

## Member Spotlight: Linda K Bawua, RN, MS, AGCNS-BC, PhD



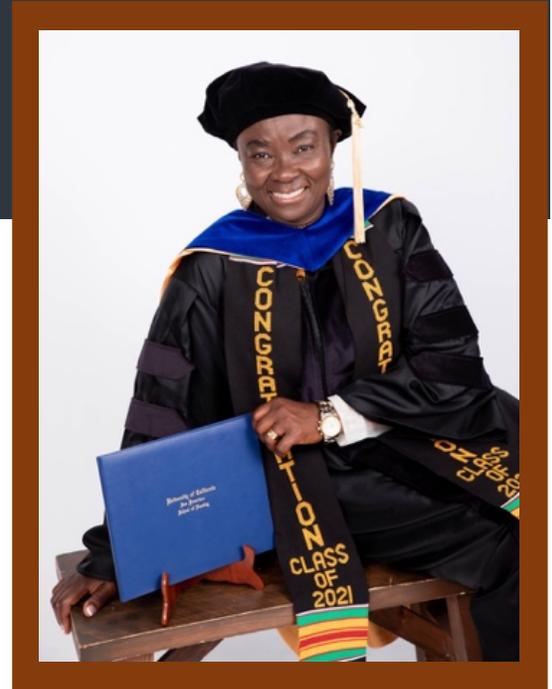
I began my career as a staff nurse in 1997 at the Holy Family Hospital in Berekum, Ghana, a Catholic mission hospital. I developed a keen interest in critical care nursing, which led me to enroll in the advanced diploma program in critical care at the Peri-Operative and Critical Care Nursing School at the Korle Bu Teaching Hospital in Accra, Ghana. To increase my knowledge and contribute to the critical care nursing specialty, I obtained a bachelor's degree in nursing at the University of Ghana. I went back to work in the intensive care unit at the Korle Bu Teaching Hospital for almost a decade before relocating to San Francisco, California.

Since graduation, I have had extensive experience in critical care nursing in various intensive care units in Ghana and abroad. My responsibilities have included monitoring nursing activities and supervising new staff and student nurses in the intensive care unit. I was part of a team of critical care nurses from the United Kingdom who managed the first ten kidney transplantations in Ghana.

I also worked as a flight nurse (Medical Escort) for the United Nation's International Organization for Migration, Ghana Mission for a decade, responsible for escorting patients to and from Africa to Europe and the United States.

### Why did you want to pursue graduate education?

My experiences as a critical care nurse and a nursing instructor gave me the background and desire to continue



seeking out opportunities to teach others and improve my skills, hence my decision to pursue a master's degree in critical care and trauma (Clinical Nurse Specialist) at the University of California San Francisco, School of Nursing (UCSF) which I earned in 2014. I took a year off and went back to pursue my doctoral degree in critical care nursing, and this year, I graduated with a Ph.D. in Nursing.

### What are your plans for the future?

My long-term goal is to go back to Ghana to initiate a structured program in advanced practice nursing, research health issues and critical illnesses affecting developing countries, and help find solutions. UCSF has given me a solid education, and advancement in nursing, I believe that the knowledge, experience, and opportunities associated with earning a doctoral degree will be valuable to the Ghanaian health care system and



abroad. I pledge to play my role as a proud Ghanaian in making this a reality.

### What was your doctoral research about?

Topic: *A Comprehensive Evaluation of Respiratory Type Alarms and a Comparison of Respiratory Rate (RR) between an ECG Derived and Impedance Pneumography Methods in the Intensive Care Unit.*

Abstract: In the healthcare facility, adequate patient management and care through continuous monitoring to guide treatment and improve patient outcomes is essential. Hospitalized patients, especially in the ICU, are susceptible to respiratory compromise (RC), necessitating continuous monitoring. The three main methods used for RR monitoring are visual assessment (VA), impedance pneumography (IP), and ECG-derived (EDR) methods. VA is easy to use, readily accessible, but intermittent, time-consuming, and has inaccuracies. IP is continuous and has inaccuracies associated with false alarms that cause alarm fatigue among clinicians and patients. However, the EDR method is also continuous but not validated for use in the healthcare setting. My dissertation was three-fold in its approach to answering pertinent questions and various hypotheses related to using the three methods listed above; (1) evaluating the available literature through a systematic review of the strength and limitations of the three methods (VA, IP, and EDR); (2) evaluating types of RR parameter alarms (low, high and apnea), and the impact of potential factors like demographics, clinical characteristics, and supportive therapies on RR type alarms; (3) and a comparison of the IP method with a novel combined ECG-derived respiration (combined-EDR) method. To read more about my findings lookout for my journal publications coming out soon.

