Safe staffing levels have always been one of nursing’s biggest issues and concerns. As nurses we know that evidence based research continues to show that safe nurse staffing levels make a difference in the quality of patient care as well as positive outcomes. The Ohio Nurses Association (ONA) has continued to advocate for safe staffing levels and this work began in the early 2000s during the 124th General Assembly. House Bill 78 (HB 78) was introduced with a focus on addressing overtime and staffing including: the development of a patient classification committee, the development of a staffing plan, and the Ohio Department of Health would be charged with the oversight and enforcement. Unfortunately HB 78 did not pass, but it began to pave the way for staffing language in the future.

In 2007 House Bill 346 (HB 346) was introduced in the 127th General Assembly, as ONA House of Delegates identified staffing as a legislative priority at the biennium convention. This piece of legislation addressed staffing only and was the brainchild of the collaborative work between ONA, the Ohio Hospital Association (OHA), and the Ohio Organization of Nurse Executives (OONE). This group created the Nursing 2015 Initiative to “create a vision for the future of nursing in Ohio”.

The Law
HB 346 was sponsored by Representative Jim Hughes from Columbus, was signed by Governor Ted Strickland on June 12, 2008, became effective law in September of 2008, and continues to be Ohio’s safe nurse staffing law. The law specifically addresses the establishment of hospital-wide nursing care committees that is comprised of the following:

- The hospital will select committee members;
- The Chief Nursing Officer (CNO) must be a member of the nursing care committee;
- At least 50% of the committee membership shall consist of direct care registered nurses, of which adequately represent all types of nursing care services provided in the hospital;
- The CNO must develop a mechanism to obtain the input from all direct care RNs.

The committee must convene at least once a year and do both of the following:
1.) Evaluate the hospital’s current nurse staffing plan and;
2.) Recommend a nursing services staffing plan consistent with current standards established by Ohio’s Safe Nurse Staffing Law continued on page 4

PHASE 1
Choose an image. Almost 1,900 votes were cast, resulting with the "Ohio N" as the winning image!

PHASE 2
Signature gathering. This is our current phase, where we need your help to gather at least 500 signatures on special petitions provided by the BMV. All fields within the petition must be completed, and those who sign must be a registered Ohio voter.

Will you help us gather signatures?
Can you commit to filling a petition? Or would you just like to sign one?
Please contact Molly Ackley at mackley@ohnurses.org to be sent a petition!
Free Independent Studies

All independent studies published in the Ohio Nurse are FREE to ONA members for three months and can also be completed online at www.CE4Nurses.org/ohionurse.

Non-members can also complete the studies published in this issue online for $12 per study or by mailing in the tests provided for $15 per study. See page 3 for more details.

Interested in joining ONA? See page 3 for membership information and five reasons for joining the only professional organization in Ohio for registered nurses.

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Join the Ohio Nurses Association

The Ohio Nurses Association does a lot for the nursing profession as a whole, but what does ONA do for its members?

FREE AND DISCOUNTED PRODUCTS AND SERVICES

Members take advantage of a wide array of discounts on products and services, including professional liability insurance, continuing education, and special tuition rates to partner RN-to-BSN programs.

WORKPLACE ADVOCACY

ONA provides members access to a wide range of resources to help them make a real difference in the workplace, regardless of work setting. ONA provides members with resources to create healthy and safe work environments in all health care settings by providing tools to help nurses navigate workplace challenges, optimize patient outcomes and maximize career benefits.

EDUCATION

Whether you’ve just begun your nursing career or are seeking to enhance or maintain your current practice, ONA offers numerous resources to guide you. For example, the Ohio Nurses Foundation awards several scholarships annually with preference to ONA members. Members also save up to $120 on certification through ANCC, and can earn contact hours for free through the independent studies in the Ohio Nurse or online at a discounted rate, among many other educational opportunities.

