

Virginia Long-Term Care Clinician Network Monthly Forum

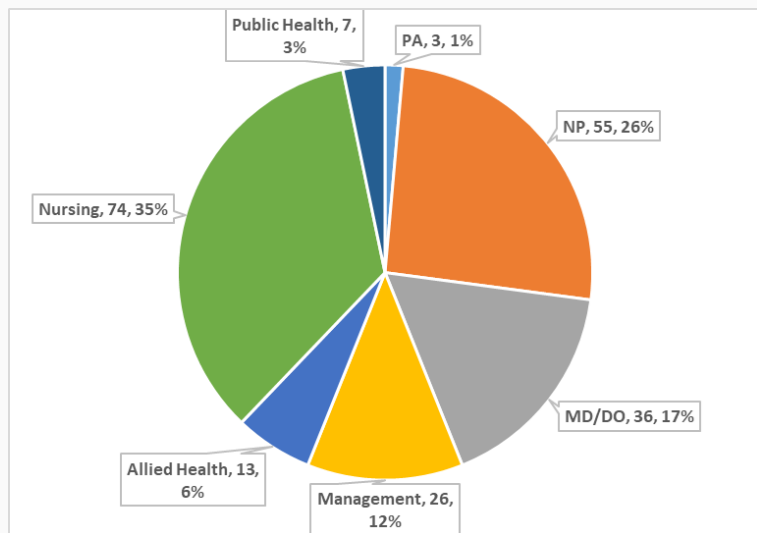
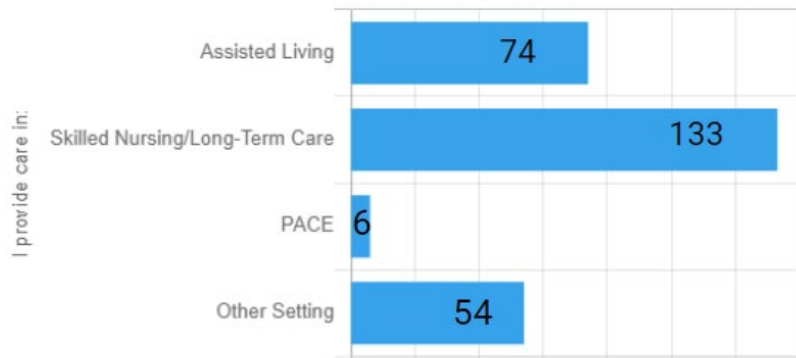
October 18, 2023



Where to find us, slides, monthly newsletter?

The screenshot shows the homepage of the Virginia Long-Term Care Clinician Network. At the top, the VCU logo and "VIRGINIA COMMONWEALTH UNIVERSITY" are on the left, and "WE ARE THE UNCOMMON." with a "GIVE TO VCU" logo is on the right. Below this is the site title "Virginia Long-Term Care Clinician Network" and a search bar. A dark navigation bar contains links for "Join the Network", "Steering Committee", "Forums & Events", "Contact Us", and "Resources". The main content area features a large network diagram of nodes and lines. A dark grey box is overlaid on the diagram with the text "A partnership between VDH and VCU." and a "Join the Network" button.

LTC Settings:



Welcome our newest Network members

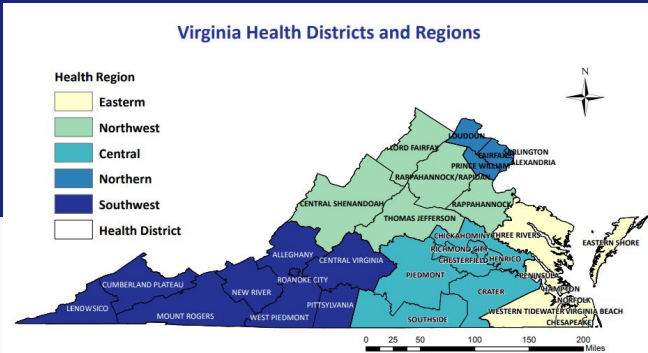
... bringing our Network total to 212 members!

Amenra Tuason, MD
Barbara Wolfe, FNP-C
Bindu Joseph, AGPCNP-C
Brittany Craven, MD
Brittney Dodt, FNP-C
Chantika Ashe, DNP
Crystal Oconnor, FNP
John Stauffer, MD
Kristie Burnette, MSN, RN
Mark Klyczek, FACHE
Ronald Hess
William Coleman, LNHA

Who are we?

