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Comparison of the Adolescent Well Care Visit and Pre-participation Physical Evaluation

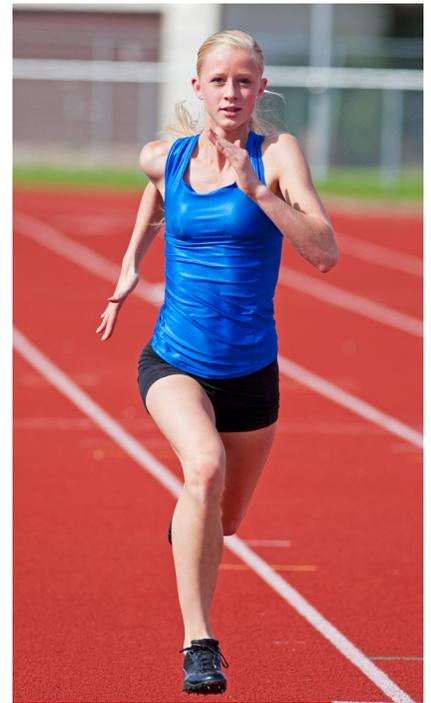


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Executive summary

Comparison of the Adolescent Well Care Visit and Pre-participation Physical Evaluation was created through a partnership between the Oregon Health Authority and the Oregon School Activities Association to help organizations understand the differences between the Adolescent Well Care Visit (AWV) and the Pre-participation Physical Evaluation (PPE), also known as a “sports physical.” These organizations include Oregon’s school districts, schools, athletic departments, school-based health centers, adolescent primary care providers, private insurers and coordinated care organizations. Student athletes benefit from both the AWV and the PPE:

- The AWV has a stronger sense of development and overall health and well-being.
- The PPE has focused screening for medical conditions or injuries (primarily cardiovascular and musculoskeletal, respectively) which may be worsened by athletic activity (a sample PPE form has been included on pages 9-11).

This publication emphasizes that schools and providers should encourage student athletes to complete both evaluations as recommended. There is enough overlap between the two methods that a health care provider could complete both assessments at the same time. The table* provides points of comparison to maximize coordination in parental involvement, the health information sought during a pre-visit questionnaire, and the physical exam. It shares recommendations for providers on modifying an AWV or PPE to include elements of both. This coordination will help limit a student’s absence from school and sports, and will ensure exams cover all aspects of a student’s health during an Adolescent Well Care visit or sports physical.

	Adolescent Well Care Visit (AWV)	Pre-participation Physical Evaluation (PPE) “Sports Physical”
<i>Timing</i>	n/a	Recommend at least six weeks before the start of the sports season. Can take place as early as May to enable use for summer camps.
<i>Periodicity</i>	Annually	Once every two years (state law)
<i>Provider</i>	MD, DO, PA, NP, ND	MD, DO, PA, NP, ND, DC

* The content for this table was sourced from best practices presented in: Adolescent Well Care Visit (American Academy of Pediatrics’ *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*): <https://brightfutures.aap.org/materials-and-tools/guidelines-and-pocket-guide/Pages/default.aspx> and Bright Futures Adolescence Tools: <https://brightfutures.aap.org/materials-and-tools/tool-and-resource-kit/Pages/adolescence-tools.aspx>

Pre-participation Physical Evaluation (American Academy of Pediatrics’ *PPE: Physical Evaluation, Fourth Addition*): <https://www.aap.org/en-us/about-the-aap/Committees-Councils-Sections/Council-on-sports-medicine-and-fitness/Pages/PPE.aspx>