NURSING PRACTICE

ONA staff includes experts in nursing practice and policy that serve our members by interpreting the complexities of the Nurse Practice Act and addressing practice issues with a focus of ethical, legal and professional standards on a case-by-case basis.

LEGISLATIVE ADVOCACY

ONA gives members a direct link to the legislatures that make decisions that affect nursing practice. Members can become Legislative Liaisons for their district, join the Health Policy Council and participate in the legislative process in many other ways through their ONA membership.

These are just a few of the benefits nurses receive as ONA members. Dues range from $33–$50 a month and we provide tools to help nurses navigate workplace challenges, optimize patient outcomes and maximize career benefits.

Go to www.ohnurses.org to join today!
Registration is open for sponsors and exhibitors.
Visit www.onaconvention.com for registration information!

Table-Top Exhibit Booths

Exhibitor $750*  Silver $1,500  Gold $3,000  Platinum $4,500

Platinum+ (Laurel)** $5,500  Platinum+ (Calibration)** $5,500

Table-top exhibit booth during the Friday and Saturday exhibit hall.

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Listing on the Convention event app.

Listing with link to company’s website on ONAConnect – ONA’s members only social media site.

Signup outside of the House of Delegates for duration of Convention.

Online ad with link to company’s website within ONA Member Update email that are sent to over 7,000 RNs.

Extended Listing on ONAConnect, with company profile and link to company’s website.

Article opportunity for the Ohio Nurse – a publication mailed to every LPN and RN in Ohio, totaling a circulation of 317,000.

Branded banner (provided by sponsor) at the entrance of the Convention hall for the duration of Convention.

Verbal recognition at the opening and closing of Convention.

Signage at the Convention hall for the duration of Convention.

Signage at the convention banquet.

Excludes table and signage at the Member Celebration on Saturday night.

Logo at the event.

Logo on Member Celebration materials and screens.

*Non-profit nursing and non-profit healthcare specialty associations: A limited number of discounted $400 Booths are available. Please contact Lisa Walker at lisa@ohionurses.org for more information.

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Staaffing Law continued from page 1

private accreditation organizations or governmental entities that addresses the following:

• The selection, implementation, and evaluation of minimum staffing levels for all inpatient care units that ensure that the hospital has a staff of competent nurses with the specialized skills needed to meet patient needs in accordance with evidence-based safe nurse staffing standards;

• The complexity of complete care, assessment on patient admission, volume of patient admissions, discharges and transfers, evaluation of the progress of a patient’s problems, the amount of time needed for patient education, ongoing physical assessments, planning for a patient’s discharge, assessment after a change in patient condition, and assessment of the need for patient referrals;

• Patient acuity and the number of patients for whom care is being provided;

• The need for ongoing assessments of a unit’s patients and its nursing staff levels;

• The hospital’s policy for identifying additional nurses who can provide direct patient care when patients’ unexpected needs exceed the planned workload for direct care staff.

In addition, the staffing plans must be evidence-based and guide the assignment of nurses hospital-wide. The plan, at a minimum, should reflect standards established by private accreditation organizations or governmental entities and be based on multiple nurse and patient considerations that yield minimum staffing levels for inpatient care units. This helps ensure that the hospital has a staff of competent nurses with specialized skills needed to meet patient needs. Moreover, the staffing plan shall be flexible enough to meet patient needs and shall be round enough to meet patient needs and each hospital shall identify a model for adjusting the staffing plans for each inpatient care unit.

Finally, the hospital shall provide copies of the nursing services staffing plan and subsequent changes to the plan free of charge to each member of the hospital’s nursing staff. For a fee, a copy of the staffing plan shall be provided to any person who requests it, but should not exceed actual copying costs. A notice shall also be posted in a conspicuous location within the hospital that informs the public of the availability of the staffing plan. Furthermore, nothing in this law shall be construed to limit, alter, or modify any of the terms, conditions, or provisions of a collective bargaining agreement entered into by a hospital.

