The Division of Developmental Disabilities (DDD), medical management goals are:

1. Improve Individual Health Outcomes
2. Enhance Care Coordination
3. Improve Member Satisfaction

DDD reviews best practice guidelines and national clinical guideline recommendations and reviews them on an annual basis with the DDD's Chief Medical Officer (CMO) and Medical Directors. The list below comprises what DDD is focusing on for CYE 2019. DDD's determination of clinical practice guideline's (CPG's) include consideration of the unique characteristics of the division as well as state and national priorities. The CPG's are adopted by health care professionals and reviewed and updated periodically as appropriate [42 CFR 43.236]. The guidelines presented have all been endorsed by the National Committee for Quality Assurance (NCQA).

Recommendation: DDD members will receive medication reconciliation within 7 days after a hospital discharge and will be seen by their PCP within 7 days of discharge.

Unplanned readmissions are associated with increased mortality and higher health care costs. They can be prevented by standardizing and improving coordination of care after discharge and increasing support for patient self-management (Boutwell, Griffin, Hwu, 2009).

Recommendation: Children to receive four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV); one measles, mumps and rubella (MMR); three Haemophilus influenzae type B (HiB); three hepatitis B (HepB); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday.

Childhood vaccines protect children from several serious and potentially life-threatening diseases such as diphtheria, measles, meningitis, polio, tetanus and

whooping cough, at a time in their lives when they are most vulnerable to disease (Mayo Clinic, 2014), (Institute of Medicine. January 2013). Approximately 300 children in the United States die each year from vaccine preventable diseases (Healthy People 2020).

Immunizations are essential for disease prevention and are a critical aspect of preventable care for children. Vaccination coverage must be maintained to prevent a resurgence of vaccine-preventable diseases (Healthy People 2020).

Recommendation: DDD members should receive one dose of meningococcal conjugate vaccine and one tetanus diphtheria toxoids and acellular pertussis (Tdap) and complete the human papillomavirus (HPV) vaccine series by their 13th birthday.

Immunizations are essential for disease prevention and are a critical aspect of preventable care for adolescents. The diseases mentioned above can cause breathing and heart problems, nerve-damage, pneumonia and seizures, cancer and death (CDC, 2017 (2)).

Recommendation: All pregnant women will be screened for syphilis during the first antenatal care visit regardless of presumed risk. At the minimum, serologic titers should be repeated at 28-32 weeks' gestation and at delivery.

Mother-to-child transmission to the fetus is almost always devastating. Most untreated primary and secondary syphilis infections result in serious adverse pregnancy outcomes. These infections are easily curable and the risk of adverse outcomes to the fetus is minimal when the mother receives treatment during early pregnancy-ideally prior to the second trimester (WHO, 2017).

Due to the high increased prevalence of syphilis in Arizona pregnant women should be rescreened twice in late pregnancy: once at 28-32 weeks' gestation and again at delivery (CDC, 2015).

Recommendation: DDD members will receive a prenatal care visit in the first trimester or within 42 days of enrollment in the plan. In addition, members will receive a postpartum visit on or between 21 and 56 days after delivery.

Although many women experience uncomplicated pregnancies, timely and adequate prenatal care can prevent poor birth outcomes (NIH, 2012). The American Academy of Pediatrics and the American College of Obstetricians and Gynecologists recommend that a woman with an uncomplicated pregnancy be examined every 4 weeks for the first 28 weeks of pregnancy, every 2-3 weeks until 36 weeks of gestation and weekly thereafter (American Academy of Pediatrics, 2012). They also recommend one post-natal visit (American Academy of Pediatrics, 2012). Appropriate perinatal services and education are crucial components of a healthy birth. Understanding how to stay healthy is important for preventing complications that can affect the health of both mother and baby before, during and after pregnancy.

Recommendation: "If a child is found to have a developmental delay (disease etiology does not need to be defined), the child should be identified by the medical home for appropriate chronic-condition management and regular monitoring and entered into the practice's children and youth with special health care needs registry. Children should also be referred to community-based family support services such as respite care, parent-to-parent programs, and advocacy organizations" (American Academy of Pediatrics, 2006).

13 percent of children in the United States have developmental or behavioral disabilities per the CDC (Boulet, Boyle, Schieve, 2009). According to the U.S. Department of Education, less than 50 percent of children who have developmental delays are identified prior to starting school (U.S. Department of Education, 1997-2006). Identifying children who have developmental delays and ensuring follow up with the primary care provider within 6 months from the date of the referral for follow-up care will ensure DDD members will have access to the services they need to gain maximum benefit from the services available to them. It will also improve

communication between parents and providers and ensure parents understand the importance of timely follow up.

Recommendation: Opioids should not be first-line or routine therapy for chronic pain. Important to discuss risks and other nonopioid therapies with the member.

According to the CDC, the U.S. is experiencing an opioid crisis. Arizona is in the top 25% of all states affected by the crisis. Prescription drug monitoring programs (PDMPs) are the most promising state-level interventions available to improve prescribing practices, inform clinical practice and protect patients at risk. (CDC, 2017 (1)).

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Evaluation: Augmentative and Alternative Communication:

Overview of AAC [Information from ASHA Practice Guidelines]:

Augmentative and alternative communication (AAC) evaluation is provided to determine and recommend methods, devices, aids, techniques, symbols, and/or strategies to represent and/or augment spoken and/or written-language in ways that optimize communication. These components, in any combination, are known collectively as an AAC system.

Information from DDD Policy about AAC Evaluation:

An evaluation may be considered when the member both: (1.) Shows communicative intent (e.g., pointing, gesturing, signing, vocalizing sounds or eye gaze) but whose expressive skills are currently below their receptive language skills and are not adequately meeting their day to day functional communication needs; and/or produces unintelligible speech. (2.) Has a documented "poor" prognosis for functional speech and language development. AAC Evaluations may not be considered when the member: (1) Has functional speech and language skills as determined by clinical review; and/or (2.) Does not intend to use the device in all settings.