	Adolescent Well Care Visit (AWV)	Pre-participation Physical Evaluation (PPE) “Sports Physical”
<i>Parental Involvement</i>	Parents are encouraged to be involved in the AWV. The patient can be alone, however, for some adolescent visits. Pre-visit questionnaires’ are confidential based on applicable Oregon law.	Parental involvement needed to ensure accuracy of medical history. Physical and risk screening completed confidentially.
<i>Goals/Priority</i>	<p>First Priority: Address concerns of adolescent and parent</p> <p>Bright Futures Discussion Priorities:</p> <ol style="list-style-type: none"> 1. Physical growth and development 2. Social and academic competence 3. Emotional well-being (coping, MH, sexuality) 4. Risk Reduction (tobacco, alcohol, pregnancy, STI) 5. Violence and injury prevention 	<p>Primary goals:</p> <ol style="list-style-type: none"> 1. Screen for conditions that may be life-threatening or disabling 2. Screen for conditions that may predispose to injury or illness <p>Secondary goals:</p> <ol style="list-style-type: none"> 3. Determine general health 4. Serve as an entry point to the health care system 5. Provide an opportunity to initiate discussion on health-related topics
<i>Structure/Components</i>	<ol style="list-style-type: none"> 1. Pre-visit questionnaire and history (supplemental assessment) 2. Developmental Observation: <ul style="list-style-type: none"> - Observation of parent-child interaction - Development surveillance - School Performance 3. Physical exam, screenings, and immunizations 4. Anticipatory guidance 	<ol style="list-style-type: none"> 1. Medical history questionnaire 2. Physical exam and screenings (includes confidential risk screening questions and some anticipatory guidance) 3. Specialty exam (if needed) 4. Optional: Immunization, education 5. Clearance for activity
<i>Pre-visit Questionnaire/History Forms</i>	Pre-visit includes discussion prompts based on Bright Futures priorities; screening questions on vision, hearing, TB, alcohol, drugs, cigarettes, sex/STI/pregnancy, and anemia; and growth and development questions. Supplemental questions follow Bright Futures priorities in detail (includes detailed questions on nutrition, emotional well-being, etc).	<ul style="list-style-type: none"> • General medical history • Heart health (family and patient) • Musculoskeletal • Head injury or concussion • Asthma • Diabetes • Medications • Supplements • Allergies • Heat illness • Missing organ • Vision and eye injuries • Nutrition and eating disorder • Sickle cell • Menstruation (anemia) <p>PPE requires specific details in physical health history (including family history). Physical exam gets at risk behaviors influencing health in part.</p>
<i>Immunizations</i>	Screening required: Consult with https://www.cdc.gov/vaccines/schedules/	Screening optional

	Adolescent Well Care Visit (AWV)	Pre-participation Physical Evaluation (PPE) “Sports Physical”
<i>Highlighted Elements of Full Physical Exam and Screenings</i>	1. Vitals: blood pressure, height, weight, BMI	1. Vitals: blood pressure, height, weight, BMI, pulse
	2. Vision/Eyes: acuity (periodicity varies)	2. Vision/Eyes: acuity and pupil size
	3. Skin: acne, acanthosis nigricans, atypical nevi, tattoos and piercings, signs of abuse, injury	3. Skin: MRSA, herpes simplex, signs associated with eating disorders
	4. Musculoskeletal: examine back/spine	4. Musculoskeletal: full general screen* / upper extremity
	5. Genitalia <ul style="list-style-type: none"> - Females: Sexual maturity rating, visual observation for STIs, pelvic exam if warranted but by age 21 - Males: Testicles for hernia, varicocele, masses; sexual maturity rating; and observe for STIs 	5. Genitalia <ul style="list-style-type: none"> - Females: NA unless part of health maintenance exam - Males: (optional) Scrotum for hernia, varicocele, masses. (Not contraindicated for athletics).
	6. Breasts: Females assessed for sexual maturity rating, clinical breast exam after age 20. Males: gynecomastia	6. Breasts: NA for PPE
	7. ENT: Universal hearing screening (once in early, mid, and late adolescence)	7. ENT: Hearing if signs of damage, oral ulcers, herpes, leukoplakia (tobacco), nasal polyps, deviated septum
	8. Cardiovascular: dyslipidemia (screen* at least once between age 17-21)	8. Cardiovascular: vitals, dynamic auscultation of heart, palpation of heart, physical exam for Marfan Syndrome* .
	9. Anemia: if positive on risk screen	9. Anemia: check for eating disorders through visual observation of height, weight, ear, nose, mouth, throat, abdomen, and skin; and history of injury, neurological conditions, nutrition, and menstrual cycle.
	10. Tuberculosis: if positive on risk screen 11. STIs: if sexually active 12. HIV: universal at least once between age 15 and 18 13. Pregnancy: if sexually active without contraception, late menses, or amenorrhea 14. Cervical Dysplasia: universal screen at age 21 15. Alcohol or drug use: universal risk assess 16. Depression: universal screen 17. Psychosocial/Behavior: universal assess 18. Oral health: screen for fluoride supplementation up to age 16	10. Central Nervous System: Upper extremity, neck range of motion, reflexes. 11. Pulmonary Exam (bronchospasm test, tobacco) 12. Abdominal exam 13. Risk Behavior: Stress, Depression, Feeling Safe, Tobacco, Alcohol, Drugs, Steroids, Supplements, Body Image
<i>Anticipatory Guidance</i>	Tied to Bright Futures priorities, and based on patient needs, developmental observation, and stage of adolescence	Related to reduction in risk of injury or sustained absence. Examples: warnings about PED use, teaching self-admin testicular exam, prevention strategies on MRSA