Progress Since the Law’s Inception

Through the actions of ONA, OONE, and OHA, a tool kit was created for each group to work with their respective members to ensure compliance with the law. In late 2009 and the beginning of 2010, ONA requested staffing plans from every hospital in Ohio and the results showed that many hospitals are complying with the law, but not all are meeting the requirements set out in statute. It is important to note that the current staffing law does not set sanctions (penalties paid by the hospital for non-compliance) and therefore, hospitals may not see the need to follow the law itself and a reason why ONA may not see 100 percent compliance in the future.

ONA traveled the state in 2012 with goal of receiving first-hand knowledge and experience from staff RNs on staffing standards within their facilities. The purpose was to Enable ONA to capture innovative ways to improve staffing in Ohio and increase nurse ownership of the staffing process. ONA conducted over 150 surveys and 6 focus groups with a total of 55 staff RNs and was able to gather research for ONA’s continued safe staffing efforts. Again, in 2012, ONA requested the staffing plans of each hospital within the state.

In March of 2014, ONA hosted an event for chief nursing officers in downtown Columbus. The goal of the event was to share the findings from the 2012 RN focus groups and to gain business insight from top CNOs on staffing issues. ONA was able to provide the surveys and focus group results that, in turn, shed light on ONA’s historical perspective and how RNs feel about staffing standards. Over 58 CNOs were in attendance that evening and each received the ANA Nurse Staffing 101: A Decision Making Guide for the RN and each received the ANA Nurse Staffing 101: A Decision Making Guide for the RN. The event was well-received and provided an open dialogue about the safe staffing law in Ohio, as well as what specific staffing guidelines work for Ohio hospitals from the CNO perspective.

ONA requested staffing plans from every hospital in the state for the third time in October 2014. We received over 150 plans from around Ohio, which have been organized by our staff and reviewed as an internal committee. ONA’s next steps will be to review each plan, develop strategies with OHA and OONE to renew their commitment to the original principles of safe staffing, and begin to move the Ohio’s current staffing law forward to provide safer patient care for all Ohioans.

To review Ohio’s Safe Nurse Staffing Law, please visit: http://archives.legislature.state.oh.us/bills.cfm?ID=1277.
This independent study has been developed for nurses to better understand chronic kidney disease. Contact hours will be awarded for successful completion of this independent study.

The authors and planning committee members have declared no conflict of interest. This information is provided for educational purposes only. For legal questions, please consult appropriate legal counsel. For medical questions or personal health questions, please consult an appropriate health care professional.

The Ohio Nurses Association (ORN-001-91) is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.


OBJECTIVES

1. Describe the four states of chronic kidney disease.
2. Discuss the nurse’s role in caring for patients in each state of chronic kidney disease.

Stages of Chronic Kidney Disease

Chronic kidney disease may develop as a result of many conditions. Some causes include heart disease, diabetes, hypertension, peripheral vascular disease, renal artery stenosis, pyelonephritis, analgesic abuse, polycystic kidney disease, allergic reactions, glomerulonephritis, systemic lupus erythematosus, sickle cell disease, carcinomas, chemotherapy and/or radiation therapy, scleroderma, dyslipidemias, and bacterial endocarditis. No matter what the cause, chronic kidney disease diseases causing kidney damage, we see so much chronic kidney disease. As the baby boomer ages, we will see even more chronic kidney disease in the future. Even scarier is the thought that chronic kidney disease is a silent problem, becoming well advanced before an individual even begins to experience symptoms of the problem. Besides having many causes, chronic kidney disease causes many problems itself. If one thinks about it, when metabolic waste products aren't eliminated, they begin to accumulate in the blood and organs. These waste products cause damage to cells, thus resulting in an acceleration of diabetes, atherosclerosis, bone disease, and hypertension, just to name a few. With the accumulation of metabolic waste products, the body attempts to perform all of its physiologic functions in a toxic waste dump. No wonder we see such wide reaching effects of this disease. It ravages every physiologic system. In this module we will be discussing the newest model of chronic kidney disease. This model enables us to recognize chronic kidney disease earlier in patients who are at risk, so that we might intervene and help the patient to manage the problem much earlier on.

