



HOLISTIC MEASLES SUPPORT

Putting the Information Together

Nutrition • Vitamin A • Vitamin C • Hydration • Recognizing & Treating Complications

An educational resource compiled by the Pennsylvania Coalition for Informed Consent

The materials in this packet approach measles from several perspectives: current public-health guidance, published research, nutritional literature, historical medical literature and the firsthand clinical experience of physicians who have cared for measles patients.

The purpose of this section is **not to create a new PCIC treatment protocol**. Rather, it is to help families understand how the information fits together, identify important issues to consider during measles illness, and know what questions they may want to discuss with a trusted health-care practitioner.

One physician whose experience is included throughout these materials is **Dr. Ben Edwards, M.D.**, a family physician who reports caring for several hundred patients during the 2025 West Texas measles outbreak. His approach emphasizes nutrition, cod liver oil as a source of vitamins A and D, vitamin C, hydration, close observation of the course of illness, and recognition and treatment of complications.

Dr. Edwards' experience is **clinical experience**, not the same thing as a controlled clinical trial or WHO/CDC treatment recommendation. Where his approach overlaps with established public-health guidance or published research, we identify that. Where it differs, we identify that as well.

The common themes are straightforward: **Support nutrition. Maintain hydration. Understand the role of vitamin A. Know what to expect. Watch breathing carefully. Pay attention when someone who was improving gets worse. Know when home supportive care is no longer enough.**

MEASLES SUPPORT CHECKLIST

☐ 1. AM I SUPPORTING NUTRITION?

Nutrition matters during illness.

The World Health Organization identifies poor nutrition—particularly insufficient vitamin A—as a factor associated with more severe measles. WHO also recognizes that vitamin A levels can fall during acute measles even in children who were previously well nourished. WHO recommends adequate fluids and a healthy diet as part of measles care.

Dr. Edwards likewise places substantial emphasis on nutritional status. His approach to measles developed from his broader integrative practice and focuses on providing the body with adequate nutritional support during infection.

Things to consider:

- ☐ Continue nourishment as tolerated.
- ☐ Continue breastfeeding when appropriate.
- ☐ Pay particular attention to young infants and children who are eating or drinking poorly.
- ☐ Don't assume that nutritional support eliminates the possibility of complications.

Nutrition is one component of supportive care—not a guarantee that measles will remain uncomplicated.

☐ 2. AM I ADDRESSING VITAMIN A APPROPRIATELY?

Vitamin A is one area where Dr. Edwards' approach overlaps substantially with established measles guidance, although **the form and amounts he reports using are not the same as CDC's therapeutic regimen.**

Current CDC guidance states that vitamin A may be administered to infants and children with measles in the United States under the supervision of a health-care provider as part of supportive management. Children with severe measles, including hospitalized children, should be managed with vitamin A.

If vitamin A is recommended, CDC gives the following age-specific amounts:

Under 6 months: 50,000 IU on Day 1 and Day 2

6–11 months: 100,000 IU on Day 1 and Day 2

12 months and older: 200,000 IU on Day 1 and Day 2

These are **therapeutic amounts used during active measles**, not routine daily nutritional supplementation. CDC warns that excessive vitamin A can cause toxicity affecting the liver, bones, central nervous system and skin, and that high levels of vitamin A are of particular concern during pregnancy because of the risk of birth defects.

WHO's July 2026 fact sheet specifically recommends two doses for suspected measles cases in children under five.

What does the research show?

Different percentages are sometimes cited because researchers have examined different populations and treatment regimens.

A 2010 systematic review found that, when researchers specifically examined trials using **at least two high doses of vitamin A**, treatment was associated with a **62% reduction in measles mortality** (RR 0.38; 95% CI 0.18–0.81). When all six high-quality randomized trials were pooled, however, the mortality reduction did not reach statistical significance.

Earlier analyses reported an approximately **82% mortality reduction among children under two receiving at least two doses**. The 82% figure therefore should not be interpreted as an 82% mortality reduction for every age group or every measles case.

☐ 3. WHAT ABOUT COD LIVER OIL?

Dr. Edwards prefers **cod liver oil** as a food-based source of preformed vitamin A (retinol) and vitamin D.

This is different from simply administering a measured number of IU of supplemental vitamin A.

