Webinar Will Begin Momentarily

TODAY'S AGENDA:

- Welcome
- Speaker Introduction
- Presentation
- Q&A
- Closing

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Professional Education Series

Support. Inform. Educate. Empower.

From the Kitchen to the Courtroom: Nutrition, Wounds, and the Standard of Care

WEBINAR HOST:

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VP of Healthcare, Sports & Professional Education
Orgain, LLC

WEBINAR PRESENTER:

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Light Bulb Health, Inc.
Award-winning nutrition, wound care, and medico-legal expert

Funding from non-CPE revenue for CPE planning, development, review, and/or presentation has been provided by Orgain, LLC. The views expressed herein are those of the presenter and do not necessarily represent Orgain's views. The material herein is accurate as of the date it was presented and is for educational purposes only and is not intended to be medical advice. The material presented in this webinar, is not intended to be a substitute for professional medical advice, diagnosis, or treatment. You should seek the recommendation of a medical professional regarding a medical condition or treatment or before starting a new nutrition and/or health regimen.

Objectives

- Review the current legal landscape in hospitals and nursing homes including litigation connected to wounds and nutrition
- Describe the legal definition of *standard of care* and the care areas that frequently lead to concerns in the medical record
- Understand documentation required to support evidenced-based care in accordance with the standard of care

Disclosures

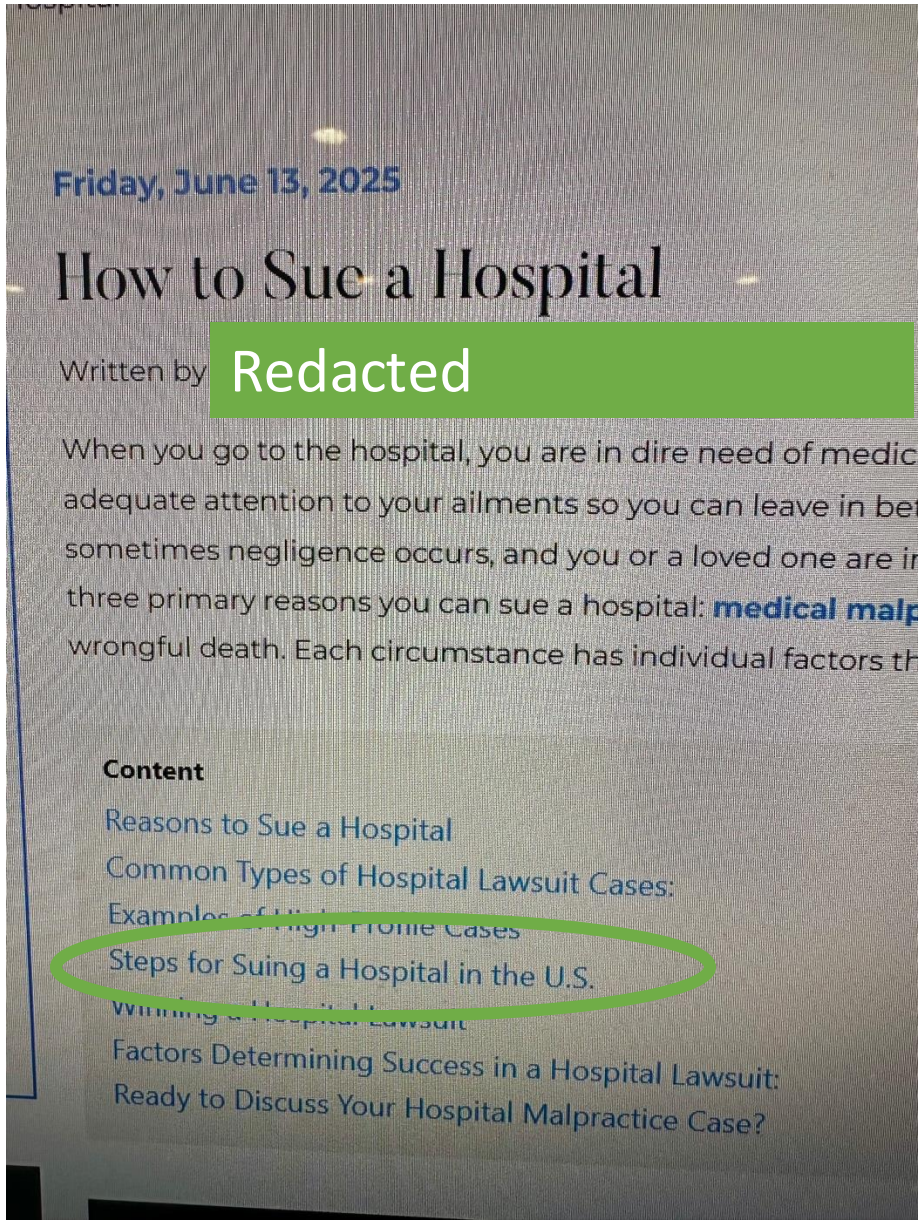
Medico-legal:

- Dr. Collins discloses that she works with both plaintiff and defense firms and receives payment as an Expert Witness
- Dr. Collins is not an attorney

Wounds:

- Dr. Collins has been a consultant and speaker for Medtrition, Inc. and Abbott Nutrition