## Global Pandemic Control: Where Did We Go Wrong?

by Dr. Leonard Sowah, Internal Medicine Physician in Baltimore,  
MD

It is 18 months since the World Health Organization declared COVID-19 as a global pandemic. The global deaths now are 8467 more than what was reported in the worst days of April and May 2020. The geographic distribution of the deaths is however different. In the early days most of the deaths were in the US and several western European countries. Today the deaths are mostly from low- and middle-income nations and in many cases the numbers are increasing. In 2020 most of us could blame the deaths on poor implementation and individual use of simple public health methods. Today, 8 months after the Pfizer COVID-19 vaccine and subsequently other vaccines granted EUA in the US, that excuse is just hollow. Today the greatest predictor of increasing COVID-19 deaths is inadequate vaccine coverage. As the illustration below shows, low- and middle-income countries are bearing the brunt of this pandemic due to poor vaccine coverage.

### Current Global Vaccine Coverage & COVID-19 Mortality

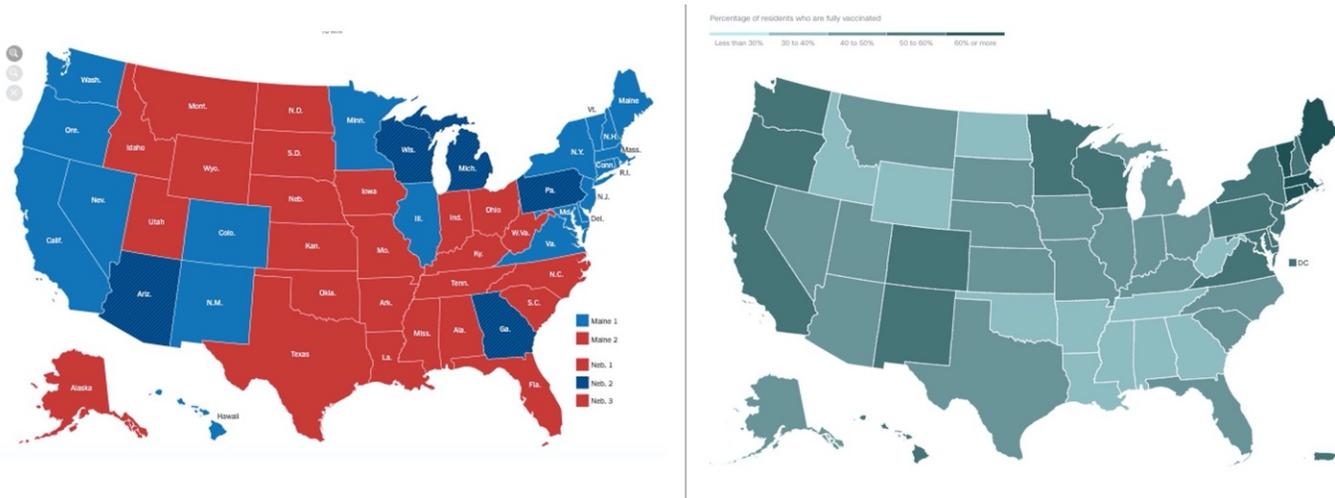
One biological reason for this are the new variants which continue to emerge. In the US, reports suggest that 80% of all COVID-19 cases are now due to the delta variant. Whilst we can easily quantify how many cases are due to new variants, that is only part of the story.

Epidemiologists and virologists agree that variants tend to emerge in the setting of active transmission. Poor efforts at Covid-19 control is however the primary reason for the rapid emergence of SARS-CoV-2 variants. As of July 14th, only 4 states, ME, MA, CT and VT are above 60% coverage within their vaccine eligible population. On the contrary 11 states are still below 40% fully vaccinated. Most of these states being located in the Southern US. On a closer look, with the exception of Georgia, President Trump won all these states in the 2020 Presidential election.