Cod liver oil products can vary substantially in their vitamin A and vitamin D concentrations. For that reason, a teaspoon of one product should **not automatically be assumed to contain the same amount of vitamin A as a teaspoon of another product.**

PCIC therefore does not convert the CDC/WHO therapeutic vitamin A amounts into teaspoons of cod liver oil.

Dr. Edwards' reported approach

In his September 2026 recorded message for Pennsylvania families, Dr. Edwards described approximate nutritional amounts of cod liver oil according to age.

He also described **substantially increasing cod liver oil during active illness**, including using as much as approximately **one teaspoon every hour in some patients during the most acute portion of illness.**

His published 2025 account provides additional detail. He reports using approximately:

Bottle-fed infants 4–12 months: $\frac{1}{2}$ teaspoon per bottle, or immediately before the bottle.

Breastfed infants: attempting to give the infant approximately $\frac{1}{4}$ – $\frac{1}{2}$ teaspoon at feedings while also encouraging the nursing mother to consume cod liver oil.

Older children: approximately 1–2 teaspoons before meals, as tolerated.

Sickest older children and adults: as much as approximately 1 teaspoon hourly while awake during the several days of most severe symptoms.

IMPORTANT

These are **Dr. Edwards' reported clinical amounts. They are not CDC or WHO recommendations.**

The vitamin A content of the actual cod liver oil product matters. Total vitamin A intake from cod liver oil, supplements and other sources should also be considered.

□ 4. WHAT IF COD LIVER OIL OR FOOD SOURCES ARE NOT AN OPTION?

In his September 2026 recorded message, Dr. Edwards also discusses supplemental vitamin A when cod liver oil or appropriate food sources are unavailable.

He describes short-term supplemental vitamin A amounts during active illness that differ from the standard CDC age-specific regimen.

This is an important point where families should **distinguish Edwards' individual clinical approach from established CDC/WHO guidance.**

High-dose preformed vitamin A can be toxic. Particular caution is warranted during pregnancy, infancy, with liver disease, and when multiple vitamin A-containing products are being used.

Do not assume that cod liver oil plus supplemental vitamin A can simply be added together without considering total vitamin A intake.

❑ 5. WHAT ABOUT VITAMIN C?

Vitamin C is another major component of Dr. Edwards' approach.

He describes giving vitamin C frequently during waking hours and using what is commonly called a “**bowel-tolerance**” **approach**—increasing frequency until loose stool develops and then reducing the amount or frequency.

His published 2025 account describes:

Young children approximately 4–12 months: 100–200 mg at a time.

Older children: approximately 500 mg at a time.

In his September 2026 interview, Dr. Edwards further described giving supplemental vitamin C approximately **every one to two hours during active illness, to “bowel tolerance,”** reducing the amount or frequency if loose stool develops.

This is Dr. Edwards' clinical recommendation and is not WHO or CDC measles guidance.

Historical medical literature

The use of vitamin C for viral illnesses, including measles, also appears in historical medical literature.

Physician Frederick R. Klenner, M.D., published reports in 1949 and 1951 describing his use of large amounts of vitamin C in patients with viral illnesses, including measles.

These papers are **historical clinical reports—not modern randomized controlled trials demonstrating that high-dose vitamin C treats measles.**

The original Klenner papers are included in this packet so families and practitioners can review the historical literature for themselves.

Important: Loose stool or diarrhea can contribute to dehydration, particularly in infants and young children. Hydration status remains important when using any approach that can increase bowel movements.

❑ 6. IS THE PERSON GETTING ENOUGH FLUIDS?

HYDRATION IS KEY Current public-health guidance and Dr. Edwards emphasize hydration. Dr. Edwards likewise identifies hydration as one of the most important issues he encountered while caring for measles patients.

Pay attention to:

- ☐ Is the person drinking?
- ☐ Is an infant continuing to nurse or take a bottle?
- ☐ Are fluids staying down?
- ☐ Is the person urinating normally?
- ☐ Is the mouth becoming unusually dry?

☐ Is the person becoming unusually weak, sleepy or difficult to awaken?

☐ Is diarrhea contributing to additional fluid loss?

Significant dehydration can require medical treatment or hospitalization.