This webinar is supported by Orgain

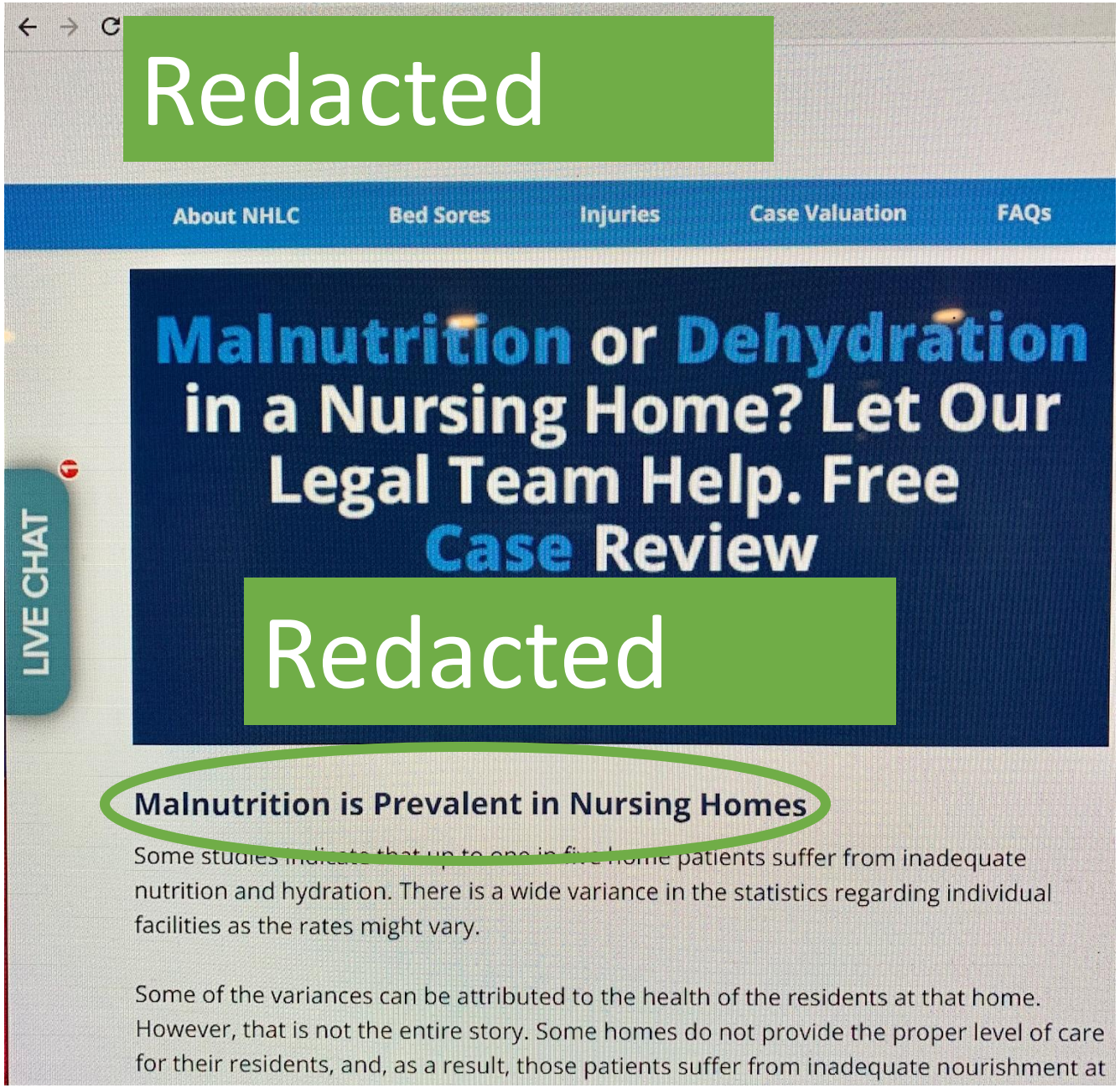


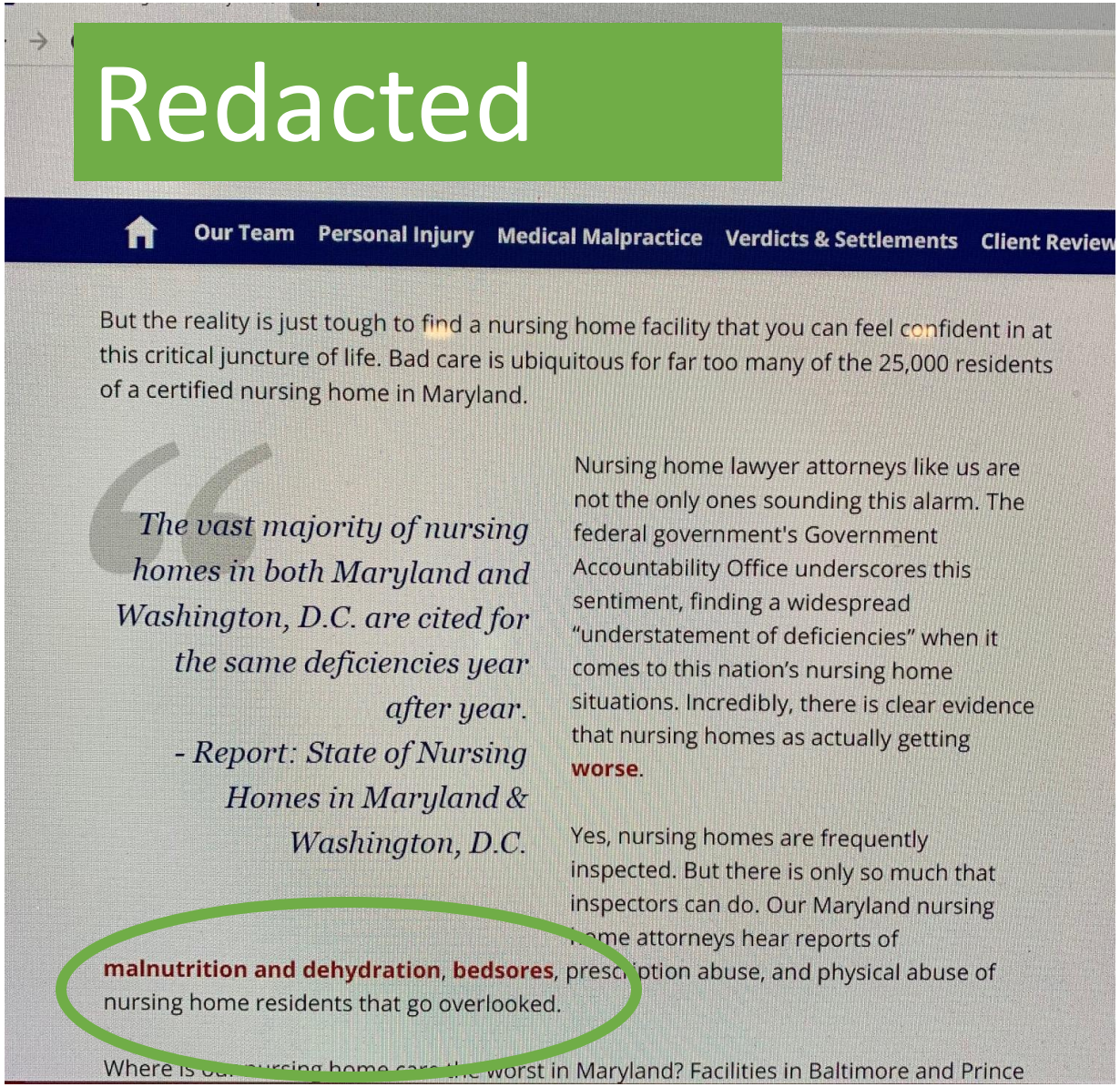
- ✓ Data indicates that around 20,000 medical malpractice suits are initiated each year
- ✓ This is influenced by geographic area, hospital size, and specialties

Legal Clarity Team. How Often Do Hospitals Get Sued and Why? July 19, 2025. Available at https://legalclarity.org/how-often-do-hospitals-get-sued-and-why/#google_vignette

Medical Malpractice Lawsuits

- Medical malpractice lawsuits are civil legal actions
- These lawsuits require showing that a healthcare provider acted negligently
- Plaintiffs stand to recover economic damages


Redacted
About NHLC
Bed Sores
Injuries
Case Valuation
FAQs
Malnutrition or Dehydration in a Nursing Home? Let Our Legal Team Help. Free Case Review
LIVE CHAT
Redacted
Malnutrition is Prevalent in Nursing Homes