Early coordinated efforts even at the point of vaccine implementation would have saved many lives globally. Beyond the ill-advised policies of the previous US administration and the lack of support for Covax, we are still far from an effective global public health response to the pandemic. Many low- and middle-income countries had better results in viral control with public health measures before vaccines became available. With vaccines roll out, unreliable supplies through Covax have significantly affected the ability of such nations to vaccinate their populations. In Africa the only country with anything close to good vaccine coverage is Seychelles with a population of 98,000.

The relatively small Island nation has vaccine coverage of about 69% whilst the rest of Africa is at about 2% average.

### In The US With No Vaccine Supply Issues Many States Are Still Below 40% Vaccinated



This CNN vaccine coverage map shows that with the exception of Georgia Trump won all the states below 40%- Source: CNN Health

The SARS-CoV-2 virus continues to evolve with emergence of new variants with increased transmission efficiency and virulence. All these developments are concerning and victory over COVID-19 is beginning to appear more elusive. If we lose this war, it would not be due to a lack of technology and the know how to defeat it. There are just a few very important reasons why we are chasing the virus without controlling it. I would take time to address these issues briefly.

#### Lack of Consistent and Coordinated Leadership

We still do not have a general who is ready to fight this global threat. Dr. Anthony Fauci has been a fierce and strong advocate for the support of science. The institute he heads at the National Institute of Health was instrumental in the development of most available COVID-19 vaccines. Dr. Fauci however does not have the power and wherewithal to help make these vaccines easily available globally. That power rests in the hands of a few world leaders including President Biden. With vaccine roll-out almost stalled in the US, President Biden may protect Americans better by shifting focus globally. President Biden has the choice to lead the world out of this deadly ideology whilst saving many lives including Americans.

#### Politicization of Vaccine Acceptance and Persistence of Wild Conspiracy Theories

Our reliance on social media and other internet sources for information has fueled the spread of wild conspiracy theories around vaccines. These theories preceded the COVID-19 pandemic. Unfortunately, such theories spread very fast and are difficult to control once they take hold. The divisive political situation in the US over the past decade, did not spare COVID-19 control. The whole public health agenda to control this pandemic has been over politicized. This situation has resulted in US states with the most vulnerable health systems lagging behind the rest of the country in vaccination rates. This is an extremely costly situation because vaccines are cheaper than intensive care unit (ICU) stays. At current rates one day in a medical ICU could pay for full dose vaccination for close to 200 individuals.

#### Persistent Racial and Geographic Disparities in Vaccine Supplies and Accessibility

Globally vaccine availability is concentrated in high income countries in North America and Western Europe. Whilst countries like the UK, Canada and the US have vaccine coverage rates above 40% most Sub-Saharan African countries are well below 5%. As the deadly and highly transmissible delta variant spreads to above 80% of all sequences even in the US many low-income countries remain effectively unvaccinated. In the US, African American communities still continue to lag behind in vaccine coverage rates. Recent Kaiser Family Foundation data suggests vaccine coverage of 37% with 62% among Asian Americans and 47% among White Americans. This racial disparity in vaccine coverage is not due to vaccine hesitancy in the African American community. US census bureau survey confirms this fact. In this survey 12% of both Black and White Americans reported definitely not planning to get vaccinated.

# Don't Quit

by Unknown Author

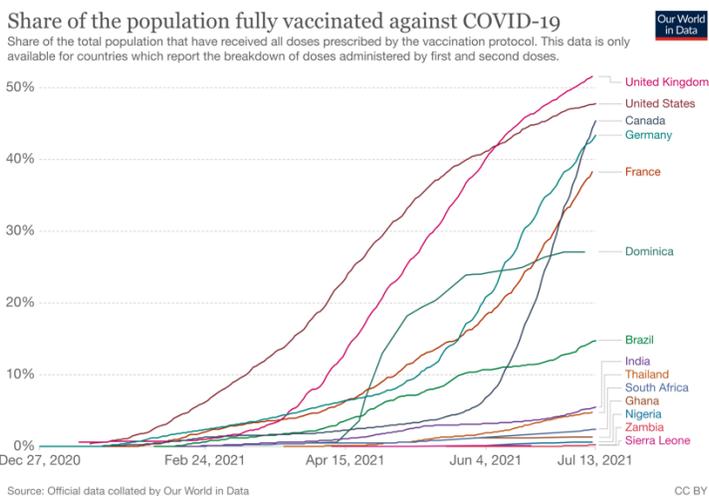
When things go wrong, as they sometimes will,  
When the road you're trudging seems all uphill,  
When the funds are low and the debts are high,  
And you want to smile, but you have to sigh,  
When care is pressing you down a bit,  
Rest, if you must, but don't you quit.