* <http://www.osaa.org/sportsmedicine>

The state requires that a PPE take place every two years. This offers a unique opportunity for athletes disconnected from the health system to have a wellness exam. Athletes who see a primary care provider for annual check-ups have an opportunity to fulfill the PPE requirement. The following recommendations will help providers maximize care in the assessments.

Recommendations for Providers:

How to modify an Adolescent Well Visit to include all elements of a Pre-participation Evaluation.

- Use the AWV pre-visit screening questions recommended by Bright Futures on physical activity and hobbies. This will help you to broach the subject of school sports.
- Complete PPEs at least six weeks before the start of the sports season. This will allow time for any referrals and follow-up exams. Ideally, you will conduct PPEs in the late spring or early summer for students who participate in fall sports.
- If you know the adolescent to be an athlete, send the parents the comprehensive PPE medical history form prior to the visit. You can also have them obtain it [online*](#).
 - If you do not have the form prior to the visit, then attempt to get a detailed past medical and family history at the visit. The student can fill out as much of the history form as possible. With consent of the adolescent, you or your medical assistant can call a parent to complete the history portion. Then you may review and sign-off on the PPE form. Studies show cardiovascular screening questions are more accurate if the parents help in providing the history.
- Make clear to the student that confidential information provided on the AWV pre-screening questionnaire will not be in the medical history form shared with the parent and school.
- Conduct focused (see above) examinations of the lung, abdomen, heart, and central nervous and musculoskeletal systems.
 - Provider should keep in mind specific recommendations for the cardiovascular/murmur exam, the two-minute musculoskeletal exam, the Marfan screen, and the concussion protocol. These are included on the second page of the OSAA Sports Physical Form found at <http://www.osaa.org/sportsmedicine>.

* <http://www.osaa.org/sportsmedicine>

- Assure that you ask appropriate risk behavior questions. Risk behavior questions in the PPE are likely in an AWV.

How to modify a Pre-participation Physical Evaluation to include all elements of an Adolescent Well Care Visit.

- Assure a separate, confidential space is available. This way an athlete can feel comfortable discussing Bright Future’s AWV topic areas.
 - This is especially important in an “assembly-line,” “locker room,” or “station-based” PPE (see Different Formats below).
- Provide previsit questions from Bright Futures/AWV to the student athlete. These can be topical conversation prompts at the time of the visit, for direct anticipatory guidance and to prompt additional physical screens.
- Provide additional screens as necessary (hearing, STIs, pregnancy, cervical dysplasia, and drug or alcohol use, etc.).
- Provide recommended vaccinations for athlete if available or advise to obtain from their primary care provider.
- Complete more thorough examinations of the genitals and breasts, as recommended for the AWV, if private setting is available.
- Based on screening, be prepared to provide pelvic exams which are recommended as needed by age 21.
- Ensure proper claims reporting for the Adolescent Well Visit.



Different Formats for Performing PPE or Sports Physicals

Not all “sports physicals” are equal. Timing, available personnel, and a community’s resources, traditions and standards all determine how middle and high school athletes get clearance to participate in sports. Whenever possible, we recommend that athletes receive a sport physical (especially those combined with an Adolescent Well Visit) in an office-based setting, including a School Based Health Center or a patient’s primary care home.

- **The “office-based” examination:** This type of exam allows privacy for history taking, examination and discussion of specific concerns. It allows for anticipatory guidance and health maintenance (including immunizations), as well as more (but not always sufficient) time. Ideally, the exam takes place in the athlete’s medical home. This is where he or she is an established patient with a well-known medical history. An exam at a medical home can be combined with or qualify for an AWV exam.