Some studies indicate that up to one in five home patients suffer from inadequate nutrition and hydration. There is a wide variance in the statistics regarding individual facilities as the rates might vary.
Some of the variances can be attributed to the health of the residents at that home. However, that is not the entire story. Some homes do not provide the proper level of care for their residents, and, as a result, those patients suffer from inadequate nourishment at

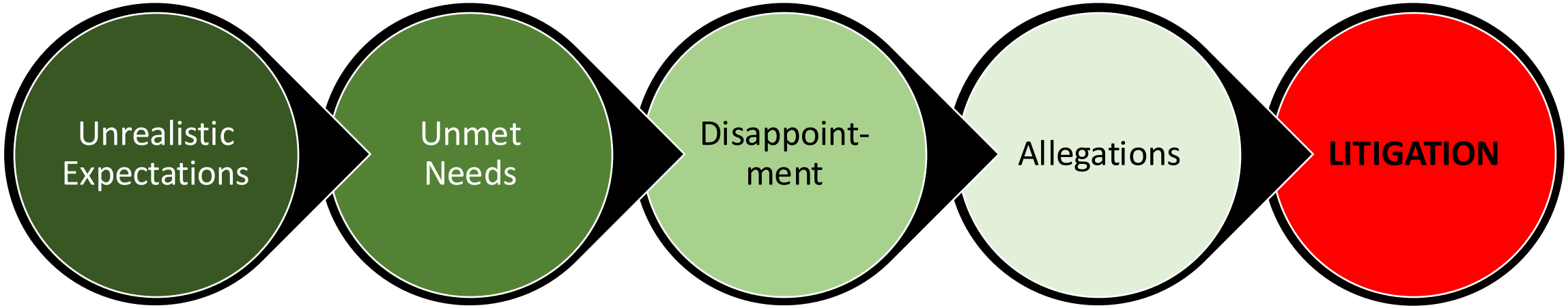


"But the reality is it's just tough to find a nursing home facility that you can feel confident in at this critical juncture of life. Bad care is ubiquitous for far too many…"

Trial – Unpredictable Roll of the Dice

- Composition of the jury
  - Sympathetic jury may simply wish to compensate a perceived victim, or to punish a defendant
- Evidentiary and legal rulings
- Most cases settle out of court