Individuals Who Provide the Service(s) [Information from ASHA Practice Guidelines]: AAC evaluation is conducted by appropriately credentialed and trained speech-language pathologists. SLPs may perform these assessments individually or as members of collaborative teams that may include the individual being assessed, family/caregivers, and other relevant persons (e.g., educational, vocational, and medical personnel).

Expected Outcome(s) [Information from ASHA Practice Guidelines]:

Evaluation is conducted to identify, measure, and describe—structural/functional strengths and deficits related to speech and language factors that affect

communication performance and justify the need for AAC devices, equipment, materials, strategies, and/or services to augment speech production or comprehension, to support and promote spoken and written language learning, or to provide an alternative mode of communication; effects of speech-language and communication impairments on the individual's activities and participation (capacity and performance in everyday communication contexts), and how an AAC system would support such activities and participation; contextual factors that serve as barriers to or facilitators of successful communication and participation for individuals who need AAC systems. Members of all ages, diagnostic categories, and severity who need AAC systems are assisted in selecting and obtaining components (e.g., aids, techniques, symbols, strategies) to optimize communication and activity/participation. The evaluation may result in recommendations for AAC systems, for AAC intervention, for follow-up, and for a referral for other examinations or services.

Required Documentation and Clinical Process [Information from ASHA Practice Guidelines and DDD Policy]:

On completion of the AAC evaluation, the qualified health care provider reviews the results of any dynamic assessment trials, describes and gives a rationale for the preferred AAC system components, describes a recommended AAC intervention program, and indicates the member’s (and family/caregivers') response to the recommended system and program. The evaluation may be static (i.e., using procedures designed to describe current levels of functioning within relevant domains) or dynamic (i.e., using hypothesis testing procedures to optimize selection and use of AAC systems), and includes the following: Review of auditory, visual, neuromotor, speech- language, and cognitive status, including observation of posture, gross and fine motor coordination, and any existing adaptive and/or orthotic devices currently used by the patient/client (e.g., wheelchair, neck braces,

communication devices and/or techniques, other specialized equipment). Relevant case history information, including medical status, education, vocation, and socioeconomic, cultural and linguistic background regarding activities in which the person needs an AAC system to support communication. Standardized and/or non-standardized methods for assessing the individual's use and acceptance of a range of AAC devices, aids, symbol systems, techniques, and strategies. Examination of specific aspects of voice, speech, language (e.g., spoken and written language samples, reading level), cognition, existing communication options and abilities, and the anticipated course of the impairment. An assessment of whether the member’s daily communication needs could be met using other natural modes of communication. Methods for identifying associated barriers and facilitators that are addressed in an intervention plan. Varied parameters of the AAC assessment (e.g., tests, materials) that depend on levels of severity, whether the patient/client is a child or an adult, and whether the expressive or receptive communication disorder is congenital or acquired. Selection of measures for AAC assessment with consideration for ecological validity, environments in which AAC systems routinely will be used, technology and device features, and preferences of the patient/client and communication partners (e.g., family/caregivers, educators, service providers). Assessment of a range of potential AAC systems in multiple controlled and natural contexts. An outline with the treatment plan for follow-up AAC programming and modification services to monitor individuals with identified speech-language and communication disorders justifying the need for AAC systems. Cognitive-communication and language status. A description of the functional communication goals expected to be achieved and treatment options. A rationale for selection of a specific device and any accessories. Documentation that the member possesses a treatment plan that includes a treatment schedule for the selected device. Results of the evaluation are reported to the member and family/caregivers, as

appropriate.

Reports are distributed to referral source and other professionals when appropriate and within accordance with DDD guidelines.

Intervention: Augmentative and Alternative Communication:

Overview of AAC [Information from ASHA Practice Guidelines]:

Intervention is provided to assist members to understand and use personalized AAC systems to optimize communication activities and participation. Services are also provided to modify or repair AAC systems when necessary.

Individuals Who Provide the Service(s) [Information from ASHA Practice Guidelines and DDD Policy]:

AAC intervention services are conducted by appropriately credentialed and trained SLPs possibly supported by SLPAs under appropriate supervision and with either certification as an Assistive Technology Specialist, or with a minimum of 1,000 hours of work experience over six

(6) years. SLPs may provide these services individually or as members of collaborative teams that may include the individual, family/caregivers, and other relevant persons (e.g., educational, vocational, and medical personnel).

Expected Outcome(s) [Information from ASHA Practice Guidelines]:

AAC system intervention is designed to: capitalize on strengths and address weaknesses related to underlying structures and functions that affect the use of an AAC system; provide therapeutic services to the member with their communication partners, teachers, parents/spouses/caregivers program, modify, and personalize the AAC systems. The intervention also may result in recommendations for AAC system reassessment or follow-up, or in a referral for other services.

Required Documentation [Information from ASHA Practice Guidelines and DDD Policy]:

Documentation includes the following competition of EXHIBIT B Augmentative Communication Device Training Report as needed. The report must include: the member's response to treatment; objective data on progress toward the generalization of operational competence, with a comparison to prior sessions; the skilled services provided (e.g., materials and strategies, patient/family education, analysis and assessment of member performance,
modification for progression of treatment); session length and/or start and stop time, as required. If the services were provided by an SLPA, documentation of the SLPAs certification as an Assistive Technology Specialist, and/or documentation to support that the SLPA has a minimum of 1,000 hours of work experience over six (6) years in AAC.

Clinical Practice Guideline: Dysphagia and Assessing Risk of Aspiration and Choking

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Introduction

Chewing and swallowing are complex physiological tasks, requiring the use of both voluntary and involuntary neuromuscular contractions to move food or liquid safely from the mouth through the pharynx and esophagus to the stomach. There are more than 25 muscles involved in swallowing, according to the American Dysphagia Network (1).