Staff

- Christian Bergman, MD - Principal Investigator
- Bert Waters, PhD - Project Director
- Laura Finch, MS, GNP, RN - Clinical Coordinator
- Kim Ivey, MS - Communications / Administration
- Jenni Mathews - Survey Data & Evaluations Specialist
- Kristin MacDonald, MS, RD - Newsletter & Content Editor



Steering Committee

Eastern Region: Rob Walters, MD & Mary Mallory, NP

Northwestern Region: Jonathan Winter, MD

Central Region: William Reed, MD & Tangelia Crawley-Hardy, NP

Southwest Region: Katherine Coffey-Vega, MD & Jamie Smith, NP

Northern Region: Noelle Pierson, NP

Statewide: Shawlawn Freeman-Hicks, NP

Members: All of you who have registered for the LTC Clinician Network

Poll Question 1

Have you (personally) gotten your Flu vaccine yet?

A- Yes

B- No

C- Appointment set

Poll Question 2

Have you (personally) gotten your COVID booster vaccine yet?

A- Yes

B- No

C- Appointment set

Poll Question

Does your facility's EMR pull over VIIS data so you have up to date vaccination records at hand?

A- Yes

B- No

C- Not sure

Virginia LTC-CN: Share Your Business Card

Please use the Chat box to share your business card:

- **Name and Region or City/Town**
 - **An Area of Expertise You are Willing to Share**
 - **Contact information if you want to be available to colleagues**
- (chat is not posted with the slide set)**

**Thank you for taking care of Virginia's residents of PACE,
assisted living and nursing homes!**

***A Cohort of
Clinical
Conundrums***

Rob Walters, MD, CMD



Learning Objectives

1. Discuss kidney function and appropriate diuretic dosing.
2. Evaluate the precision and accuracy of routine laboratory tests.
3. Critically appraise the diagnosis of aspiration pneumonia.

Disclosures/Warnings

- No pertinent financial disclosures.
- Some of my colleagues on the call have heard a lot of this from me before. You guys should restrain yourselves a bit in the chat (i.e., from either providing answers too soon or typing snide comments about me).
- These subjects are intended to help manage relatively common clinical problems in LTC practice.

Case #1

An 89 yo female resident was admitted to SNF

Recent History: hospitalization for CHF. Other conditions include HTN and DM2. She improved with interventions including multiple administrations of 40mg of furosemide IV.

With volume status much improved, she has resumed her home dose of furosemide 20 mg daily with instructions to take an additional dose prn, Lisinopril 10mg qd, Lantus 8 units qd, and assorted supplements.

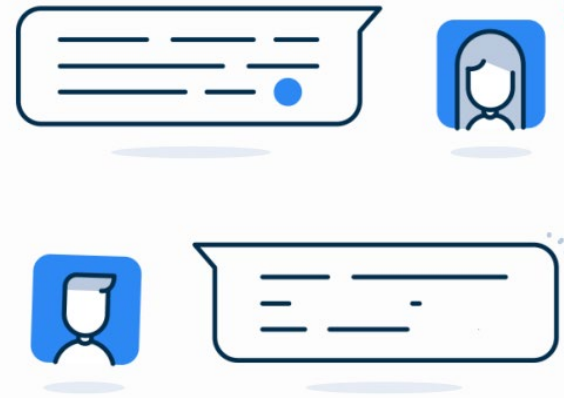
On follow up several days later, you notice 2-3+ edema; she's been up in her wheelchair for hours.

Lab review is remarkable for BUN 17, Cr 0.9, Hgb 9.2. Weight is 108 # (unchanged from hospital discharge), Height 60".

Case #1 – Discussion (What am I thinking?)

Type in chat:

- What concerns do you have?
- What, if anything, should we do next?



Case #1 (What I am thinking.)

Estimate her renal function.

- Most equations we use to estimate renal function use serum creatinine and adjust for sex, race, and age to account for average muscle mass and creatinine generation rate.
- The Cockcroft-Gault equation estimates creatinine clearance (measured in mL/min). It does not adjust for body surface area (BSA) and appears to be less accurate, especially in older and obese people.
- Kidney function is proportional to kidney size, which is proportional to body surface area (BSA).
 - Most equations assume a BSA of 1.73 m², which is the normal mean value for young adults.
 - It is possible to estimate GFR more accurately using a BSA calculated from height and weight measurements.
- Pharmacokinetic studies have historically used the Cockcroft-Gault equation to determine level of kidney function for dosage adjustment in drug labels. As a result, it has become the standard for drug dosing. Thus, GFR estimates may need to be “unadjusted” for body surface area for drug dosing.
- The online calculator at https://www.kidney.org/professionals/KDOQI/gfr_calculator estimates GFR using the CKD-EPI equation and gives the option to adjust for BSA.