Electrolyte Support

In his September 2026 recording, Dr. Edwards also discusses a simple homemade mineral/electrolyte drink using **citrus, sea salt and cream of tartar**, which provides potassium.

Common homemade “adrenal cocktail” or mineral-drink recipes use combinations of citrus juice, sea salt and cream of tartar.

For infants, significant dehydration, persistent vomiting or diarrhea, kidney or heart disease, or other circumstances in which sodium or potassium balance is important, individualized medical guidance is appropriate.

☐ 7. DO I KNOW WHAT THE NORMAL COURSE CAN LOOK LIKE?

Understanding the expected course can help families recognize when something changes.

CDC describes measles as typically beginning with:

High fever • cough • runny nose • red/watery eyes

Koplik spots may appear inside the mouth approximately 2–3 days after symptoms begin.

The rash generally appears **3–5 days after the first symptoms**, beginning around the face/hairline and spreading downward. Fever can spike above 104°F when the rash appears.

What Dr. Edwards observed

Dr. Edwards describes a somewhat recognizable pattern among many of the West Texas patients he treated:

Day 1: fever begins

Day 2: fever may lessen

Day 3: fever may return; cough becomes prominent; rash may begin

Days 4–6: fever, cough and rash may be significant

Days 7–8: symptoms generally begin clearing in uncomplicated cases

This is **Dr. Edwards' clinical observation, not a universal measles timeline**. Individual illness can vary substantially.

The more important question is not whether someone follows this timeline exactly.

It is: **Is the person continuing to improve—or has something changed?**

FEVER & COMFORT

High fever is common with measles. CDC notes that fever can exceed 104°F during the illness.

Dr. Edwards emphasizes that fever is part of the body's response to infection. In a September 2026 interview, he describes generally allowing lower-grade fever while using supportive measures when fever becomes higher or the patient is uncomfortable.

His suggestions include maintaining hydration, avoiding excessive bundling or heavy clothing, and using lukewarm bathing or other physical comfort measures.

Pay attention to the whole patient—not temperature alone. Hydration, alertness, breathing, age, underlying health conditions and the overall course of illness are important considerations. Young infants and medically vulnerable patients warrant additional caution.

☐ 8. IS THE PERSON BREATHING NORMALLY?

This deserves particular attention.

Measles is a respiratory illness, and recognized complications include bronchopneumonia and laryngotracheobronchitis (croup). Secondary bacterial infections can also cause pneumonia.

Dr. Edwards reports that the amount of respiratory involvement he encountered during the West Texas outbreak was one of the issues that particularly concerned him.

Watch for:

- ☐ worsening cough;
- ☐ shortness of breath;
- ☐ faster or labored breathing;
- ☐ difficulty breathing;
- ☐ unusual chest symptoms;
- ☐ blue or gray discoloration around the mouth; or
- ☐ a child who appears to be working unusually hard to breathe.
- ☐ falling oxygen saturation, when pulse oximetry is available;

Significant shortness of breath or difficulty breathing warrants medical evaluation rather than relying solely on home supportive measures.

☐ 9. WHAT ABOUT BUDESONIDE?

During the West Texas outbreak, Dr. Edwards reports using **nebulized budesonide** in selected patients experiencing significant respiratory symptoms.

Budesonide is a corticosteroid used to reduce airway inflammation.

IMPORTANT EVIDENCE DISTINCTION

Budesonide does **not kill the measles virus**, and PCIC has not identified a randomized clinical trial specifically establishing nebulized budesonide as a measles treatment.

Its inclusion here documents **Dr. Edwards' clinical treatment of respiratory complications in selected measles patients**, rather than an established WHO or CDC measles protocol.

A family experiencing significant respiratory symptoms should contact a health-care practitioner rather than assuming that budesonide—or any other home treatment—is appropriate.

☐ 10. WAS THE PERSON GETTING BETTER—AND NOW IS GETTING WORSE?

WATCH FOR THE TURN Dr. Edwards emphasizes paying particular attention when a patient who appeared to be recovering suddenly becomes sick again.

The rash is clearing.

The fever is resolving.

Appetite is returning.

The patient appears to be recovering.

Then something changes:

- ☐ fever returns or spikes again;
- ☐ cough develops or becomes significantly worse;
- ☐ oxygen saturation begins to fall;
- ☐ shortness of breath develops;
- ☐ respiratory distress develops; or
- ☐ the patient's overall condition suddenly declines.