A. Kidney Concepts: Before we begin our discussion of chronic kidney disease, let us briefly review some concepts regarding the kidney.

The Nephron: as you will recall is the functional unit of the kidney. There are approximately one million nephrons in each kidney. Nephrons are able to compensate for the loss of other nephrons by hypertrophying and handling a larger volume of solute. Critical nephrons are located in the outer region of the cortex of the kidney, have shorter loops of Henle and have a lesser capacity for sodium reabsorption. Juxtamedullary nephrons are located in the inner region of the cortex next to the medulla of the kidney, have long loops of Henle and have a greater capacity for sodium reabsorption and therefore concentrate urine. Functional Units of the Nephron: Each nephron has two portions, a vascular side and a tubular side. The vascular side begins with the renal corpuscle. The renal corpusle is comprised of the glomerulus and Bowman's capsule. Bowman's capsule is the specialized end portion of the proximal convoluted tubule that houses the glomerulus. The glomerulus is a capillary bed composed of three cellular layers (endothelial, basement membrane and endothelial cells), which gives the glomerulus a semipermeable quality. The semipermeable membrane is permeable to water, electrolytes, nutrients and wastes and is impermeable to large protein molecules, albumin and erythrocytes. The vasa recta is the remaining portion of the vascular side of the nephron. The vasa recta wraps itself around the renal tubules. When substances are reabsorbed from the tubules, the substances are returned to the blood flow by the vasa recta side of the nephron. When the nephron begins at Bowman's capsule and ends at the collecting ducts. Each function of the renal tubule has specific functions as follows.

Summary of the Main Functions of the Renal Tubules:

Proximal Convoluted Tubule: reabsorbs 60 to 80% of the filtrate that comes from Bowman's capsule. Its major function is to reabsorb sodium and water. Acid-base regulation takes place via hydrogen ion secretion and bicarb ion-reabsorption. The proximal convoluted tubule is also responsible for secreting foreign substances such as drugs.

Loop of Henle: has two distinct sections. Descending Loop: permeable to water and impermeable to sodium. Ascending Loop: has an active pump for sodium and chloride, and is impermeable to water.

The main function of the loop of Henle is to concentrate or dilute urine via the countercurrent mechanism. The countercurrent mechanism maintains a hyperosmolar concentration in the interstitium of the renal medulla thus allowing for the reabsorption of water.

Distal Convoluted Tubule: Reabsorbs water, sodium chloride and sodium bicarb, secretes potassium, ammonia and hydrogen ions or acids. The distal convoluted tubule is the target organ for two hormones. Aldosterone and ADH (ADH) controls or influences water reabsorption here, while sodium reabsorption is controlled by Aldosterone. The distal convoluted tubule also secretes foreign substances such as the juxtaglomerular apparatus, which is our major mechanism for blood pressure control.

Don’t forget: Ohio Medicaid members need to renew their coverage.

UnitedHealthcare Community Plan is proud to support nurses in Ohio and the work you do to continue providing high-quality care to all patients. Your patients receiving Medicaid may not be aware that they need to recently or how to do it.

Medicaid members can renew their coverage by visiting their nearest county Job & Family Services (JFS) office. To find a local JFS office, visit the Ohio Department of Medicaid at http://jfs.ohio.gov/County/County_Directory.pdf.

To learn more about UnitedHealthcare Community Plan, call 1-800-895-2017, TTY 711.

Chronic Kidney Diseases continued on page 6
chronic kidney disease

1. Kidney Control of Blood Pressure: involves five major mechanisms.
   a. Maintenance of extracellular fluid volume and composition via sodium and water.
   c. Renin-Angiotensin-Aldosterone System discussed above.
   d. Renal Prostaglandins discussed above.