Case #1 (continued)

Our patient's renal function:

- CG (1973): **72** ml/min CKD II
- CKD-EPI (2021), **not** adjusted for BSA: **61** ml/min CKD II
- CKD-EPI (2021), adjusted for BSA: **51** ml/min
 CKD IIIa

BSA: Body Surface Area

Case #1 – The Diuretic Dose

- Loop diuretics have a threshold dose; **no diuretic effect is shown when the dose is lower than the threshold dose.**
- They also have a maximum effective dose; this is the dose that shows the maximum fractional sodium excretion.
- They have a dose-responsive effect between the threshold and maximum effective doses.
- **Repeated administration of the maximum effective dose is more effective than increasing the dose.**
- In patients with severe edema, the effect of furosemide may be altered due to inadequate gastrointestinal absorption. Patients unresponsive to oral furosemide should be switched to parenteral therapy or oral torsemide.

Case #1 – More on Furosemide Dosing

- The dosage of parenterally administered furosemide is usually half of that of the oral dose; oral bioavailability is approximately 50%(10-90%).
- The maximum effective dose of intravenous furosemide also varies in different diseases; this dose is 80-200mg in patients with CKD or nephrotic syndrome, and 40-80mg in patients with congestive heart failure or liver cirrhosis.
- For the treatment of peripheral edema or edema associated with heart failure, chronic lung disease (CLD), or nephrotic syndrome: Initially, 20 to 80 mg PO as a single dose; may repeat dose in 6 to 8 hours. Titrate upward in 20 to 40 mg increments. The usual dosage is 40 to 120 mg/day (Max: 600 mg/day). If doses exceeding 80 mg/day are administered chronically, careful clinical and laboratory monitoring are recommended.
- For adjunctive treatment of edema in patients with acute or chronic renal failure (renal impairment): Initially, 80 mg PO once daily, increasing in increments of 80 to 120 mg/day until desired clinical response. For immediate diuresis, 320 to 400 mg once daily has been suggested.
- For the treatment of ascites in combination with spironolactone or amiloride Initially, 40 mg PO once daily, in the morning in combination with spironolactone; dose may be increased after 2—3 days if no clinical response. Some recommendations suggest a 40mg furosemide to 100mg of spironolactone ratio for this indication.

Case #1 – Final Thoughts

- **Why did they resume the ineffective home oral dose of furosemide?**
We may never know.
- **What about the stable weight?**
Do you really believe that weight?
- **What about dependent edema from being up so long?**
That was a distractor. There was a lot wrong with the overall picture, and inaction could lead to decompensation.
- **What about after we increase the dose?**
Monitor carefully! We may need to reduce dose frequency.

Case # 2

You are called at 2:30 am about a 62 yo male with CKD, GERD, HTN, CAD, and anemia. A nurse reports a Hgb of 6.9 (drawn at 4:00 am the day before). The last hemoglobin was 8.2, obtained when he was in the ER after a fall a couple of weeks ago. The resident is asleep, just as he was before the phlebotomist got there the day before and as you were before they called. He had pudding and played bingo in between, but the nurse adds that he does fatigue easily. She then mentions that she has called the resident's attentive daughter and expects her to return the call soon.

Case #2

Select the most appropriate next step:

1. Send to the ER.
2. Arrange an outpatient transfusion.
3. Repeat the lab.
(If at first you don't succeed...)
4. Wait and see what the daughter wants to do.
5. Pinch yourself to see if you're dreaming about work stuff a gain.



Case #2 – Lab Variability

- Devices that are commonly used to measure hemoglobin have been shown to vary up to ± 1.2 g/dL.
- There are a variety of physiologic and methodologic factors that can significantly influence hemoglobin levels in the body.
 - In a study of venous blood samples drawn from the same individuals on two different occasions, within person variances could vary as much as 2.6 g/dL in males and 2.3 g/dL in females.
 - Heart rate and blood pressure are higher when standing vs. sitting, which induces the movement of intravascular fluid such as plasma into interstitial compartments. This causes plasma volume to decrease and Hct and Hgb levels to rise (hemoconcentration). Moving from seated to standing positions for 20 minutes may result in an increase in Hb concentration by >1.0 g/dL. The converse is also true.