Life is queer with its twists and turns,  
As every one of us sometimes learns,  
And many a failure turns about,  
When he might have won had he stuck it out;  
Don't give up though the pace seems slow-  
You may succeed with another blow.

Often the goal is nearer than,  
It seems to a faint and faltering man,  
Often the struggler has given up,  
When he might have captured the victor's cup,  
And he learned too late when the night slipped down,  
How close he was to the golden crown.

Success is failure turned inside out-  
The silver tint of the clouds of doubt,  
And you never can tell how close you are,  
It may be near when it seems so far,  
So stick to the fight when you're hardest hit-  
It's when things seem worst that you must not quit

## Vaccine Coverage in Select Countries as of July 14th, 2021



As the virus evolves to be replaced in most places by the highly transmissible delta variant many in low- and middle-income nations remain unvaccinated. Source: [Our World in Data](https://ourworldindata.org/covid-cases)

In this divided world split into small pieces along economic, racial, political and ideological lines the only consistent path to control lies in cooperation. The world leaders who can make this happen know this fact. The political calculus is however uncertain. The weakness of democracy lies in the fact that in certain situations the humane response may not appear politically expedient. This is why most of us love leaders who are capable in such situations to decide in favor of humanity. On that note President Biden won by a strong margin in 2020. So far President Biden's promises have been encouraging and some countries in Asia have started receiving supplies of promised vaccines. Unfortunately the need is great and the later these vaccines arrive the more deaths we are going to see. Low- and middle-income nations with low vaccine coverage today need vaccines now to help save precious lives.

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# How An Interoperable Electronic Health Record Can Enhance Improved Patient Care In African Hospitals

by Esther Apraku Bondzie, DNP Student, Boston College '23

Aisha is at her community clinic for her son's immunization. She doesn't remember her hospital membership number but she is hoping "they" have it in her paperwork. Unfortunately, the community clinic was flooded a week ago leaving 80% of medical records damaged. Aisha's were damaged. In many clinics and health facilities in Ghana the use of paper for record-keeping continues to be the order of the day, and this system presents numerous challenges.

Electronic Health Records (EHR) systems are powerful tools for clinicians and patients. The EHR system allows for clinical data repository, physician order entry, decision support, clinical knowledge management, prescription entry, and clinical workflow display. For the clinician, it is a tool that captures clients' information in a single and accessible place and allows for communication between professionals on a healthcare team. For patients, an EHR system can be more than record-keeping, it enhances continuity of care.

Take this a step further, an interoperable EHR system across all federal and private healthcare facilities could transform healthcare delivery in Ghana to a large extent. An interoperable EHR system simply means that the software/program/algorithm used for building the EHR at hospital A is compatible with the program used for building the software at hospital B. In other words, my primary care provider in Tema should be able to access the same information that was recorded in my chart when I was emergently admitted at Effia Nkwanta Regional Hospital in the Western Region. Interoperability is synonymous with 'seamless' and it does not have to remain an ideal concept.

There is no doubt that EHR systems come with their hurdles. They require a huge budget to build and maintain. Funding is needed for training staff, compensating full-time information technology experts, purchasing computers, laptops, and scanners as needed and for power backups especially in the setting of power fluctuations. Privacy, security, and confidentiality remain a huge concern. Failure to implement measures to protect patients' data poses a risk to the patient and diminishes trust in a system that could otherwise contribute to improving healthcare delivery. It is also important to think about change as a process. Introducing EHR into an organization that has mastered the use of paper records can be challenging because the staff has to adapt to a new system and efforts need to be made to ensure that this adaptation is as painless as possible.

Proper planning and implementation are at the core of many successful projects. For an interoperable EHR system to be effective, there is a need to establish a goal-oriented action plan with competitive committees and experts. Discussions on what software platform to adopt or who leads what aspect of the project needs to be considered closely. Easier said than done? Yes. Wishful thinking? No.

