

2) **Parent-child interaction therapy:** Evidence-based play therapy for children ages two to seven. <http://www.medicine.uiowa.edu/psychiatry/parentchildinteractiontherapy/>

3) **Trauma focused cognitive behavioral therapy:** Evidence-based therapy focusing on helping clients overcome their trauma-based difficulties. Check with local mental health centers. <http://mental-health-facilities.findthebest.com/d/I/Iowa>

4) **Group therapy (children and adults):** The local community mental health center of each county may provide this service in addition to psychoeducation for the parent, counseling for parents with their own ACEs, and addiction.

5) **Substance abuse treatment:** Dedicated treatment centers are located across Iowa. <http://www.meccaservices.com/>; <http://www.sieda.org/>

6) **Big Brother Big Sister programs:** Provides respite care for vulnerable children. [http://www.beabigcr.org/site/c.bjJRLcNWJIL2H/b.7742955/k.EFD8/Home\\_Page.htm](http://www.beabigcr.org/site/c.bjJRLcNWJIL2H/b.7742955/k.EFD8/Home_Page.htm); [http://www.iowabigs.org/site/c.5oIKJVPpGblUF/b.6538603/k.EEAF/Home\\_Page.htm](http://www.iowabigs.org/site/c.5oIKJVPpGblUF/b.6538603/k.EEAF/Home_Page.htm)

7) **Protective day care:** Available through the Department of Human Services by voluntary application.

8) **Area Education Agency services:** Early Access for children ages zero to three years, Early Childhood Special Education for children ages three to six, and Early Headstart up to age 21 providing physical therapy, occupational therapy, speech therapy, and behavioral and developmental evaluation: <http://www.iowaaea.org/>.

### References

1) The foundations of a lifelong health are built in early childhood. <http://www.iowaaces360.org/uploads/1/0/9/2/10925571/foundations-of-lifelong-health.pdf>

2) IowaACEs 360. <http://www.iowaaces360.org/>

3) Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med.* 1998 May;14(4):245-58.

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# Pediatric Intake Form

Our practice is dedicated to providing the best possible care for your child. In order for us to serve you better, please take a few minutes to answer the following questions. Your answers will be kept strictly confidential as part of your child's medical record. Ongoing evaluations of our care may involve chart reviews by qualified persons, but neither your name nor your child's name will ever appear in any reports.

Circle either the word or the letter for your answer where appropriate. Fill in answers where space is provided.

Child's Name \_\_\_\_\_ Today's Date \_\_\_\_\_

Are you the child's  
 A. Mother                      D. Foster parent                      G. Self (Are you the patient?)  
 B. Father                        E. Other relative  
 C. Grandparent                F. Other

How many times have you moved in the last year? \_\_\_\_\_ times

Where is the child living now?  
 A. House or apartment with family                      C. Shelter  
 B. House or apartment with relatives or friends                      D. Other

Besides you, does anyone else take care of the child? If yes, who? \_\_\_\_\_ Yes No

Has child received health care elsewhere? If yes, what? \_\_\_\_\_ Yes No

Does the child have any allergies to any medications? If yes, what? \_\_\_\_\_ Yes No

Has the child received any immunizations? Which ones? \_\_\_\_\_ Where? \_\_\_\_\_ Yes No

Has the child ever been hospitalized? When? \_\_\_\_\_ Where? \_\_\_\_\_ Why? \_\_\_\_\_ Yes No

How would you rate this child's health in general?  
 A. Excellent                      B. Good                      C. Fair                      D. Poor

Do you have any concerns about your child's behavior or development? If yes, what? \_\_\_\_\_ Yes No

What are your main concerns about your child?  
 \_\_\_\_\_

How old are you? \_\_\_\_\_ years old

Are you  
 A. Single                      D. Divorced  
 B. Married                      E. Other  
 C. Separated

What is the highest grade you have completed?  
 1 2 3 4 5 6 7 8 9 10 11 12 (High School/GED)  
 13 14 15 16 17 18 19  
 Some college or vocational school      College graduate      Postgraduate

## FAMILY MEDICAL HISTORY

Do the child's mother, father, or grandparents have any of the following? If yes, who?