Dysphagia (problems with chewing and swallowing) becomes more common as individuals age. Spieker reports that 7 to 10% of persons over 50 years of age will have difficulty swallowing and up to 25% of hospitalized patients will have dysphagia. (2) The American Dysphagia Network website indicates that as many as 66% of persons living in nursing homes may have dysphagia.

A recent study by Stewart and Hurd (3) identified "The Six Most Statistically Significant Observable Signs of Difficulty Swallowing." They are:

1) "Food often goes down the wrong way."
2) "I have lost weight because eating is now a difficult or unpleasant experience."
3) "I have repeated pneumonia/respiratory illness."
4) "I have trouble clearing food from my mouth in one swallow."
5) "Eating is now less enjoyable than it used to be."
6) "I have difficulty swallowing my medications."

These six statements from patients or their caregivers should be warning signs of possible dysphagia and this individual may be at risk for aspiration, choking or other complications.

Persons with Developmental Disabilities, particularly aging individuals with Cerebral Palsy are at risk for problems with chewing and swallowing. (4) Problems with chewing and swallowing can result in aspiration of food or liquid into the lungs, leading to damage to lung tissue and pneumonia. Dysphagia may also increase the likelihood of choking on food and sudden death.

It is recommended that every person with Cerebral Palsy be screened for Dysphagia after age 35 and all individuals with other Developmental Disabilities be screen for Dysphagia at age 45.

Causes of Dysphagia

The American Dysphagia Network's Physician Education Course lists three major causes of dysphagia in the elderly:

1) **Dysphagia due to Neurologic Disorders** often result in dysphagia due to the loss of muscle function and coordination. Neurologic disorders that may cause dysphagia may include:

    a) Cerebral Palsy
    b) Stroke
    c) Brain Injury
    d) Spinal Cord injury
    e) Parkinson's Disease
    f) Multiple Sclerosis
    g) Amyotrophic lateral sclerosis (ALS)
    h) Muscular Dystrophy
    i) Alzheimer's Disease

2) **Dysphagia due to Disorders of the Head, Neck or Esophagus**, including:

    a) Cancer
    b) Injury or surgery involving the head or neck
    c) Decayed or Missing Teeth
    d) Poorly Fitting Dentures

3) **Drug Induced Dysphagia:** Medications may cause difficulty swallowing by several different mechanisms. In the list below, medications are grouped by their mechanism for causing dysphagia.

    a) Medications that affect smooth muscle function and coordination of the esophagus: Anticholinergic and antimuscarinic agents

    b) Cytotoxic injury to the esophageal muscles: anti-neoplastic agents

    c) Viral and fungal infections of the esophagus: prolonged use of immunosuppressants

    d) Esophageal muscle wasting: High dose corticosteroids

e) Blockage of Dopaminergic Transmission resulting in an extra-pyramidal syndrome similar to Parkinson's disease: Antipsychotic Medications (Neuroleptics) such as Thorazine (Chlorpromazine), Haldol (Haloperidol) or Risperdal (Risperidone).

Note: Tardive dyskinesia, an irreversible condition that may be caused by neuroleptics can result in an orofacial and lingual muscle syndrome that may progress until the patient cannot chew or swallow.

f) Medications that cause dry mouth (Xerostomia) which impairs food transport:

i) ACE (Angiotensin Converting Enzyme) Inhibitors
ii) Antiarrhythmics
iii) Calcium Channel Blockers
iv) Diuretics
v) Anti-emetics
vi) Anti-histamines and Decongestants
vii) Selective Serotonergic Re-uptake Inhibitors such as Prozac (Fluoxetine) or Zoloft (Sertraline)
viii) Tricyclic Anti-depressants such as Imipramine (Tofranil) or Elavil (Amitriptyline)

g) Medications that CNS depression, leading to drowsiness, confusion and decreased voluntary muscle control:

i) Benzodiazepines, such as Valium (Diazepam) and Xanax (Alprazolam)
ii) Narcotics
iii) Skeletal Muscle Relaxants

h) Medications that local irritation of esophageal mucosa:

i) Aspirin
ii) Non-steroidal anti-inflammatory drugs (NSAIDS)
iii) Antibiotics
iv) Iron containing products
v) Vitamin C
i) Antiarrhythmics
ii) Potassium supplements

History

The American Dysphagia Network's Physician Education Course indicates that a thorough history will uncover the symptoms of dysphagia that a patient or caregiver has not reported. Questions to ask the patient or his/her caregiver include:

1) Do you ever choke or cough when eating solid foods or swallowing liquids?

2) Do you enjoy eating less than you used to?

3) Have you lost weight because you no longer enjoy eating?

4) Do you have difficulty swallowing medications?

5) Do you have difficulty swallowing certain foods?

6) Do you ever have the feeling that food is sticking in your throat?

7) Do you have trouble clearing food from your mouth with one swallow?

8) Does it ever feel as if food is "going down the wrong pipe?"

9) Does your voice ever sound "gurgly" or wet when you are eating?

10) Do you have repeated episodes of pneumonia and/or other respiratory illness?

Additional Questions recommended by Gasiorowski and Fass (5) include:

1) What is the duration of the dysphagia?

2) Is the onset of the dysphagia acute? **Sudden onset with other neurologic signs may indicate that a stroke has occurred.**

3) Can the patient localize the swallow dysfunction?

4) Are there any additional symptoms, such as heartburn, regurgitation, aspiration, weight loss and chest or abdominal pain?

Physical Examination

Dr. Spieker's article "Evaluating Dysphagia" in the *American Family Physician* suggests that the physical examination for a person with a positive history for difficulty swallowing include the following:

1) Neurological examination, including:

    a) Assessment of Mental Status including level of consciousness
    b) Motor and sensory functioning
    c) Deep tendon reflexes
    d) Cranial nerves including assessment of gag reflex

Persons with impaired cognitive functioning and those who are a decreased level of consciousness may be at a higher risk for difficulty swallowing.