Case #2 – Anemia Management Tips

Transfusions:

- Transfuse for chronic asymptomatic anemia when the hemoglobin is below 7 g/dL.
- Transfuse when hemoglobin is below 8 g/dL in:
 - high-risk patients with significant cardiovascular or respiratory disease and
 - clinically significant symptoms (e.g., chest pain dizziness, shortness of breath, tachycardia, hypotension).
- Immediate transfusion is often required in the presence of acute blood loss producing hypotension with associated tachycardia and tachypnea.
- If a patient qualifies for transfusion but is stable without clinically significant symptoms, consider timely outpatient transfusion arrangements; in many patients, a hemoglobin of 6-7 g/dL is reasonably likely to be amenable to non-emergent transfusion. Consider increased monitoring (e.g., vital signs every shift and additional hemoglobin measurements) while awaiting outpatient transfusion. Contacting the transfusion center to convey urgency when scheduling may be warranted.

Case #2 – Anemia Management Tips

General Management Suggestions:

- Upon assumption of care, identify a current hemoglobin measurement. Obtain a hemoglobin if no result is available from within the past six months. Evaluate and treat as indicated; note that it's quite reasonable to factor in the resident's anticipated length of stay when formulating a plan of care; sometimes work up may be more appropriately deferred.
- Even if anemia is not present, assess risk factors, e.g., meds such as anticoagulants, anti-inflammatories, antacids; CKD (stage 3 or greater); inflammatory process (infection or disease); poor nutrition; etc. Mitigate/treat risk factors as appropriate. Establish laboratory monitoring for anemia commensurate with any identified risk factors or established treatments.

Case #3

You are called about a 66 yo resident with dysphagia after a CVA. He eats what he wants in spite of ST recommendations but chews his food well and soaks all bread in liquid to make it go down easier. He has a history of GERD but is no longer on acid-suppression therapy.

He had frequent coughing after choking during lunch yesterday. Initial suctioning was clear. Sats briefly declined to 89%, but he improved with use of nebs and oxygen. On-call ordered a CBC and CXR last night, and you now have results including a WBC of 12.4 and a right-sided infiltrate. Temp yesterday was up to 99.7. Vitals are now stable, and he did reasonably well with breakfast (some minor “sputtering”).

Case #3

What is the most important next step?

1. Deep suction
2. Parenteral antibiotics
3. Oral antibiotics
4. Monitor vitals at least every shift.
5. Get this guy's autograph!



Case # 3

- Clinical studies suggest that 13 to 26 percent of patients with observed aspiration events acquire pulmonary superinfections during the course of recovery.
- The high rate of spontaneous recovery from aspiration pneumonitis and observational comparisons of treated and untreated patients suggest that **antibiotics are not necessary for most patients** .
- Antibiotic treatment of patients who develop fever, leukocytosis and infiltrates within the first 48 hours after aspiration is likely unnecessary, **reserve use of empiric antibiotics following an aspiration event for patients who are severely ill, persistent or progressive respiratory impairment with systemic signs of inflammation, have had small bowel obstructions, or are on acid suppression therapy** (given the increased risk of gastric colonization).
- If antibiotics are started, **re-evaluate after 24, 48, and 72 hours, and if the resident has returned to baseline, stop antibiotics** .

Case # 3 - Final thoughts

- Another uphill battle in practicing good antibiotic stewardship.
- Another reason for GDR (gradual dose reduction) of antacid medications.
- Don't even get me started on modified diets.

References

- https://www.kidney.org/sites/default/files/docs/12-10-4004_abe_faqs_aboutgfrrev1b_singleb.pdf
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4520883/>
- <https://www.pdr.net/drug-summary/Lasix-furosemide-2594>
- <https://www.pdr.net/drug-summary/Aldactone-spiro lactone-978>
- <https://www.masimo.co.jp/pdf/SpHb/LAB5527A.pdf>
- “Antibiotic Guidelines 2015-2016: Treatment Recommendations for Adult Inpatients” published by the Johns Hopkins Hospital Antimicrobial Stewardship Program
- <https://www.uptodate.com/>

Open Forum

Share an idea. Anything
you need help with?

What's new in your
Virginia Health District?
Any announcements?



Have you noticed social activities getting back to normal?

1. Yes, we have costumes, school aged children, and trick or treating planned.
1. What are you talking about? I started this job in a pandemic.
1. I have my costume ready, but only staff are participating.
1. I try to stay out of the activities, too busy!