Chain of Events



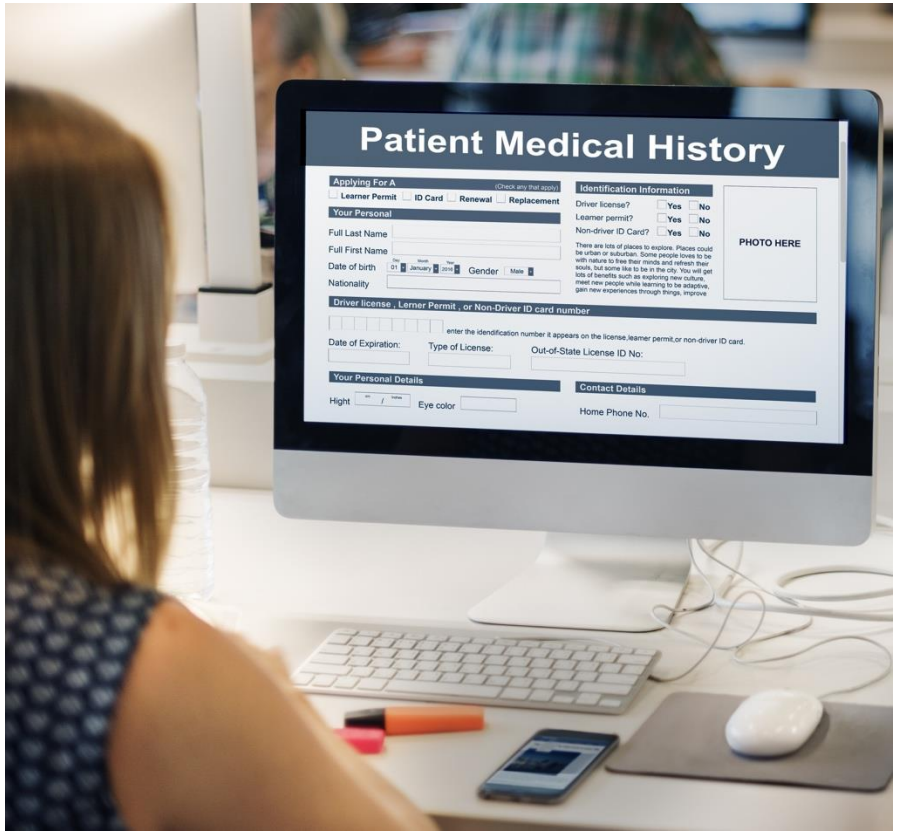
Conditions Driving Litigation

- Poor surgical outcomes
  - Anesthesia errors
- Medication errors
- Birth injuries
- **Non-healing wounds**
  - **Amputations**
  - **Infections**

From the Kitchen to the Courtroom…

It common to uncover nutritional problems when reviewing medical records

- Malnutrition
- Dehydration
- Unintended weight loss
- Adult failure to thrive
- Missed meals/poor meal consumption



What Must Be Proven?

- An unwarranted departure from the generally accepted standard of care that results in injury
- Unwarranted = Not justifiable

The Standard of Care

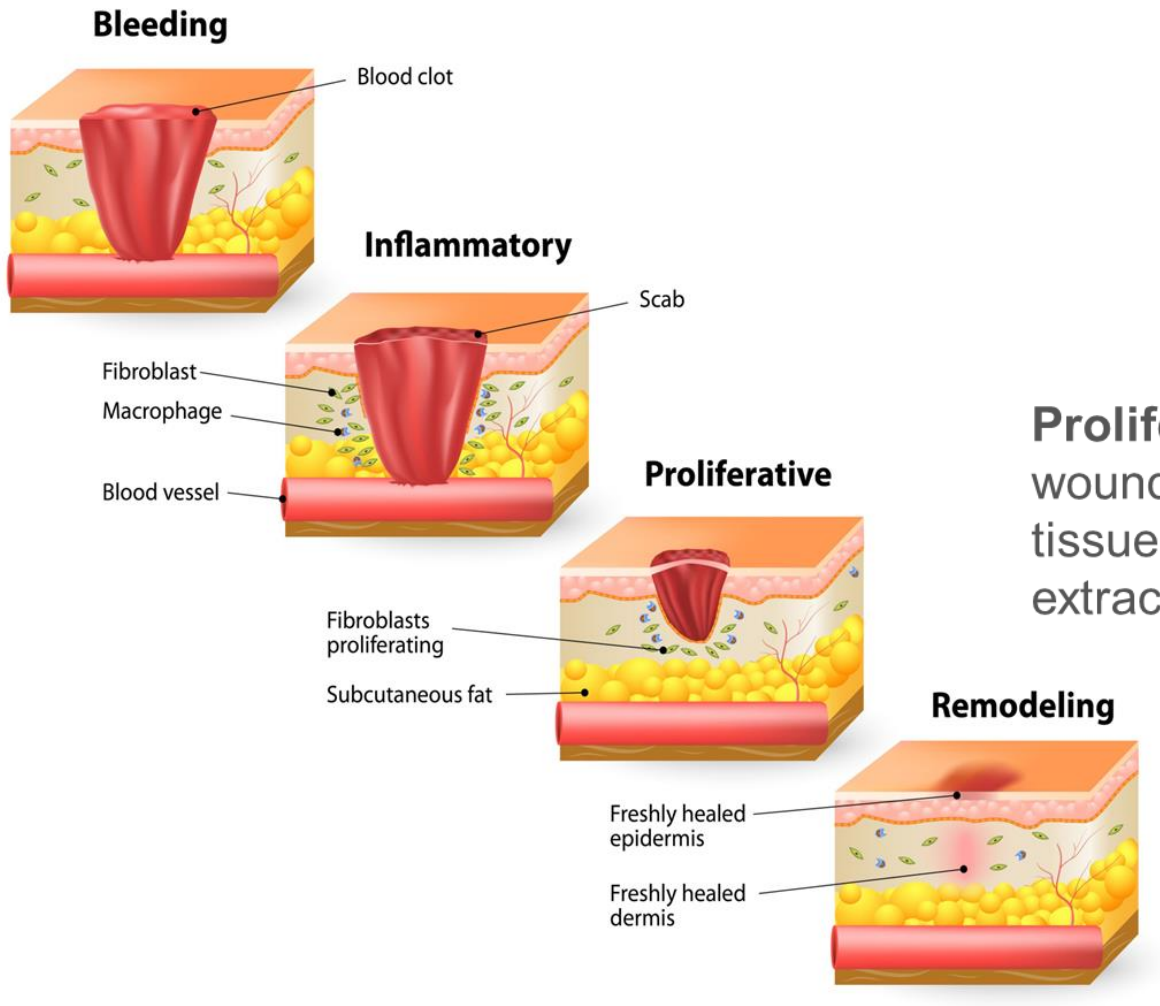
- The care that a dietitian, nurse, etc. in good standing with similar experience and education would ordinarily exercise under similar circumstances.
- Sometimes stated as what would be done in a similar facility across town.