Those persons with a decreased gag reflex are at increased risk for aspiration.

2) Examination of the oropharynx should include:

    a) Assessment of whether there is adequate saliva production
    b) Inspection of the soft palate and vocal cords
    c) Bimanual palpation of the floor of the mouth, tongue and lips may detect masses and abnormal motor function
    d) Examination of the teeth

3) Observation of the patient swallowing a variety of liquids and solids:

    a) When swallowing, the patient should be able to chew food, mix the food with saliva and deliver it to the posterior pharynx without coughing or choking.

    b) The larynx should rise during swallowing to protect the airway and open the esophageal sphincter. The normal upward movement of the larynx can be detected by placing a finger on the thyroid cartilage when the patient swallows.

4) Examination of the neck for thyroid masses or other conditions that may cause obstructive dysphagia.

5) The presence of occult blood in the stool may indicate esophagitis or cancer.

Diagnostic Tests

According to the American Dysphagia Network, a Modified Barium Swallow is the "gold standard" of diagnostic tests for the diagnosis of Dysphagia. The Physician Education Course recommends that this test be done by a speech and language pathologist and radiologist working as a team.

Discussion of other diagnostics tests to assist in the diagnosis of dysphagia are beyond the scope of this Clinical Guidance Document.

Referral to a Speech and Language Pathologist

An assessment by a Speech and Language Pathologist may be very helpful to the Primary Care Physician in the diagnosis and treatment of Dysphagia. The Speech and Language Pathologist will also complete a detailed history, evaluate musculature and observe feeding before making the diagnosis of dysphagia.

Once the diagnosis of Dysphagia has been made, the Speech and Language Pathologist will also develop a treatment plan. According to the Physicians Education Course on the American Dysphagia Network, this treatment plan may include the following:

1) Modification to the consistency of food by recommendation of a specific diet. Examples of these diets include:

    a) Thin liquids

    b) Thick liquids

    c) Soft foods

2) The use of different head positions and swallowing techniques to reduce the risk of aspiration.

3) The recommendation of Prosthetic devices.

4) Exercises to improve effectiveness of swallowing by:

    a. Improving range of motion

    b. Strengthening the muscles of the jaw, cheeks, lips, tongue, soft palate and vocal cords.

Physician Recommendations for Reducing the Risk of Aspiration while Eating

1) The physician should be very specific with families or group home staff with regard to the type of diet necessary for the individual with dysphagia. A referral to a nutritionist may be needed.

2) If it is recommended that the individual's food be cut into small bites for them, the physician must specify the size of the bite. Under no circumstances should an order for cutting an individual's food into bite- sized portions to be done "PRN" or "as needed." This will significantly decrease the likelihood that the food will be cut appropriately and increase the risk of choking or aspiration.

3) The physician should encourage the individual's family, caregivers or group home to avoid "power struggles" over food. Denying an individual, a desired food item may result in him or her attempting to covertly take the food item and stuff it quickly into their mouth. "Power Struggles" over food are a fairly common cause of choking episodes for individuals enrolled with the Division.

Suggestions for the Prevention of Aspiration during Hand Feeding

Norma Metheny, R.N., Ph.D., in "Preventing Aspiration in Older Adults with Dysphagia," Issue 20 of *Try This: Best Practices in Nursing Care to Older Adults*,
(6) makes the following recommendations to reduce the risk of aspiration if a family member, caregiver or group home staff member is feeding an individual with dysphagia:

1) Provide a 30-minute rest period prior to feeding; a rested person is less likely to have difficulty swallowing.

2) Sit the person upright in a chair; if confined to bed, elevate the head of the bed to a 90-degree angle.

3) Adjust the rate of feeding and the size of bites to the person's tolerance; **avoid rushed or forced feeding**.

4) Alternate solid and liquid boluses.

5) Vary placement of food in the person's mouth according to the type of deficit. For example, food may be placed on the right side of the mouth if left facial weakness is present.

6) Determine the food viscosity that is best tolerated by the individual. For example, some persons swallow thickened liquids more easily than thin liquids.

A recent study by Clave and others (7) showed that increasing food viscosity greatly improved swallowing in neurological patients. **Aspiration was significantly lower when nectar or pudding was swallowed in comparison to when liquids were swallowed.**

7) **Minimize the use of sedatives and hypnotics since these agents may impair the cough reflex and swallowing**.

Footnotes

1) Logemann et. al., "Diagnosis and Management of Dysphagia in Seniors" American Dysphagia Network Website, Downloaded 08/15/09 from the Internet: <http://americandysphagianetwork.org/physician_education_course>

2) Spieker, M. "Evaluating Dysphagia" (2000) *American Family Physician*, Downloaded 07/13/09 from the Internet: http://aafp.org/afp/20000615/3639.html

3) Stewart, C. & Hurd, J. "Dysphagia Among Seniors Living Independently in L.A. County: Development of a NEW Self-Test" Downloaded 08/15/09 from the Internet: <http://americandysphagianetwork.org/ASHA_Poster_Self_Test_6/pdf.>

4) Turk, M.A., Overeynder, J.C. & Janicki, M.P., Eds. (1995) *Uncertain Future - Aging and Cerebral Palsy: Clinical Concerns.* Albany: New York State Developmental Disabilities Planning Council.

5) Gasiorowska, A. & Fass, R. "Current Approach to Dysphagia" *Gastroenterology and Hepatology* (April 2009) Vol. 5, No. 4, pp. 269-279

6) Metheny, N., "Preventing Aspiration in Older Adults with Dysphagia" (2007), *Try This: Best Practices in Nursing Care to Older Adults*, Issue 20. Downloaded 0713/09 from the Internet: <http://www.nursingcenter.com/prodev/ce_article.asp?tid=771094>

7) Clave, P., et al., (2006) "The effect of bolus viscosity on swallowing function in neurogenic dysphagia" *Alimentary Pharmacology & Therapeutics*, 24(9), pp. 1385-94.