Other sports physical formats will be less than ideal. In addition, these formats may not be conducive to providing a comprehensive well visit. Therefore, avoid the following formats when trying to complete both exams:

- **The “station-based” examination:** This is the most appropriate format when performing a mass sports physical at a school or clinic. Athletes proceed through a series of stations. Stations are for height and weight measurements, blood pressure reading, visual acuity, general exam, cardiovascular exam, orthopedic screening, and review of history and final clearance. Ideally, an additional station will focus on risks and behaviors. This can include mental health, sexual health and substance use issues. These topics can be sensitive in the non-medical environment and require provision of confidential space. Station-based exams require multiple volunteer licensed healthcare providers. You may need athletic trainers and coaches to coordinate logistics, if performed at a school.
- **The “assembly-line” or “locker room” physical:** A single provider screens a large number of athletes. This occasionally occurs in a medical office, but more often in the school locker room, cafeteria or gymnasium. Although sometimes necessary, you should avoid the assembly-line physical when possible. There is little time to review thoroughly the athlete’s medical history. Additionally, it offers little to no privacy for the physical exam or a private discussion of the athlete’s history or questions.

HISTORY FORM

(Note: This form is to be filled out by the patient and parent prior to seeing the provider. The provider should keep this form in the medical record.)

Date of Exam: _____

Name: _____

Date of birth: _____

Sex: _____ Age: _____ Grade: _____ School: _____

Sport(s): _____

Medicines and Allergies: Please list all of the prescription and over-the-counter medicines and supplements (herbal and nutritional) that you are currently taking.

Do you have any allergies? Yes No If yes, please identify specific allergy below.

Medicines Pollens Foods Stinging Insects

Explain “Yes” answers below. Circle questions you do not know the answers to.

GENERAL QUESTIONS		
1. When was the student’s last complete physical or “checkup?” Date: Month/ Year ____ / ____ (Ideally, every 12 months)		
	YES	NO
2. Has a doctor or other health professional ever denied or restricted your participation in sports for any reason?		
3. Do you have any ongoing medical conditions? If so, please identify below.		
4. Have you ever had surgery?		
HEART HEALTH QUESTIONS ABOUT YOU		
5. Have you ever passed out or nearly passed out DURING or AFTER exercise?		
6. Have you ever had discomfort, pain, tightness or pressure in your chest during exercise?		
7. Does your heart ever race or skip beats (irregular beats) during exercise?		
8. Has a doctor ever told you that you have any heart problems? If so, check all that apply: <input type="checkbox"/> High blood pressure <input type="checkbox"/> A heart murmur <input type="checkbox"/> High cholesterol <input type="checkbox"/> A heart infection <input type="checkbox"/> Kawasaki disease <input type="checkbox"/> Other: _____		
9. Has a doctor ever ordered a test for your heart? (For example, ECG/EKG, echocardiogram)		
10. Do you get lightheaded or feel more short of breath than expected, or get tired more quickly than your friends or classmates during exercise?		
11. Have you ever had a seizure?		
HEART HEALTH QUESTIONS ABOUT YOUR FAMILY		
12. Has any family member or relative died of heart problems or had an unexpected sudden death before age 50 (including drowning, unexplained car accident or sudden infant death syndrome)?		
13. Does anyone in your family have a pacemaker, an implanted defibrillator, or heart problems like hypertrophic cardiomyopathy, Marfan syndrome, arrhythmogenic right ventricular cardiomyopathy, long QT syndrome, short QT syndrome, Brugada syndrome or catecholaminergic polymorphic ventricular tachycardia?		

BONE AND JOINT QUESTIONS	YES	NO
14. Have you ever had an injury to a bone, muscle, ligament or tendon that caused you to miss a practice, game or an event?		
15. Do you have a bone, muscle or joint problem that bothers you?		
MEDICAL QUESTIONS	YES	NO
16. Do you cough, wheeze or have difficulty breathing during or after exercise?		
17. Have you ever used an inhaler or taken asthma medicine?		
18. Are you missing a kidney, an eye, a testicle (males), your spleen or any other organ?		
19. Do you have any rashes, pressure sores, or other skin problems such as herpes or MRSA skin infection?		
20. Have you ever had a head injury or concussion?		
21. Have you ever had numbness, tingling, or weakness, or been unable to move your arms or legs after being hit or falling?		
22. Have you ever become ill while exercising in the heat?		
23. Do you or someone in your family have sickle cell trait or disease?		
24. Have you, or do you have any problems with your eyes or vision?		
25. Do you worry about your weight?		
26. Are you trying to or has anyone recommended that you gain or lose weight?		
27. Are you on a special diet or do you avoid certain types of food?		
28. Have you ever had an eating disorder?		
29. Do you have any concerns that you would like to discuss today?		
FEMALES ONLY	YES	NO
30. Have you ever had a menstrual period?		
31. How old were you when you had your first menstrual period? _____		
32. How many periods have you had in the last 12 months? _____		