Violations in Standard of Care

- Did not:
  - Identify nutritional risk
  - Provide adequate nutrition and hydration
  - Prevent weight loss, dehydration, wounds
  - Treat in a timely manner
  - Appropriate use of supplements, vitamins, treatments, etc.
  - Follow-up on recommendations
  - Communicate and document adequately

WOUND HEALING

- ✓ Granulation tissue fills in the wound bed
- ✓ Fibroblasts lay collagen in the wound bed, strengthening new granulation tissue
- ✓ Epithelial cells migrate from the wound margins



Proliferative phase: when the wound is rebuilt with new tissue made up of collagen and extracellular matrix

Rodrigues M, Kosaric N, Bonham CA, and Gurtner GC. Wound Healing: A Cellular Perspective
Nov 26 2018 https://doi.org/10.1152/physrev.00067.2017

Clinical Practice Guidelines: Recommended Caloric and Protein Intake

- **30 – 35** calories/kg body weight
- **1.25 to 1.5** grams protein/kg body weight

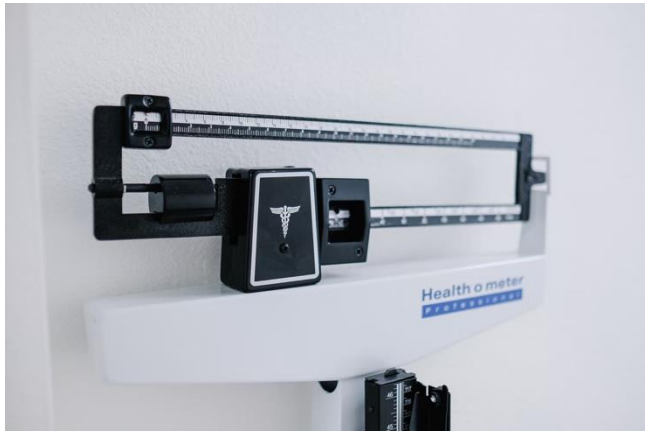
….for an adult at risk of a pressure injury or with an existing pressure injury who is assessed to be at risk of malnutrition when compatible with goals of care, and reassess as condition changes…

European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel, Pan Pacific Pressure Injury Alliance. *Prevention and Treatment of Pressure Ulcers/Injuries.* Haesler E, ed. 3rd ed. EPUAP/NPIAP/PPPIA; 2019.

Food First

- Favorite and culturally appropriate foods
- Diet liberalization policies
- Proper dining environment
- Assistance and encouragement as needed
- Offer substitutes

10 Common Reasons For Unintended Weight Loss



1. Dislikes the food/cultural preferences
2. Nausea or stomach issues
3. Dental problems
4. Swallowing problems
5. Depression
6. Requires mealtime assistance
7. Decreased smell and taste
8. End of life
9. Hypermetabolic
10. Medication side effects

Each of these causes requires a very different intervention!

Oral Nutrition Supplements (ONS)

Find something the patient enjoys and will consume!

- Many flavor profiles and forms available
- High calorie
- High protein
- Protein modular supplement
- Collagen dipeptides
- Arginine/Citrulline

The Macronutrients = Protein, Carbohydrates, Fat

Protein is the key macronutrient!

Collagen Di-Peptides Specific to Wound Healing

- Readily absorbed through the wall of small intestine
- PO is a low molecular weight fibroblast-initiating factor
- Enhances wound healing by stimulating the growth of p75NTR-positive fibroblasts
- Promotes hyaluronic acid synthesis, required for maintaining dermal integrity

Pro-Hyp
prolyl-hydroxyproline

Hyp-Gly
Hydroxyprolyl-Glycine

Not easily degraded
- PO is twisted
- OG is stacked

Sato K, Asai TT, Jimi S. Collagen-Derived Di-Peptide, Prolylhydroxyproline (Pro-Hyp): A New Low Molecular Weight Growth-Initiating Factor for Specific Fibroblasts Associated With Wound Healing. Front. Cell Dev. Biol.2020. 8:548975.doi: 10.3389/fcell.2020.548975

Arginine Functions in Wound Healing

- Under stress arginine becomes essential
- Role in protein synthesis[1]
  - Promotes cell division
  - Hormone release
- Stimulates T cell response[2]
  - Helps prevent infection
  - Promotes cell division
- Nitric oxide production[1]
  - Promotes blood flow

1. Posthauer ME, Martin M. Wound healing. In: Mueller C, ed. A.S.P.E.N./Adult Nutrition Support Core Curriculum. 3rd ed. Silver Springs, MD: American Society for Parenteral and Enteral Nutrition; 2017:419–34.
2. Saghaleini SH, Dehghan K, Shadvar K, Sanaie S, Mahmoodpoor A, Ostadi Z. Pressure ulcer and nutrition. Indian J Crit Care Med 2018;22(4):283–9.