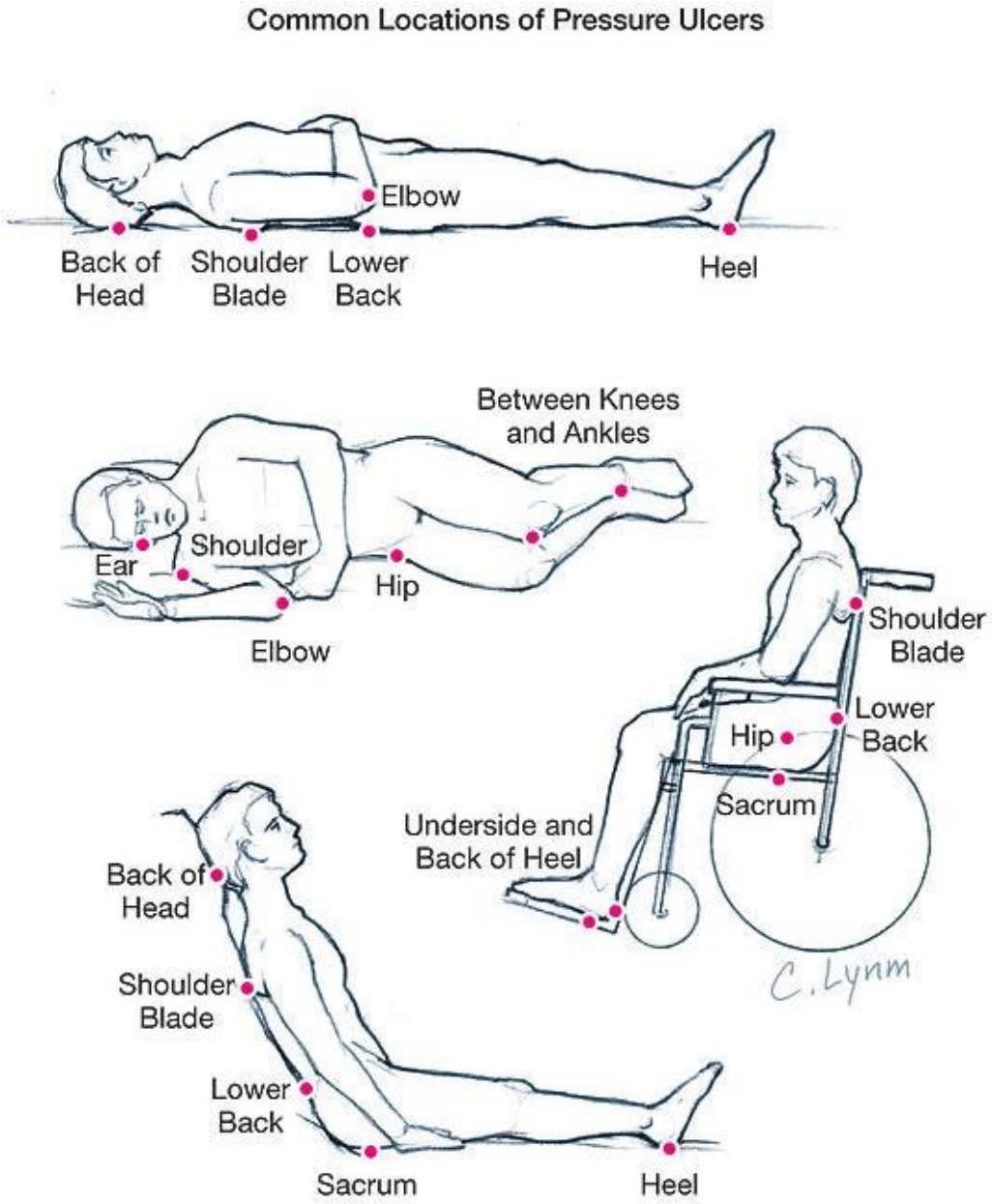
Pressure Ulcers in the Developmentally Disabled

Arizona Department of Economic Security
Division of Developmental Disabilities

Compiled by Nancy Braden MD, Medical Director, Mercy Care Plan

PRESSURE ULCERS

Pressure ulcers are skin injuries that result from constant pressure. This pressure reduces blood flow and eventually causes skin breakdown, and an open wound develops. These ulcers can develop in a short time in patients who are immobile, sometimes in just a couple of hours. If the pressure is not relieved and infection treated, the damage will spread to deeper layers such as the muscle, tendon and bone. Bony prominences are the most vulnerable to pressure ulcers, such as the sacrum (tailbone), buttocks, heels, back of the head and elbows.



1 FIGURE USED WITH PEMISSION John L. Zeller, MD, PhD, Writer; Cassio Lynm, MA, Illustrator; Richard M. Glass, MD, Editor *JAMA.* 2006; 296:1020.

PREVENTION AND TREATMENT OF PRESSURE ULCERS

Causes of skin breakdown:

- ☐ People who can't reposition themselves on their own
- ☐ Sustained pressure, especially in areas with little fat/muscle underneath the skin
- ☐ Other causes:
    - Wrinkled sheets
    - Crumbs in bed
    - Wheelchair with an uneven tilt
    - Perspiration rivets or creases in clothing
    - FRICTION- body rubbing against another surface when turning or transferring
    - SHEAR- skin moves in one direction, while the underlying bone moves in another direction. Occurs when sitting in bed, and slides down. This stretches and tears skin cells and blood vessels

Prevention:

- ☐ Reposition in bed every 2 hours
- ☐ Reposition in wheelchair every ½ hour
    - Encourage lifts or tilts
    - Pressure relief cushions
    - Padded footrests and arms
    - Prevent feet from sliding off foot rests
- ☐ Keep off bony prominences
- ☐ Protective loose clothing
- ☐ Eliminate friction and shear
    - Never drag a person across a bed/sheet
    - Always LIFT
    - Keep head of bed 30 degrees or less to prevent shear
- ☐ Keep skin clean, dry and moisturized
- ☐ Protect areas of dry skin
- ☐ Specialized mattresses
- ☐ Balanced diet: high in protein, vitamins A, C, E and Zinc if tolerated
- ☐ Adequate hydration
- ☐ SKIN MUST BE CHECKED EVERY DAY (See Braden Scale)
    - Report any broken skin, open sores
    - Immediate attention if any signs of infection- fever, drainage, foul odor, increased heat or redness.