Dr. Edwards reports that this pattern caused him to evaluate for **secondary bacterial pneumonia requiring treatment**.

A return of fever or worsening respiratory symptoms does **not automatically establish bacterial pneumonia**. However, secondary bacterial pneumonia or another complication is one possible explanation, and a patient who was improving and then deteriorates warrants prompt clinical reassessment.

A child who seems better may still need medical evaluation.

If the fever returns, the cough worsens, breathing becomes difficult, or the child becomes noticeably less alert after initially improving, seek prompt medical assessment. These changes can indicate pneumonia or another complication; symptoms alone cannot establish whether an infection is bacterial.

Severe breathing difficulty, blue or gray lips, inability to wake normally, or other signs of serious illness require emergency care.

WHO recognizes that antibiotics may be used to treat bacterial pneumonia and certain other bacterial complications of measles. CDC likewise states that complications such as pneumonia and secondary bacterial infections should be promptly managed.

☐ 11. COULD THIS BE A SECONDARY BACTERIAL INFECTION?

ANTIBIOTICS TREAT BACTERIA NOT THE MEASLES VIRUS

Measles can be complicated by secondary bacterial infections, including pneumonia and ear infections.

Dr. Edwards reports using prescription antibiotics when he suspected that a patient had developed a secondary bacterial infection. In discussing bacterial pneumonia during the West Texas outbreak, he has specifically referenced **azithromycin (Zithromax)** as one antibiotic used in this context.

Antibiotics do **not** treat the measles virus itself. Antibiotic selection, dose and duration should be based on clinical evaluation and, when appropriate, microbiologic findings and susceptibility because the causative organism and antibiotic resistance can vary.

The important takeaway for families is not to self-diagnose bacterial pneumonia. It is to recognize a concerning change in the course of illness and have it evaluated.

☐ 12. DO I KNOW WHEN HOME SUPPORTIVE CARE IS NO LONGER ENOUGH?

Most measles care is supportive, but supportive care does **not** mean that worsening symptoms should simply be waited out.

Recognized measles complications include:

Dehydration • Ear infections • Pneumonia • Croup/airway complications • Secondary bacterial infections • Encephalitis

CDC identifies infants and children under five, adults over 20, pregnant women and people with weakened immune systems as groups at increased risk of complications.

CONTACT A HEALTH-CARE PROFESSIONAL WHEN SOMEONE:

- ☐ becomes sicker rather than continuing to improve;
- ☐ develops a new or returning fever;
- ☐ develops a significantly worsening cough;
- ☐ has difficulty drinking or keeping fluids down;
- ☐ urinates substantially less than normal;
- ☐ develops signs of dehydration;
- ☐ develops ear pain or drainage;
- ☐ becomes unusually weak or sleepy; or
- ☐ simply does not appear to be progressing as expected.

SEEK URGENT OR EMERGENCY MEDICAL ATTENTION FOR:

- ☐ significant difficulty breathing;
- ☐ rapidly worsening breathing;
- ☐ blue or gray discoloration around the mouth;
- ☐ severe dehydration;
- ☐ confusion or substantially decreased alertness;
- ☐ seizures;
- ☐ severe or persistent headache;
- ☐ difficulty awakening or responding normally; or
- ☐ rapid deterioration.

Pneumonia and encephalitis are recognized serious measles complications. CDC estimates encephalitis occurs in approximately 1 in 1,000 children with measles.

☐ 13. IS THIS A VERY YOUNG INFANT, PREGNANCY OR SOMEONE WITH A WEAKENED IMMUNE SYSTEM?

These circumstances deserve additional attention.

CDC identifies **children under five, pregnant women and immunocompromised individuals** among those at increased risk for serious measles complications.

Pregnancy also requires particular caution with high-dose preformed vitamin A.

Young infants deserve close attention to:

feeding • nursing/bottle intake • wet diapers • hydration • breathing • alertness

A young infant who is not feeding normally, appears dehydrated, develops respiratory difficulty, or is becoming unusually sleepy should be medically evaluated.

☐ 14. HAS SOMEONE JUST BEEN EXPOSED BUT ISN'T SICK YET?