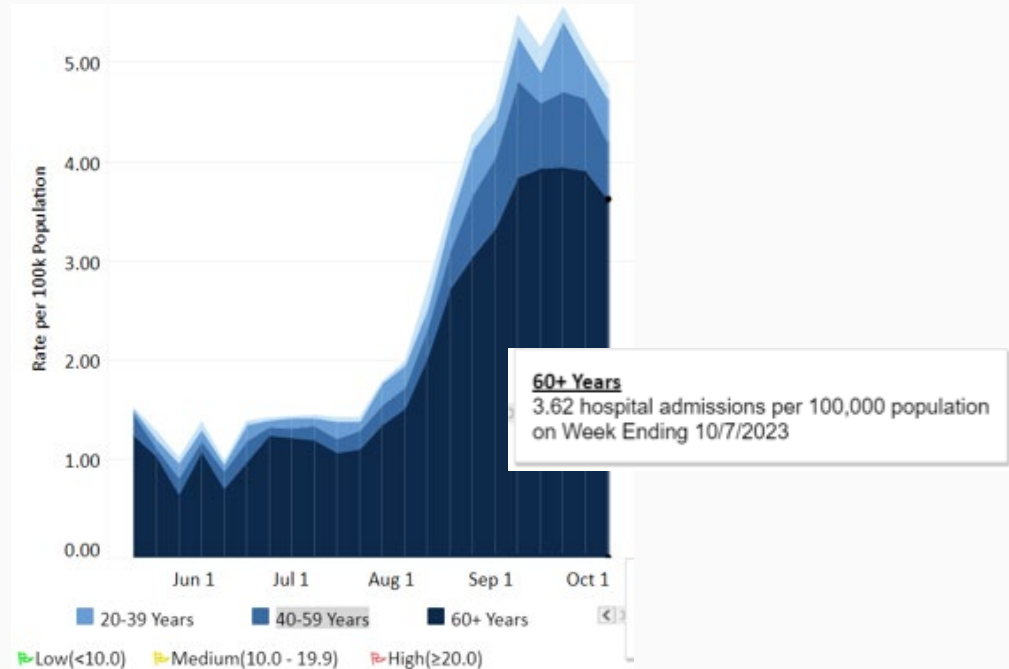
Updates COVID19

COVID-19:
Data, Treatment, Vaccines

No new therapeutics. New vaccines are approved and out. New Novavax is in VA. **Any news on your local vaccines? Please speak up or add to chat.**

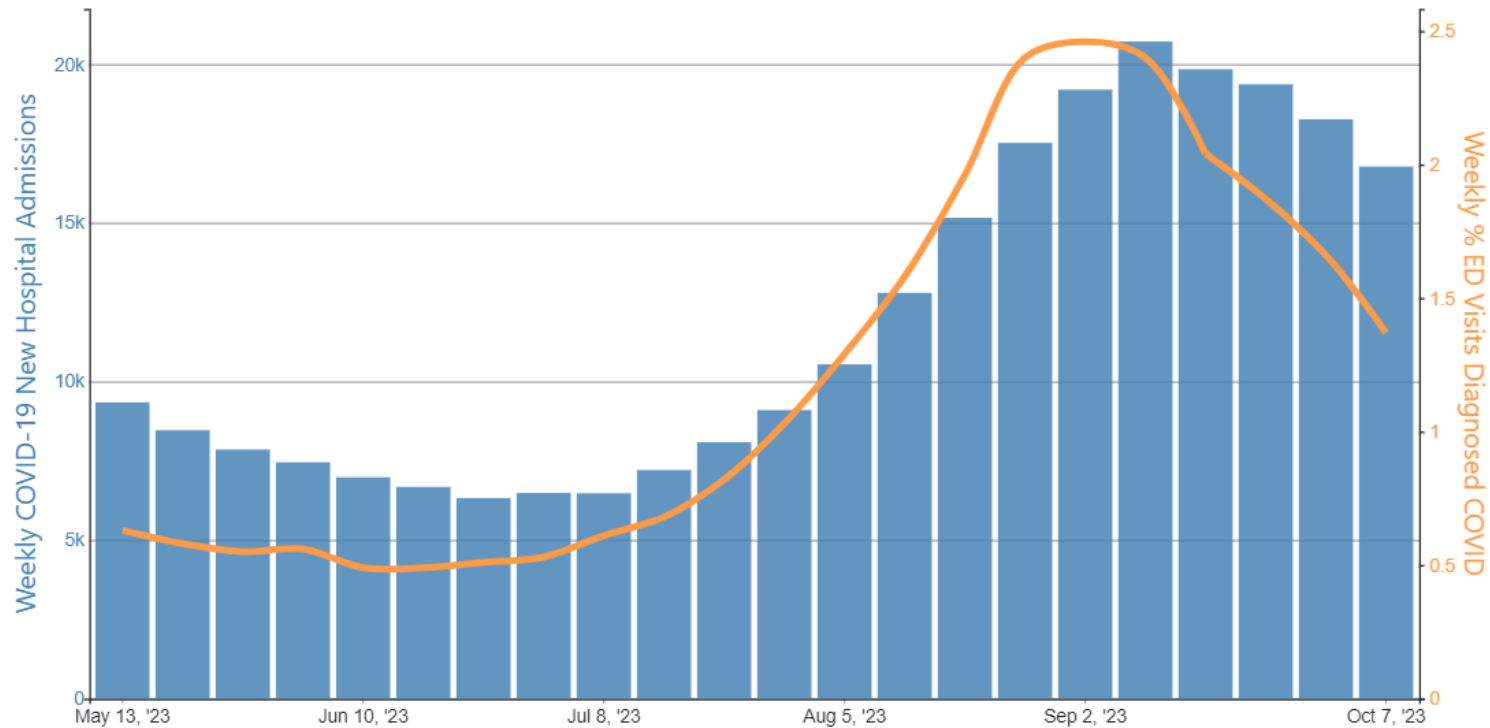
As announced September 12 the new **COVID vaccines** (Moderna and Pfizer) are recommended for those over 6 months of age. They may be given with RSV and Flu vaccines in separate doses separated by an inch or more. Don't forget the pneumococcal vaccine also!