- If patient will not allow you to check, get them to sign a statement, refusing to allow medical treatment.

☐ Use the modified Braden Q Scale for children <5y of age. [2]

If patient will not allow you to check, get them to sign a refusal to allow medical treatment.

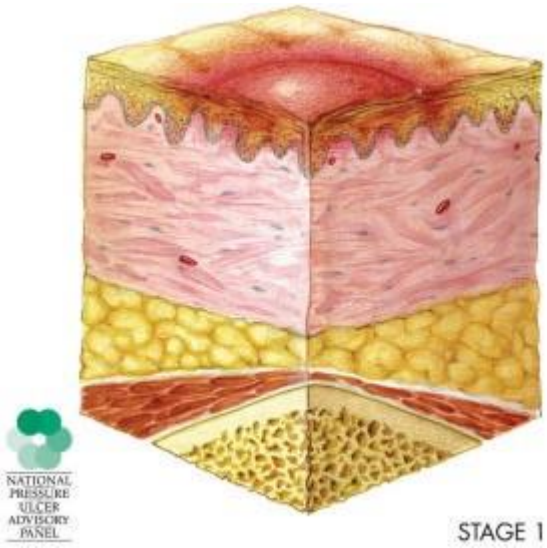
Once an ulcer develops, treatment may be needed for several months:

☐ Antibacterials (local and/or systemic)
☐ Periodic Debridement (trimming away dead tissue)
☐ Surgery may be needed to cover the area with a flap or graft of tissue or to divert urine or fecal material from the area.

STAGING PRESSURE ULCERS

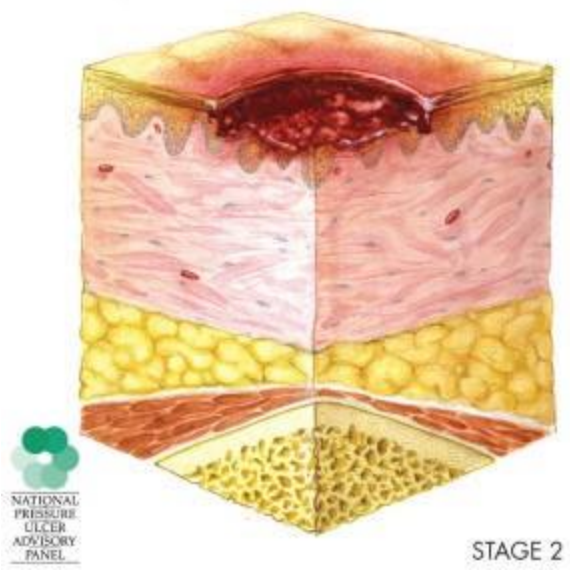
http://www.npuap.org/resources.htm

***Use of drawings is permitted for educational purposes only.**

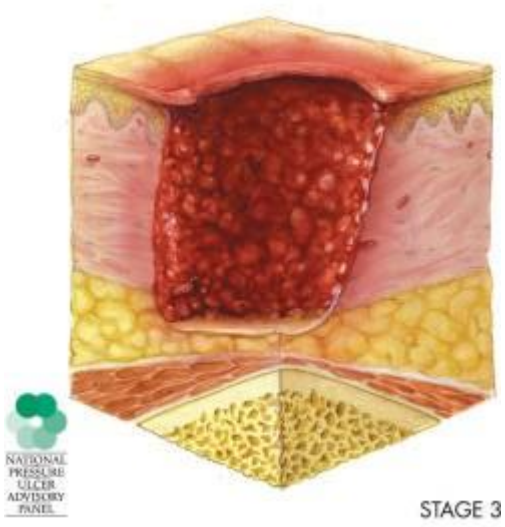


Stage 1

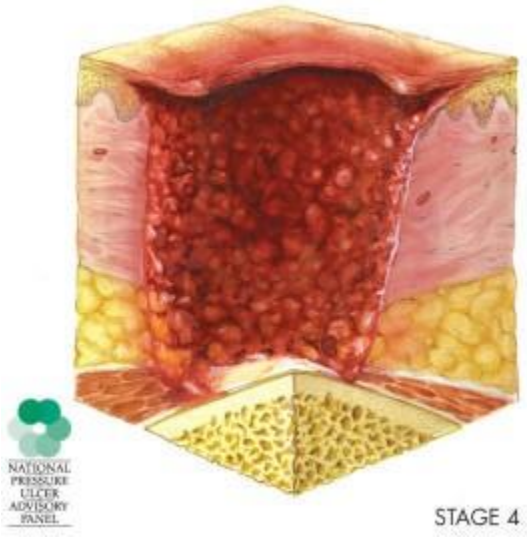
Skin is red or darker in color, but no breaks in the surface. Should heal within 2 months, if properly treated.



☐ **Stage 2** skin breaksdown and an ulcer forms



☐ **Stage 3**
ulcer goes deeper. Usually not painful, since nerves are damaged.



- **Stage 4**
  Deeper crater that now involves muscles, tendons and bones. Patient may develop sepsis (blood infection) or osteomyelitis (bone infection).