Explain “yes” answers here: _____

I hereby state that, to the best of my knowledge, my answers to the above questions are complete and correct.

Signature of athlete _____ Signature of parent/guardian _____ Date _____

ORS 336.479, Section 1 (3) "A school district shall require students who continue to participate in extracurricular sports in grades 7 through 12 to have a physical examination once every two years." Section 1(5) "Any physical examination required by this section shall be conducted by a (a) physician possessing an unrestricted license to practice medicine; (b) licensed naturopathic physician; (c) licensed physician assistant; (d) certified nurse practitioner; or a (e) licensed chiropractic physician who has clinical training and experience in detecting cardiopulmonary diseases and defects."

PHYSICAL EXAMINATION FORM

Date of Exam: _____

Name: _____

Date of birth: _____

Sex: _____ Age: _____ Grade: _____ School: _____

Sport(s): _____

EXAMINATION		
Height: _____	Weight: _____	BMI: _____
BP: _____ / _____ (_____ / _____)	Pulse: _____	Vision R 20/ _____ L 20/ _____ Corrected <input type="checkbox"/> YES <input type="checkbox"/> NO
MEDICAL	NORMAL	ABNORMAL FINDINGS
Appearance		
Eyes/ears/nose/throat		
Lymph nodes		
Heart •Murmurs (auscultation standing, supine, with and without Valsalva)		
Pulses		
Lungs		
Abdomen		
Skin		
Neurologic		
MUSCULOSKELETAL		
Neck		
Back		
Shoulder/arm		
Elbow/forearm		
Wrist/hand/fingers		
Hip/thigh		
Knee		
Leg/ankle		
Foot/toes		

- Cleared for all sports without restriction
 - Cleared for all sports without restriction with recommendations for further evaluation or treatment for:
 - Not cleared
 - Pending further evaluation
 - For any sports
 - For certain sports: _____
- Reason: _____
- Recommendations: _____
- _____
- _____
- _____

I have examined the above-named student and completed the preparticipation physical evaluation. The athlete does not present apparent clinical contraindications to practice and participate in the sport(s) as outlined above. A copy of the physical exam is on record in my office and can be made available to the school at the request of the parents. If conditions arise after the athlete has been cleared for participation, the provider may rescind the clearance until the problem is resolved and the potential consequences are completely explained to the athlete (and parents/guardians). This form is an exact duplicate of the current form required by the State Board of Education containing the same history questions and physical examination findings. I have also reviewed the "Suggested Exam Protocol".

Name of provider (print/type): _____

Date: _____

Address: _____

Phone: _____

Signature of provider: _____

ORS 336.479, Section 1 (3) "A school district shall require students who continue to participate in extracurricular sports in grades 7 through 12 to have a physical examination once every two years." Section 1(5) "Any physical examination required by this section shall be conducted by a (a) physician possessing an unrestricted license to practice medicine; (b) licensed naturopathic physician; (c) licensed physician assistant; (d) certified nurse practitioner; or a (e) licensed chiropractic physician who has clinical training and experience in detecting cardiopulmonary diseases and defects."

Form adapted from ©2010 American Academy of Family Physicians, American Academy of Pediatrics, American College of Sports Medicine, American Medical Society for Sports Medicine, American Orthopaedic Society for Sports Medicine, and American Osteopathic Academy of Sports Medicine.