L-Citrulline is Well Researched

The Journal of Nutrition
Nutrient Requirements and Optimal Nutrition

Supplemental Citrulline Is More Efficient Than Arginine in Increasing Systemic Arginine Availability in Mice[1–3]

Umang Agarwal,[4] Inka C Didelija,[4] Yang Yuan,[4] Xiaoying Wang,[4] and Juan C Marini[4,5]*

[4]USDA/Agricultural Research Service Children's Nutrition Research Center; and [5]Critical Care Medicine Division, Department of

OPEN ACCESS Freely available online PLOS one

Citrulline a More Suitable Substrate than Arginine to Restore NO Production and the Microcirculation during Endotoxemia

Karolina A. P. Wijnands[1,2]*, Hans Vink[3,4], Jacob J. Briedé[5,6], Ernst E. van Faassen[7], Wouter H. Lamers[2,8], Wim A. Buurman[1,2], Martijn Poeze[1,2]

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journal homepage: www.elsevier.com/locate/ybbrc

Oral supplementation with a combination of L-citrulline and L-arginine rapidly increases plasma L-arginine concentration and enhances NO bioavailability

Masahiko Morita [a], Toshio Hayashi [b,*], Masayuki Ochiai [a], Morihiko Maeda [b], Tomoe Yamaguchi [b], Koichiro Ina [b], Masafumi Kuzuya [b]

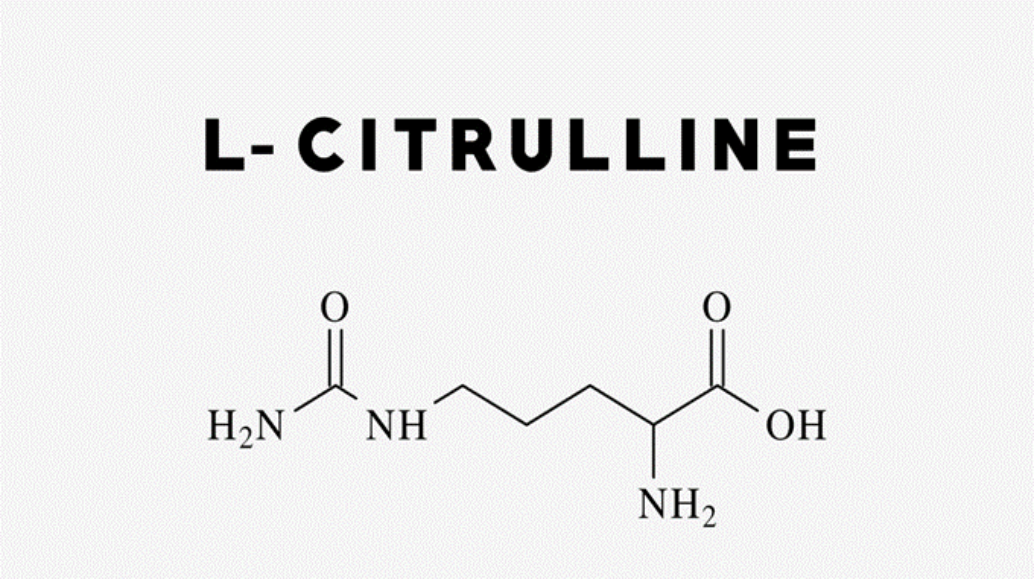
[a] *Function Research Group, Healthcare Products Development Center, KYOWA HAKKO BIO CO., LTD., 2, Miyukigaoka, Tsukuba, Ibaraki 305-0841, Japan*
[b] *Department of Geriatrics, Nagoya University Graduate School of Medicine, 65 Tsuruma-cho, Showa-ku, Nagoya 466-8550, Japan*

L-Citrulline Supplementation Increases Plasma Nitric Oxide Levels and Reduces Arginase Activity in Patients With Type 2 Diabetes

Alia Shatanawi[1], Munther S. Momani[2], Ruaa Al-Aqtash[1], Mohammad H Hamdan[1,3] and Munir N. Gharaibeh[1]*

L-Citrulline

- Has been suggested as an alternative to increase arginine availability due to drawbacks of arginine
  - First pass metabolism
  - GI complaints
  - Use in critically ill
- Natural arginase inhibitor



1. Agarwal U, Didelija IC, Yuan Y, Wang X, Marini JC. Supplemental Citrulline Is More Efficient Than Arginine in Increasing Systemic Arginine Availability in Mice. *J Nutr*. 2017;147(4):596-602. doi:10.3945/jn.116.240382
2. Shatanawi A, Momani MS, Al-Aqtash R, Hamdan MH and Gharaibeh MN (2020) L-Citrulline Supplementation Increases Plasma Nitric Oxide Levels and Reduces Arginase Activity in Patients With Type 2 Diabetes. Front. Pharmacol. 11:584669. doi: 10.3389/fphar.2020.584669