BRADEN PRESSURE ULCER RISK ASSESSMENT

ACT TO PREVENT PRESSURE ULCERS

SENSORY PERCEPTION Ability to respond meaningfully to pressure-related discomfort	**NO IMPAIRMENT** Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.	**SLIGHTLY LIMITED** Responds to verbal commands but cannot always communicate discomfort or ask to be moved or turned OR has some sensory impairment which limits ability to feel pain or discomfort in 1 or 2 extremities.	**VERY LIMITED** Responds only to painful stimuli. Cannot communicate discomfort except by moaning or restlessness OR has a sensory impairment which limits the ability to feel pain or discomfort over 1/2 of body.	**COMPLETELY LIMITED** Unresponsive (does not moan, flinch, or grasp) to painful stimuli due to diminished level of consciousness or sedation OR limited ability to feel pain over most of body surface.	4 3 2 1 ADD TO TOTAL SCORE
MOISTURE Degree to which skin is exposed to moisture	**RARELY MOIST** Skin is usually dry; linen only requires changing at routine intervals.	**OCCASIONALLY MOIST** Skin is occasionally moist, requiring an extra linen change approximately once a day.	**OFTEN MOIST** Skin is often but not always moist. Linen must be changed at least once a shift.	**CONSTANTLY MOIST** Skin is kept moist almost constantly by perspiration urine, etc. Dampness is detected every time patient is moved or turned.	4 3 2 1 ADD TO TOTAL SCORE
ACTIVITY Degree of physical activity	**WALKS FREQUENTLY** Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.	**WALKS OCCASIONALLY** Walks occasionally during day but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	**CHAIRFAST** Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	**BEDFAST** Confined to bed	4 3 2 1 ADD TO TOTAL SCORE
MOBILITY Ability to change and control body position	**NO LIMITATIONS** Makes major and frequent changes in position without assistance.	**SLIGHTLY LIMITED** Makes frequent though slight changes in body or extremity position independently.	**VERY LIMITED** Makes occasional slight changes in body extremity position but unable to make frequent or significant changes independently.	**COMPLETELY IMMOBILE** Does not make even slight changes in body or extremity position without assistance.	4 3 2 1 ADD TO TOTAL SCORE
NUTRITION Usual food intake pattern *NPO: Nothing by mouth. *IV: Intravenously. *TPN: Total parenteral nutrition.	**EXCELLENT** Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.	**ADEQUATE** Eats over half of most meals. Eats a total of 4 servings of protein (meat, dairy products) each day. Occasionally will refuse a meal, but will usually take a supplement if offered, OR is on a tube feeding or TPN* regimen, which probably meets most of nutritional needs.	**PROBABLY INADEQUATE** Rarely eats a complete meal and generally eats only about 1/2 of any food offered. Protein intake includes only 3 servings or meat or dairy products per day. Occasionally will take a dietary supplement, OR receives less than optimum amount of liquid diet or tube feeding.	**VERY POOR** Never eats a complete meal. Rarely eats more than 1/3 of any food offered. Eats 2 servings or less of protein (meat or dairy products) per day. Takes fluids poorly. Does not take a liquid dietary supplement, OR is NPO* and/or maintained on clear liquids or IV* for more than 5 days.	4 3 2 1 ADD TO TOTAL SCORE
FRICTION & SHEAR		**NO APPARENT PROBLEM** Moves in bed and in chair independently and has sufficient muscle strength to lift up completely during move. Maintains good position in bed or chair at all times.	**POTENTIAL PROBLEM** Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraints, or other devices. Maintains relatively good position in chair or bed most of the time but occasionally slides down.	**PROBLEM** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. Spasticity, contractures, or agitation leads to almost constant friction.	4 3 2 1 ADD TO TOTAL SCORE

RISK SCALE	**NONE** 23 22 21 20 19	**MILD** **MODERATE** 18 17 16 15	**HIGH** 14 13 12 11 10	**SEVERE** 9 8 7 6
EQUIPMENT	No additional pressure support required	High specification foam mattress or static air overlay. Consider cushion for chair, Bedcradle/gooseneck	Dynamic air overlay, Dynamic air cushion Dynamic mattress Replacement or Low Air Loss	
PRACTICE	• Educate Weight-shifting, Skin inspection • Evaluate on change of condition	• Reposition Weight-shifting, Skin inspection • Promote Activity • Manage individual risk factors nutrition; shear; friction; continence • Educate • Evaluate on change of condition	ALL PLUS • Supplement with small positional shifts • Seating/posture assessment • Nutritional assessment • Educate • Evaluate on change of condition	

TOTAL SCORE
USE CHART ON LEFT TO DETERMINE YOUR PATIENTS RISK

References: "The Braden Scale of Predicting Pressure Sore Risk" Bergstrom, N; Braden, B et al. Nursing Research 1987 Vol.36 No.4 pp205-210.
Issued by Royal Adelaide Hospital Staff Development Department in conjunction with South Australian Quality Council.
Pressure Ulcer Prevention Practices - Integration of Evidence.