Yes No High blood pressure \_\_\_\_\_  
 Yes No Diabetes \_\_\_\_\_  
 Yes No Lung problems (asthma) \_\_\_\_\_  
 Yes No Heart problems \_\_\_\_\_  
 Yes No Miscarriages \_\_\_\_\_  
 Yes No Learning problems \_\_\_\_\_  
 Yes No Nerve problems \_\_\_\_\_  
 Yes No Mental illness (depression) \_\_\_\_\_  
 Yes No Drinking problems \_\_\_\_\_  
 Yes No Drug problems \_\_\_\_\_  
 Yes No Other \_\_\_\_\_

## FAMILY HEALTH HABITS

How often does your child use a seatbelt (carseat)?  
 A. Never    B. Rarely    C. Sometimes    D. Often    E. Always

Does your child ride a bicycle? Yes No  
 If yes, how often does he/she use a helmet?  
 A. Never    B. Rarely    C. Sometimes    D. Often    E. Always

Do you feel that you live in a safe place? Yes No

In the past year, have you ever felt threatened in your home? Yes No

In the past year, has your partner or other family member pushed you, punched you, kicked you, hit you, or threatened to hurt you? Yes No

What kind of guns are in your home?  
 A. Handgun    B. Shotgun    C. Rifle    D. Other \_\_\_\_\_    E. None

If you have a gun at home, is it locked up? N/A Yes No

Does anyone in your household smoke? Yes No

Do you currently smoke cigarettes? If yes, how many cigarettes do you smoke per day?  
 \_\_\_\_\_ cigarettes/day

(Continues on page 7)





**Dental:** An examination of the oral cavity and dentition and teaching about oral/dental health care should occur at every visit. Refer to dental home by 12 months or within 6 months of eruption of first tooth. Ask about dental home at every visit. <http://www2.aap.org/catch/cqsummer2012.pdf>

**Caregiver Depression Screening:** Patient Health Questionnaire-2 PHQ-2, PHQ-9, or Edinburgh Postnatal Depression screen. Medicaid will reimburse for using the PHQ-9 or the Edinburgh. PHQ-2 is not a separately reimbursable service. [http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/mental-health/documents/mh\\_screeningchart.pdf](http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/mental-health/documents/mh_screeningchart.pdf)

**Developmental Surveillance** is required for every health maintenance visit. Developmental surveillance consists of reviewing family and child strengths and risk factors, eliciting caregiver concerns, reviewing developmental milestones, observation of the child, selected screening, monitoring, and anticipatory guidance. Any child who is identified as having a developmental concern should be referred immediately for more in-depth screening or diagnostic evaluation.

**Developmental Screening:** Screen at 9, 18, and 24-30 months. ASQ is the suggested tool. Medicaid will reimburse for a standardized screening tool. <http://www.healthychildcare.org/DevScr.html>

**Autism Screening:** Screen at 18 and 24 months. M-CHAT R/F is the suggested screening tool. Medicaid will reimburse for a standardized screening tool. Any child suspected of autism spectrum disorder should be referred immediately for services, diagnostic evaluation, and receive an audiological evaluation. [http://www.mchatscreen.com/Official\\_M-CHAT\\_Website.html](http://www.mchatscreen.com/Official_M-CHAT_Website.html)

**Adolescent Depression Screening:** AAP/Bright Futures recommends screening of children and adolescents for depression beginning at 11 years of age. The Patient Health Questionnaire-2 PHQ-2 is a brief and practical tool to use. If screening is positive on the PHQ-2, the PHQ-9 should be administered. Medicaid will reimburse for the PHQ-9 or other standardized tool. The PHQ-2 is not a separately reimbursable service. <https://bright-futures.aap.org/pdfs/Preventive%20Services%20PDFs/History,%20Observation,%20and%20Surveillance.PDF>