Common Documentation Issues

- Inconsistent information
  - Height and weight
  - Meal intake in notes does not match consumption records and nursing notes
  - Ability to feed self
- Incomplete information
  - Calorie counts
  - Intake/Output
  - Brevity/missing of consults
  - Lack of follow up on recommendations

A Current Case: Let's Look at the Weights

Date	Pounds
June 30	203.5
July 5	205
July 13	197
August 2	168.5
August 9	171
August 16	161
August 17	156
August 19	154
August 20	152.5
August 22	152.5
August 23	153
August 24	152.5
August 27	142

Two Problematic Ways to Document Unintended Weight Loss

- Using “above ideal body weight” as a justification that weight loss is acceptable
- Adding more food/ONS for a person who is not consuming the food/ONS already being served
  - Must do a root cause analysis

Interventions Must Address Root Cause

- **Poor appetite**
  - Small, frequent meals
  - Cultural and favorite foods
  - Fortified foods to get “more bang for the bite”
- **Dry mouth**
  - Provide ice chips, popsicles, or moistened swabs
  - Keep lips moistened with petroleum jelly or lip balm
- **Mouth pain**
  - Soft and bland , non-irritating foods
- **Constipation**
  - Add extra fiber as tolerated (start slow and gradually increase)
  - Serve additional liquids – prune juice can be helpful to some
- **Diarrhea**
  - Avoid “trigger foods” that stimulate the bowels/ diarrhea (simple sugars, sugar alcohols, caffeine, alcohol, high fiber, and gas producing foods)
  - Add fluids and electrolytes to prevent dehydration with diarrhea
- **Nausea or vomiting**
  - Serve bland foods (crackers, toast)
  - Limit sights, sounds, smells that trigger nausea/vomiting
- **Altered taste and smell**
  - Plastic silverware if taste is metallic
  - Experiment with seasonings/flavoring (lemon juice, vinegar, herbs, etc)

Data Collection v. Intervention

- Confirm weight
  - Reweigh
  - Monitor weights
- Speak to MD/PA
  - Discuss at care plan meeting
- Get labs
- Continue to monitor
  - Follow prn

Effect of Unintended Weight Loss on Wound Healing

- Loss of body protein = impairment in wound healing
- Nutrients for wound healing compete with those necessary for survival
- **Must have effective, accepted, and timely nutrition intervention to correct**

Demling RH. Nutrition, anabolism, and the wound healing process: an overview. *ePlasty*. 2009;9:65-94. http://www.medscape.com/viewarticle/711879_8.

Relationship Between LBM Loss and Wound Healing

<10%	Wound healing has priority for protein substrate
>10%	The stimulus to restore LBM competes with the wound for protein
>20%	Correction of LBM takes precedence **Wound healing stops**

Demling RH. Nutrition, anabolism, and the wound healing process: an overview. *Eplasty.* 2009;9:e9.
Demling RH. The role of anabolic hormones for wound healing in catabolic states. *J Burns Wounds*. 2005;4:e2. http://www.eplasty.com/pdf/volume04/jobw04e2.pdf. Accessed July 15, 2018.

Documenting Declining Body Weight

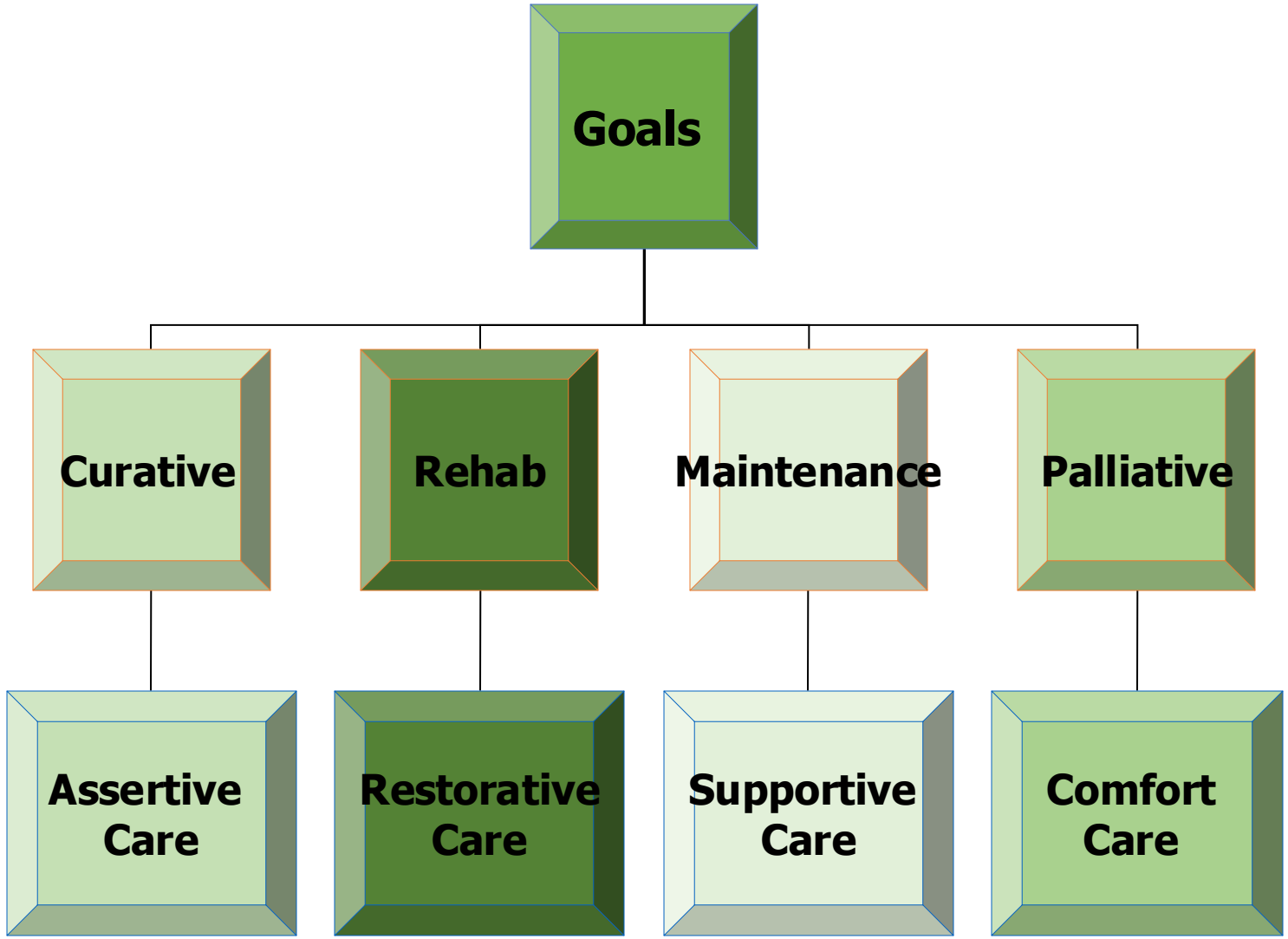
- Weight loss is anticipated due to…
- Communicated to family and team
- Discussion on enteral nutrition
- Hospice services does not mean discontinuation of nutrition care