Braden Risk Assessment Tool		Affix patient identification label in this box		
	Date of Assessment			
CATEGORY	DESCRIPTOR	SCORE	SCORE	SCORE
Sensory Perception Ability to respond meaningfully to pressure related discomfort	**Completely Limited:** Unresponsive (does not moan, flinch or grasp) to painful stimuli due to diminished level of consciousness or sedation. **OR**, limited ability to feel pain over most of body surface.	1	1	1
	Very Limited: Responds to only painful stimuli. Cannot communicate discomfort except by moaning or restlessness; **OR** has sensory impairment that limits the ability to feel pain or discomfort over half of body.	2	2	2
	Slightly Limited: Responds to verbal commands, but cannot always communicate discomfort or need to be turned; **OR**, has sensory impairment that limits the ability to feel pain or discomfort in one or two extremities.	3	3	3
	No Impairment: Responds to verbal commands. Has no sensory deficit that would limit ability to feel or communicate pain or discomfort.	4	4	4
Mobility Ability to change and maintain own position	**Completely immobile:** Does not make even slight changes in body or extremity position without assistance.	1	1	1
	Very limited: Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	2	2	2
	Slightly limited: Makes frequent though slight changes in body or extremity position independently	3	3	3
	No limitations: makes major and frequent changes in position without assistance.	4	4	4
Activity Degree of physical activity	**Bedfast:** confined to bed (can't sit at all).	1	1	1
	Chairfast: Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	2	2	2
	Walks occasionally: walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	3	3	3
	Walks frequently: Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.	4	4	4
Moisture Degree to which skin is exposed to moisture	**Constantly moist:** skin is kept moist almost constantly by perspiration, urine, drainage etc. Dampness is detected every time patient is moved or turned.	1	1	1
	Very moist: Skin is often, but not always, moist. Linen must be changed at least every 8 hours. Dry 2-3 hours at a time	2	2	2
	Occasionally moist: Skin is occasionally moist, requiring linen change every 12 hours	3	3	3
	Rarely moist: Skin is usually dry, linen only requires changing every 24 hours.	4	4	4
Friction Shear	**Problem:** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. spasticity, contractures, itching or agitation leads to almost constant friction	1	1	1
	Potential problem: Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraint or other devices. Maintains relative good position in chair or bed most of the time but occasionally slides down.	2	2	2
	No apparent problem: Able to completely lift patient during a position change, moves in bed and in chair independently and has sufficient muscle strength to lift completely during move. Maintains good position in bed or chair at all times.	3	3	3
Nutrition	**Very poor:** NPO and/or maintained on clear fluids, or IVs for more than 5 days OR never eats a complete meal. Rarely eats more than 1/3 of any food offered. Protein intake includes only 2 servings of meat or dairy products per day. Takes fluids poorly. Does not take a liquid dietary supplement.	1	1	1
	Inadequate: Is on a liquid diet or tube feedings/TPN, which provide inadequate calories and minerals for age OR rarely eats a complete meal and generally eats only half of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement	2	2	2
	Adequate: Is on tube feedings OR eats over half of most meals. Eats a total of 4 servings of protein each day. Occasionally eats between meals. Does not require supplementation.	3	3	3
	Excellent: Is on TPN, which provides adequate calories and minerals for age OR is on a normal diet providing adequate calories for age. For example, eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.	4	4	4
	mild risk- 15-15 moderate risk - 14-13 TOTAL SCORE high risk - 12-10 severe risk - ≤9			

PATIENTS SCORING 12 OR BELOW SHOULD BE CONSIDERED FOR A DYNAMIC AIR MATTRESS

REFERENCES:

[1] John L. Zeller, MD, PhD, Writer; Cassio Lynm, MA, Illustrator; Richard M. Glass, MD, Editor *JAMA.* 2006; 296:1020.

[2]http://www.safetyandquality.sa.gov.au/Portals/0/Braden%20Q%20Risk%20Assessment
%20scale.pdf accessed on May 27th, 2009. (Braden scale poster, Braden Q scale)

[3]http://www.guideline.gov/summary/summary.aspx?doc_id=7006&nbr=004215&string=
pressure+AND+ulcers accessed on May 27th, 2009

[4]http://www.npuap.org/resources.htm accessed on May 27th, 2009. ***Use of drawings is permitted for educational purposes only.**

Clinical Practice Guidelines for Children with Autism

Children and adults with autism spectrum disorder (ASD) have social communication and interaction difficulties and show restricted, repetitive, and stereotyped patterns of behaviors, interests, or activities. Social communication impairments and ASD behaviors are present during early childhood, and additional impairments may manifest later. ASD is caused by genetic and nongenetic factors; other factors are also likely to have a role in causing ASD. Boys are affected more frequently than girls (4:1). Around 20% to 30% of people with ASD have epilepsy. Around 50% of people with ASD have intellectual disability; others have ability in the average or above average range. However, many people have an uneven cognitive profile, and show relative cognitive strengths and weaknesses on cognitive testing. Long-term outcome in adulthood is variable. Many people live either in 24-hour care or with community support; however, some people with ASD live independent lives, and some have jobs and families.

Definition

Autism spectrum disorder (ASD) is characterized by persistent impairments in social communication, and restricted, repetitive, and stereotyped patterns of behaviors, interests, or activities. Abnormal development is present during early childhood and additional issues may manifest later. There may be a history of language delay (single-word or phrase speech delay), and 25% of children lose previously acquired language skills. Approximately 20% to 30% of children develop epilepsy and 50% have intellectual disability; others have ability in the average or above average range. However, many people have an uneven cognitive profile, and show relative cognitive strengths and weaknesses on cognitive testing. In addition to the core symptoms of ASD, the majority have coexisting conditions

(e.g., difficulties with sleep). Many young people and adults with ASD have mental health problems such as anxiety. These associated conditions are often more challenging to manage than ASD itself.

Retrieved from:

C:\Users\D048590\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\H1FOH3YQ\CPG_ Autism spectrum disorder - Symptoms diagnosis and treatment BMJ Best Practice (002).mht

Psychosocial interventions

- Consider a specific social-communication intervention for the core features of autism in children and young people that includes play-based strategies with parents, caregivers and teachers to increase joint attention, engagement and reciprocal communication in the child or young person. Strategies should:
    - Include techniques of therapist modelling and video-interaction feedback
    - Include techniques to expand the child or young person's communication, interactive play and social routines.
    - The intervention should be delivered by a trained professional. For pre-school children consider parent, caregiver or teacher mediation. For school-aged children consider peer mediation.
- Assess factors that may increase the risk of behavior that challenges in routine assessment and care planning in children and young people with autism, including:
    - Impairments in communication that may result in difficulty understanding situations or in expressing needs and wishes
    - Coexisting physical disorders, such as pain or gastrointestinal disorders
    - Coexisting mental health problems such as anxiety or depression and other neurodevelopmental conditions such

as ADHD

- The physical environment, such as lighting and noise levels
- The social environment, including home, school and leisure activities
- Changes to routines or personal circumstances
- Developmental change, including puberty
- Exploitation or abuse by others
- Inadvertent reinforcement of behavior that challenges the absence of predictability and structure.

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