We can all agree that the process to arrive at an interoperable EHR system will be long and demanding, therefore, it is important to reward effort. Rewarding effort has the secondary benefit of incentivizing the initiative. The end goal of such a project, however, should never deviate from improving healthcare delivery to presenting awards and plaques. One of the ways to reward effort is to recognize physicians and nurses who show meaningful use of electronic health records, locally, regionally, and nationally. Who is embracing change and how can they be a model for others?

The question that is often avoided when it comes to large nationwide projects is "Who is paying for this?" Who is paying for an interoperable EHR system in Ghana? If private companies are contracted to build platforms for hospitals, is that cost going to be a burden for the patient down the line? If the federal government is going to fund EHR systems along with cybersecurity tools, then are citizens ready for even the slightest increase in taxes. Who is paying their taxes?

The process of building an interoperable EHR will not be cheap. It will be long and expensive and that is the reality of many good and lasting projects. Planning for it will save us time, money, and resources in the end.

## What Is the Difference Between APR and Interest Rate?

*Courtesy PNC Insights; June 14, 2021*

It's no secret that borrowing money costs money. But when it comes to telling you how much a loan will cost you, lenders may approach the matter from different perspectives: Some talk about their interest rate while others focus on their annual percentage rate (APR). Once you understand these terms and how they play into the total loan cost, you can make an informed decision before committing to a loan.

### Interest Rate Is the Starting Point

A loan's interest rate is the cost of borrowing the principal (the amount of the loan), expressed as a percentage of that principal. You can get an idea of the amount of interest you might pay on a loan by using the following simple interest formula for a fixed-interest loan: Principal x Interest Rate x Years. Let's say you're looking at a five-year, \$10,000 loan with an annual fixed interest rate of 5%. You can calculate the simple interest this way:

$\$10,000 \text{ principal} \times .05 \text{ interest} \times 5 \text{ years} = \$2,500 \text{ in interest over the life of the loan}$

### Annual Percentage Rate (APR) Adds Fees to the Mix

APR, which is also expressed as a percentage, more accurately reflects the true cost of borrowing, because it includes the interest rate plus any fees and other expenses associated with the loan. These costs may include application, processing, administrative and other fees, depending on the type of loan and the lender's policies. If no additional fees are charged, the interest rate and APR will be the same; this is called a no-fee loan.

Typically, the APR will be either the same or higher than the interest rate. However, when a loan is fully deferred — i.e., no payment of interest or principal is required for a specified period of time — the interest rate may be higher than the APR.

### Compare Loans Using APR

When you're shopping for the best deal on a loan, compare APRs rather than interest rates. Fees may vary widely from lender to lender, so using the all-inclusive APR should provide you with a more meaningful comparison. Borrowers sometimes believe that the loan with the lowest interest rate is their best choice, only to discover later that the fees charged on that loan outweigh any cost savings in interest.

Learn all you can about any loan you are considering before you commit to it. Find out: Will the lender be charging you simple interest (interest based on principal only) or compound interest (interest on not only the principal but also the interest)?

Is the interest rate fixed (doesn't change over the life of the loan) or variable (may fluctuate with market rate changes)?

What fees and other costs will be included?

What is the loan's repayment term?

The more you know about what goes into the overall cost of your loan, the better prepared you will be to make your loan decision.

## Is Skin Protection Necessary?

*by Emma Dzifa Toussaint, FNP-C*

My answer was always, "No thanks, I don't need sunscreen, I have enough melanin in my skin." My friends who asked the question, would laugh while applying sunscreen liberally. It wasn't until I got sunburned on my ears and nose on a trip to Miami, that I started using sunscreen. Seeing my skin peel off like a banana, and dealing with that stinging, burning pain was enough to make me a believer in sunscreen protection.

People of color usually do not protect their skin from the sun. Like me, some think well I come from a hot country and we don't use sunscreen in Ghana/Peru/Jamaica/Barbados etc., so I'm fine. Unfortunately, we are still at risk for cancer, despite our melanin complexions. In an article by the American Academy of Dermatology Association - "Skin Cancer in People of Color," this very topic is discussed. The article clearly states that anyone can get skin cancer, even if he or she does not sunburn. It also goes on to say that usually "When skin cancer develops in people of color, it's often in a late stage when diagnosed," which is a sad reality.