This is a different situation from treating someone who already has measles.

There are **time-sensitive post-exposure options** for certain susceptible individuals, particularly young infants, pregnant people without evidence of immunity and severely immunocompromised people.

Because those options must be considered within a limited period after exposure, contact a knowledgeable health-care practitioner promptly rather than waiting for symptoms to develop.

CALL AHEAD BEFORE ARRIVING FOR MEDICAL CARE

Measles is highly contagious.

A person with measles is considered contagious from approximately **four days before through four days after the rash begins.**

If measles is suspected, **call the physician's office, clinic, urgent-care center or emergency department before arriving whenever circumstances permit.**

This allows the facility to take appropriate precautions and reduce exposure to other patients.

THE BIG PICTURE

When caring for someone with measles, keep asking:

- ☐ **Are they getting adequate nutrition?**
- ☐ **Are vitamin A and other supplements being used appropriately?**
- ☐ **Are they getting enough fluids?**
- ☐ **Are they urinating normally?**
- ☐ **Are they breathing normally?**
- ☐ **Is the illness following a generally expected course?**
- ☐ **Were they improving and now getting worse?**
- ☐ **Is there evidence of a complication?**
- ☐ **Is it time to call a health-care practitioner?**

The goal is not simply to “wait out” measles, nor is it to assume that every symptom requires hospitalization.

The goal is to **support the person through the illness while recognizing when the clinical picture changes and additional medical care may be necessary.**

IMPORTANT INFORMATION ABOUT THIS RESOURCE

This document is intended for **education and informed-consent purposes.**

It brings together several different categories of information:

WHO / CDC / AAP Guidance

Current public-health and clinical recommendations.

Published Research

Findings from clinical trials, systematic reviews and other medical literature.

Dr. Ben Edwards' Clinical Experience

What Dr. Edwards reports using while caring for patients during the West Texas measles outbreak and what he describes in his September 2026 recorded message for Pennsylvania families.

Historical Medical Literature

Earlier physician reports and medical publications documenting approaches that have been used historically.

These sources **do not represent the same level of evidence.**

The inclusion of an approach in this document does not mean that PCIC considers every approach equally established, that it has been proven effective through controlled clinical trials, or that it is appropriate for every individual.

Age, pregnancy, breastfeeding, nutritional status, underlying medical conditions, medications, kidney and liver function, severity of illness and other individual factors may materially change what is appropriate.

PCIC provides educational information and does not provide individual diagnosis, prescribing or medical treatment. Families are encouraged to use this information to ask informed questions and work with a trusted health-care practitioner.

PRIMARY SOURCES & FURTHER READING

World Health Organization — Measles Fact Sheet

Includes information on nutrition, hydration, vitamin A and treatment of bacterial complications.

[WHO Measles Fact Sheet](http://www.who.int/news-room/fact-sheets/detail/measles) www.who.int/news-room/fact-sheets/detail/measles

Centers for Disease Control and Prevention — Clinical Overview of Measles

Includes current U.S. clinical guidance regarding complications, supportive management, vitamin A and antibiotics.

[CDC Clinical Overview of Measles](http://www.cdc.gov/measles/hcp/clinical-overview/index.html) www.cdc.gov/measles/hcp/clinical-overview/index.html

Centers for Disease Control and Prevention — Symptoms and Complications

Includes the typical clinical course, recognized complications and warning information.

[CDC Measles Symptoms and Complications](http://www.cdc.gov/measles/signs-symptoms/index.html) www.cdc.gov/measles/signs-symptoms/index.html

Ben Edwards, M.D. — Treating Measles with Cod Liver Oil

Weston A. Price Foundation, August 11, 2025. Provides Dr. Edwards' firsthand account and detailed nutritional approach during the West Texas outbreak.

[Dr. Ben Edwards — Measles Natural Treatment](http://www.westonaprice.org/health-topics/measles-natural-treatment/) www.westonaprice.org/health-topics/measles-natural-treatment/

Ben Edwards, M.D. — Recorded Message on Measles for Pennsylvania Families

September 2026. PCIC audio recording.

Sudfeld CR, Navar AM, Halsey NA. *Effectiveness of measles vaccination and vitamin A treatment.* International Journal of Epidemiology. 2010;39(Suppl 1):i48–i55.

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