MUSCULOSKELETAL

Have patient:

1. Stand facing examiner
2. Look at ceiling, floor, over shoulders, touch ears to shoulders
3. Shrug shoulders (against resistance)
4. Abduct shoulders 90 degrees, hold against resistance
5. Externally rotate arms fully
6. Flex and extend elbows
7. Arms at sides, elbows 90 degrees flexed, pronate/supinate wrists
8. Spread fingers, make fist
9. Contract quadriceps, relax quadriceps
10. "Duck walk" 4 steps away from examiner
11. Stand with back to examiner
12. Knees straight, touch toes
13. Rise up on heels, then toes

To check for:

- AC joints, general habitus
- Cervical spine motion
- Trapezius strength
- Deltoid strength
- Shoulder motion
- Elbow motion
- Elbow and wrist motion
- Hand and finger motion, deformities
- Symmetry and knee/ankle effusion
- Hip, knee and ankle motion
- Shoulder symmetry, scoliosis
- Scoliosis, hip motion, hamstrings
- Calf symmetry, leg strength

MURMUR EVALUATION – Auscultation should be performed sitting, supine and squatting in a quiet room using the diaphragm and bell of a stethoscope.

Auscultation finding of:

1. S1 heard easily; not holosystolic, soft, low-pitched
2. Normal S2
3. No ejection or mid-systolic click
4. Continuous diastolic murmur absent
5. No early diastolic murmur
6. Normal femoral pulses
(Equivalent to brachial pulses in strength and arrival)

Rules out:

- VSD and mitral regurgitation
- Tetralogy, ASD and pulmonary hypertension
- Aortic stenosis and pulmonary stenosis
- Patent ductus arteriosus
- Aortic insufficiency
- Coarctation

MARFAN'S SCREEN – Screen all men over 6'0" and all women over 5'10" in height with echocardiogram and slit lamp exam when any two of the following are found:

1. Family history of Marfan's syndrome (this finding alone should prompt further investigation)
2. Cardiac murmur or mid-systolic click
3. Kyphoscoliosis
4. Anterior thoracic deformity
5. Arm span greater than height
6. Upper to lower body ratio more than 1 standard deviation below mean
7. Myopia
8. Ectopic lens

CONCUSSION -- When can an athlete return to play after a concussion?

After suffering a concussion, no athlete should return to play or practice on the same day. Previously, athletes were allowed to return to play if their symptoms resolved within 15 minutes of the injury. Studies have shown that the young brain does not recover that quickly, thus the Oregon Legislature has established a rule that no player shall return to play following a concussion on that same day and the athlete must be cleared by an appropriate health care professional before they are allowed to return to play or practice.

Once an athlete is cleared to return to play, they should proceed with activity in a stepwise fashion to allow their brain to readjust to exertion. The athlete may complete a new step each day. The return to play schedule should proceed as below following medical clearance:

- Step 1: Light exercise, including walking or riding an exercise bike. No weightlifting.
- Step 2: Running in the gym or on the field. No helmet or other equipment.
- Step 3: Non-contact training drills in full equipment. Weight training can begin. Step 4: Full contact practice or training.
- Step 5: Game play.

If symptoms occur at any step, the athlete should cease activity and be re-evaluated by a health care provider.

581-021-0041 Form and Protocol for Sports Physical Examinations

1. The State Board of Education adopts by reference the form entitled "School Sports Pre-Participation Examination " dated May, 2017 that must be used to document the physical examination and sets out the protocol for conducting the physical examination. The form may be used in either a hard copy or electronic format. Medical providers may use their electronic health records systems to produce the electronic form. Medical providers conducting physicals of students who participate in extracurricular activities in grades 7 through 12 must use the form.
2. The form must contain the following statement above the medical provider's signature line:
This form is an exact duplicate of the current form required by the State Board of Education containing the same history questions and physical examination findings. I have also reviewed the "Suggested Exam Protocol".
3. Medical providers conducting physicals on or after April 30, 2011 and prior to May 1, 2017 must use the form dated May 2010.
4. Medical providers conducting physicals on or after May 1, 2017 and prior to May 1, 2018 may use either the form dated May 2010 or the form dated May, 2017.
5. Medical providers conducting physicals on or after May 1, 2018 must use the form dated May, 2017.

NOTE: The form can be found on the Oregon School Activities Association (OSAA) website: <http://www.osaa.org>

Stat. Auth.: ORS 326.051 Stats.

Implemented: ORS 336.479



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To learn more about additional metric resources please visit:

www.oregon.gov/oha/Transformation-Center/Pages/Resources-Metric.aspx

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