There were many advantageous tips mentioned, and by sharing them, you can save a life, including your own. Although skin cancer can be deadly, it is curable if found early. A smart idea presented in the article was for skin checks to be done monthly, head to toe, with a mirror. Another brilliant one was to have your stylist or barber check for skin irregularities. Since it's difficult to see behind your head, having someone else check is an ideal way to stay safe. Some of the specifics to check for include a non-healing wound, patches of dry skin and spots that are changing or growing. More importantly, the article strongly suggests we check areas that don't get much sun, like under your feet and inside your mouth to name a few. The article even includes pictures of skin cancer in African American skin, and this is helpful if one is not sure about their skin abnormality or sore.

Risk reduction was also included, with ideas such as seeking shade, wearing protective clothing, wearing sunscreen with spf 30 or greater, and not using a tanning bed. It is crucial to remember to reapply sunscreen every few hours, when sweating or after being in water. If anything appears abnormal, make an appointment to see a dermatologist, as soon as you can, so that it can be managed sooner. Do your part to keep your skin protected, after all, it is the largest organ in our bodies.

For further reference please see "Skin Cancer in People of Color at <https://www.aad.org/public/diseases/skin-cancer/types/common/melanoma/skin-color>."

## Executive's Corner

Mission Trip June 3, 2021

Young Empowerment Seminar at Bankoman Senior High School - Ghana Medical Mission by Dr Jemima Kodua as part of celebration of final funeral rites of Nurse/Midwife, Madam Mary Amoasoh (my mother) and in collaboration with NAGNF - DMV Chapter.

Banko - Effiduase is the hometown of mother Mary Amoasoh which has one High School of growing population. Bankoman Senior High School (SHS) in the Sekyere Kumawu District of Ashanti was built by chiefs and the people of Bankoman as a community Day School in 2006. It was absorbed by the Ghana government in 2012 into the main public educational system with a student population of less than 150. It can now boast a student population of 1200 as a result of free SHS. It has often been a herculean task for students there to access portable water in order to observe handwashing with soap as part of the COVID-19 protocol, personal hygiene, washing of clothing and for meal preparation in the school's kitchen. The nearest borehole is about a kilometre away and this often resulted in their lateness for school and their lack of concentration in class due to tiredness from trekking the distance to fetch water. Moreover, the school is in dire need of a toilet facility and the students typically relieve themselves in the bush. In addition, the absence of a dining hall and administration block impedes effective quality teaching and learning. This came to light when I led a team of experts in partnership with the management of the Bankoman SHS to organize the "Young Empowerment Seminar." The seminar was a special initiative, targeted at young men and women to dialogue on challenges confronting the current students, to share best practices as well as consider suitable approaches for chosen career courses, that would help them to achieve their aspirations. My presentation touched on the relevance of education, health, sanitation and entrepreneurship. The students were given books, pens and bibles. Additionally, I furnished the school's sick bay with assorted drugs to augment efforts of the school's management in providing first aid to students who fall sick.

Touching on career choices, the former Minister of Energy and Lecturer at the Kwame Nkrumah University of Science and Technology, KNUST, Professor Oteng Adjei who was an integral part of the team, commended successive governments for implementing human-centered policies such as the National Health Insurance, the Community Health Planning and Services (CHPS) concept and Free SHS. He however urged the students to have clear visions and focus on their career aspirations with perseverance. Our encounter with the management, staff and students of Bankoman SHS was insightful and inspiring. The students gave chilling accounts of their experiences at the school and asked great questions. The mission trip was an opportunity for me to give back to the very community that nurtured me to become who I am today as a PhD holder. I encouraged the students to take their studies seriously irrespective of their current challenges.

The Assistant Headmaster of the School, in charge of Domestic affairs, Mr. Wisdom Komla Agbalevor was full of gratitude to me for the continued support not only to the town of Banko but the SHS as well. He therefore urged residents of Banko inside and outside Ghana to emulate my continued contributions to the growth and development of Banko and its adjoining communities.

Some of the students also expressed similar gratitude to the team for our frequent visits and donations.

By Dr. Jemima Kodua, RN, MSN, DNP  
DMV Chapter president



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