Addressing Weight Loss at End of Life

- Adequate nutritional intake is often difficult, if not impossible, for the person at end of life
- Starving people generally want food; dying people do not
- Help family members understand this change in metabolism

Hospice Patients Alliance. Food, Nutrition, Artificial Feeding Methods, Constipation, and Other Considerations. Available at http://www.hospicepatients.org/hospic28.html.

What is Enough Care or Intervention? Define the Outcome Expectations

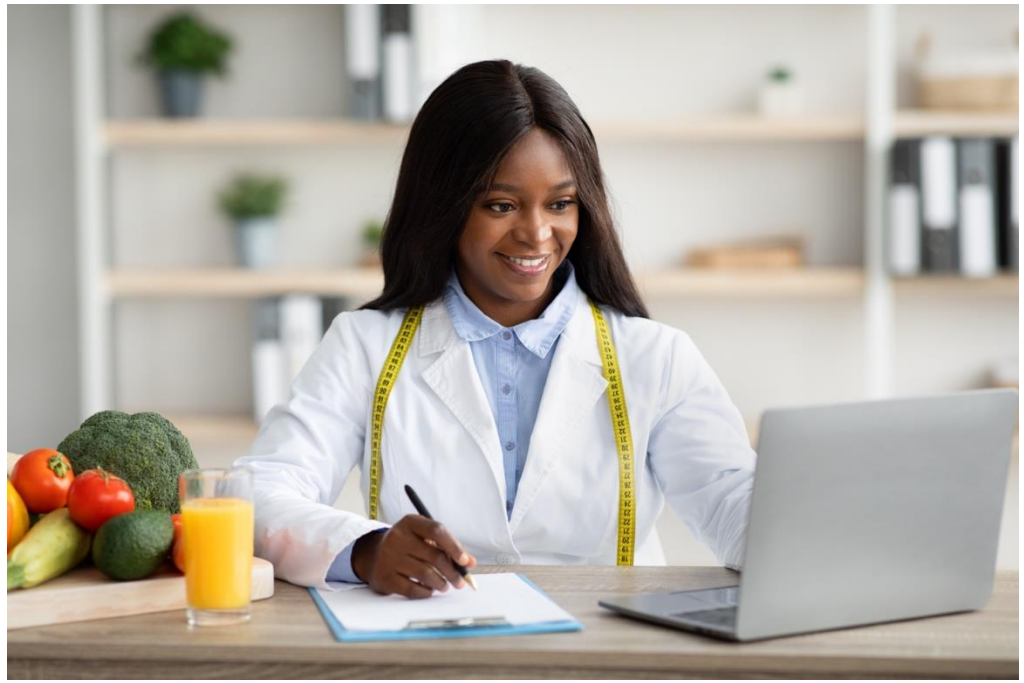


Steps for Improving Documentation

- Identify your weak areas
  - Chart audits
  - Peer reviews and/or consultants
- Review policies for weak areas
  - Eliminate unnecessary orders unless the reason for obtaining data is clear
- Revise data collection forms and tools or process

Develop Good Charting Habits

- Verify orders and information for yourself
- Be clear about your goals and plan
- Document who you spoke with
  - “Daughter” or “daughter Eileen Jones”
  - “Notified doctor’s office”
- Notify/involve other disciplines as appropriate



The Fine Line of Being Professional

- Be courteous and genuinely concerned in a professional manner
- Patients and their family members are not your friends or confidantes
- Do not use work email for personal use or personal commentary on workplace
- Do not disclose facility mismanagement or problems to “guests”
  - *“I am so sorry your medicine is late – we are so short staffed again today!”*
  - *“I am exhausted.”*

The Bottom Line

- Your best defense is the medical record
- Give the type of care you wish for your own loved ones
- High level of care elevates the perception of the entire profession

It may just be another day at work for you,

but for your patient, it is life event.

Time for Questions, Thoughts, Comments

Dr. Nancy Collins
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Advocating. Nourishing. Healing.

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