**Alcohol and Drug Use Screening:** AAP/Bright Futures recommends screening for alcohol, tobacco, and substance use annually beginning at 11 years of age by asking directly about usage or experimentation. The CRAFFT screen is a suggested tool. Medicaid will reimburse for the use of the CRAFFT or other standardized tool. <http://pediatrics.aappublications.org/content/early/2011/10/26/peds.2011-1754.abstract?rss=1>

**Lead Screening:** Determine a child's level of risk for lead poisoning by administering the IDPH lead questionnaire. (English – <http://www.iowaepsdt.org/wp-content/uploads/screening/questionnaire-english.pdf> and Spanish - <http://www.iowaepsdt.org/wp-content/uploads/screening/questionnaire-spanish.pdf>) When you have determined the child's level of risk, administer blood lead level testing: **For children at low risk:** test at 12 and 24 months; **For children at higher risk:** test at time high risk is determined and at 12, 18, and 24 months, then annually up to age of 6 years. Blood lead tests – a blood lead test result equal to or greater than 15 ug/dl obtained by capillary specimen (finger stick) must be confirmed using a venous blood sample. Since 2012, the Center for Disease Control has considered a blood lead level of 5 mcg/ml elevated. <http://www.idph.state.ia.us/LPP/>

**Newborn Screening:** Note that Newborn Screening includes blood spot, hearing screening, and screening for critical congenital heart disease by pulse oximetry after 24 hours of age and before discharge. <http://www.babysfirsttest.org/newborn-screening/states/iowa>

**Hemoglobin/Hematocrit:** Test at 12 months. Assess risk at 4 months, 15 months, and every visit afterwards.

**Lipid Screening:** Test all children at 9-11 years and 18-21 years. For Universal screening, a non-fasting, non-HDL cholesterol can be used. Assess for high risk at 24 months, 4, 6, 8, and 12-17 years of age. High-risk children should be screened with a fasting lipid profile. [http://pediatrics.aappublications.org/content/128/Supplement\\_5/S213.full](http://pediatrics.aappublications.org/content/128/Supplement_5/S213.full)

**Cervical Dysplasia Screening:** Adolescents are no longer routinely screened for cervical dysplasia until 21 years of age. The 2010 AAP statement "Gynecologic Examination for Adolescents" notes the indications for pelvic examinations prior to age 21 years. <http://pediatrics.aappublications.org/content/126/3/583.full.pdf+html>

**STI/HIV Screening:** Adolescents should be screened for sexually transmitted infections as per recommendations in the AAP Red Book. All sexually active adolescents should be tested for HIV at least once between 16-18 years. Those at high risk should be tested annually. [http://www.cdc.gov/healthyyouth/sexualbehaviors/pdf/hivtesting\\_adolescents.pdf?bitly=drdeancdc-bit-00025](http://www.cdc.gov/healthyyouth/sexualbehaviors/pdf/hivtesting_adolescents.pdf?bitly=drdeancdc-bit-00025) In Iowa, the minor must give written consent for HIV testing and treatment. The minor also needs to be informed that the legal guardian will be informed if the test is positive. [http://www.iaafp.org/documents/news/u\\_hiv\\_testing\\_brochure.pdf](http://www.iaafp.org/documents/news/u_hiv_testing_brochure.pdf)

Pediatric Intake Form (continued)

**DRINKING AND DRUGS**

In the past year have you ever had a drinking problem? Yes No

Have you tried to cut down on alcohol in the past year? Yes No

How many drinks does it take for you to get high or get a buzz? 1 2 3 4 5 6 7 or more

Do you ever have five or more drinks at one time? Yes No

Have you ever had a drug problem? Yes No

Have you used any drugs in the last 24 hours? Yes No  
If yes, which one(s)  
Cocaine Heroin Methadone Speed Marijuana Other:

Are you in a drug or alcohol recovery program now? If yes, which one(s) Yes No

Would you like to talk with other parents who are dealing with alcohol or drug problems? Yes No

**WHEN YOU WERE A CHILD**

Did either parent have a drug or alcohol problem? Yes No

Were you raised part or all of the time by foster parents or relatives (other than your parents)? Yes No

How often did your parents ground you or put you in time out?  
A. Frequently B. Often C. Occasionally D. Rarely E. Never

How often did your parents ridicule you in front of friends or family?  
A. Frequently B. Often C. Occasionally D. Rarely E. Never

How often were you hit with an object such as a belt, board, hairbrush, stick, or cord?  
A. Frequently B. Often C. Occasionally D. Rarely E. Never

How often were you thrown against walls or down stairs?  
A. Frequently B. Often C. Occasionally D. Rarely E. Never

Do you feel you were physically abused? Yes No

Do you feel you were neglected? Yes No

Do you feel you were hurt in a sexual way? Yes No

Did your parents ever hurt you when they were out of control? Yes No

Are you ever afraid you might lose control and hurt your child? Yes No

Would you like more information about free parenting programs, parent hotlines, or respite care? Yes No

Would you like information about birth control or family planning? Yes No

**FAMILY ACTIVITIES**

How strong are your family's religious beliefs or practices?  
A. Very strong B. Moderately strong C. Not strong D. N/A

Do you have a religious affiliation? If so, what is your religion?  
\_\_\_\_\_

How often do you read bedtime stories to your child?  
A. Frequently B. Often C. Occasionally D. Rarely E. Never

How often does your family eat meals together?  
A. Frequently B. Often C. Occasionally D. Rarely E. Never

What does your family do together for fun?  
\_\_\_\_\_

How often in the last week have you felt depressed?  
0 1-2 3-4 5-7 days

In the past year, have you had two weeks or more during which you felt sad, blue, or depressed, or lost pleasure in things that you usually cared about or enjoyed? Yes No

Have you had two or more years in your life when you felt depressed or sad most days, even if you felt OK sometimes? Yes No

**HELP AND SUPPORT**

Whom can you count on to be dependable when you need help (just write their initials and their relationship to you):  
A. No one D. \_\_\_\_\_ G. \_\_\_\_\_  
B. \_\_\_\_\_ E. \_\_\_\_\_ H. \_\_\_\_\_  
C. \_\_\_\_\_ F. \_\_\_\_\_ I. \_\_\_\_\_

How satisfied are you with their support?  
A. Very satisfied C. A little satisfied E. Fairly dissatisfied  
B. Fairly satisfied D. A little dissatisfied F. Very dissatisfied

Who accepts you totally, including both your best and worst points?  
A. No one D. \_\_\_\_\_ G. \_\_\_\_\_  
B. \_\_\_\_\_ E. \_\_\_\_\_ H. \_\_\_\_\_  
C. \_\_\_\_\_ F. \_\_\_\_\_ I. \_\_\_\_\_

How satisfied are you with their support?  
A. Very satisfied C. A little satisfied E. Fairly dissatisfied  
B. Fairly satisfied D. A little dissatisfied F. Very dissatisfied

Whom do you feel truly loves you deeply?  
A. No one D. \_\_\_\_\_ G. \_\_\_\_\_  
B. \_\_\_\_\_ E. \_\_\_\_\_ H. \_\_\_\_\_  
C. \_\_\_\_\_ F. \_\_\_\_\_ I. \_\_\_\_\_

How satisfied are you with their support?  
A. Very satisfied C. A little satisfied E. Fairly dissatisfied  
B. Fairly satisfied D. A little dissatisfied F. Very dissatisfied

Source: Adapted, with permission, from Kemper KJ, Kelleher KJ. 1996. Family psychosocial screening: Instruments and techniques. *Ambulatory Child Health* 1:325-339. (*Ambulatory Child Health* published by Blackwell Science, <http://www.blacksci.co.uk>.)



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## What's in this issue

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