Hospital Admissions >60 yo
May1 - Oct, 7 2023



US CDC May 13 - Oct. 7 New Hospital Admissions and % ED Visits Diagnosed as COVID-19

COVID-19 New Hospital Admissions and Percentage of Emergency Department (ED) Visits Diagnosed as COVID-19, by Week, in The United States, Reported to CDC



Monthly Forum - Every 3rd Wednesday, 4-5 PM



Forum topics will be in areas of interest to clinicians working in long term care. We will continue to integrate COVID-19 topics in our discussion. Share the membership QR code with your work colleagues so they can get a unique link.

Upcoming Forums

- November 15 Vaccination Use in LTC (VDH)
- December 13 **** Change in Date
- January 17, 2024 Trauma Informed Care



Accreditation

 <p>JOINTLY ACCREDITED PROVIDER™ INTERPROFESSIONAL CONTINUING EDUCATION</p>	<p>In support of improving patient care, VCU Health Continuing Education is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.</p>
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	<p>VCU Health Continuing Education designates this activity for a maximum of 1.00 ANCC contact hours. Nurses should claim only the credit commensurate with the extent of their participation in the activity.</p>
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Disclosure of Commercial Support:

We acknowledge that no commercial or in-kind support was provided for this activity.

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1. If you have **not participated in a VCU Health CE program in the past:**
 - a. Go to vcu.cloud-cme.com to create an account – make sure to add your cell phone number
2. Once you have registered or if you **have participated before:**
 - a. Text the course code to (804) 625-4041.
 - b. The course code for today's event is: ##### (please note this is only active for 5 days)

Complete Evaluation & Claim Credit, **within 60 days of the event**

1. Go to <https://vcu.cloud-cme.com> OR Open the CloudCME app on device
2. Sign in using email address used above Click "My Evaluations"
3. Click "My CE"
Click the name of the activity to Click "Evaluations and
Certificates" complete evaluation

Need help? ceinfo@vcuhealth.org

Thank you for joining! Evaluation will pop up-

Next Newsletter - coming to you November 8.

Next Monthly Forum - **November 15 at 4pm**. Scroll down in the Zoom registration confirmation email you received for a calendar link you can use to update your calendar automatically with the Zoom link for future meetings.

On your way out of Zoom, kindly answer a 3-question feedback survey.

Stay in touch! Email us at ltccn@vcu.edu

Invite your colleagues! They can register at ltccn.vcu.edu

Disclosures

The speakers and presenters for today have no relevant financial conflicts of interest.

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Virginia Long-Term Care Infrastructure Pilot Project (VLIPP) funding will be utilized in nursing homes and long-term care facilities to assist with the ongoing COVID-19 response and to bolster preparedness for emerging infections. The projects are based on identified needs that align with funding objectives



VCU