2. Kidney Regulation of Body Water: involves three mechanisms:
   a. Thirst Mechanism: our thirst center is located in the hypothalamus and stimulated by reduced intravascular volume.
   b. Antidiuretic hormone (ADH): water is reabsorbed in the distal part of the tubule.
   c. Renin-Angiotensin-Aldosterone System.

3. Kidney Role in the Excretion of Metabolite Waste Products:
   a. Urea: the major end product of protein metabolism.

4. Renal Role in Acid-Base Balance:
   a. Buffers: H2CO3 (carbonic acid) and NH3 and H+.
   b. Renal Prostaglandins: discussed above.

5. Renal Role in Red Blood Cell Maturation:
   a. Erythropoietin: stimulates the production of red blood cells.

B. Definition of Chronic Kidney Disease:
   a. Kidney damage present for 3 months or longer, as defined by structural or functional abnormalities of the kidney.
   b. Erythropoietin deficiency is the primary cause of anemia in chronic kidney disease.

C. Proteinuria screening:
   a. Urine albumin to creatinine ratio test.

D. Diagnostic Guidelines for Chronic Kidney Disease:
   a. Albuminuria to creatinine ratio test.

E. Treatment for proteinuria:
   a. Proteinuria to creatinine ratio test.

F. Nutritional recommendations:
   a. High protein diet.

G. Exercise recommendations:
   a. Regular exercise.

H. Preventive measures:
   a. Avoidance of nephrotoxic substances.

I. Corticosteroids:
   a. Corticosteroids are used to treat certain kidney disorders.

J. Therapeutic interventions:
   a. Renal replacement therapy.

K. Prognosis:
   a. Depends on the cause.

L. Complications:
   a. Cardiac disease.

M. Legal and ethical considerations:
   a. Consent.

N. Research and future directions:
   a. Gene therapy.

O. Public health initiatives:
   a. Promoting healthy lifestyles.

P. Public education:

Q. Patient education:
   a. Self-care.

R. Professional education:
   a. Continuing education.

S. Community education:
   a. Public awareness.

T. International guidelines:

U. National guidelines:

V. Local guidelines:
   a. Local healthcare providers.

W. Patient support groups:

X. Patient advocacy groups:

Y. Patient support:
   a. Emotional support.

Z. Professional support:
   a. Support from healthcare professionals.

AA. Patient education materials:
   a. Educational brochures.

BB. Professional education materials:
   a. Continuing education courses.

CC. Community education materials:
   a. Public awareness campaigns.

DD. Public education materials:
   a. Patient information sheets.

EE. Professional education materials:
   a. Continuing education courses.

FF. Community education materials:
   a. Public awareness campaigns.

GG. Public education materials:
   a. Patient information sheets.

HH. Professional education materials:
   a. Continuing education courses.

II. Community education materials:
   a. Public awareness campaigns.

JJ. Public education materials:
   a. Patient information sheets.

KK. Professional education materials:
   a. Continuing education courses.

LL. Community education materials:
   a. Public awareness campaigns.

MM. Public education materials:
   a. Patient information sheets.

NN. Professional education materials:
   a. Continuing education courses.

OO. Community education materials:
   a. Public awareness campaigns.

PP. Public education materials:
   a. Patient information sheets.

QQ. Professional education materials:
   a. Continuing education courses.

RR. Community education materials:
   a. Public awareness campaigns.

SS. Public education materials:
   a. Patient information sheets.

TT. Professional education materials:
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VV. Public education materials:
   a. Patient information sheets.

WW. Professional education materials:
   a. Continuing education courses.

XX. Community education materials:
   a. Public awareness campaigns.

YY. Public education materials:
   a. Patient information sheets.

ZZ. Professional education materials:
   a. Continuing education courses.

1. Community education materials:
   a. Public awareness campaigns.

2. Public education materials:
   a. Patient information sheets.

3. Professional education materials:
   a. Continuing education courses.

4. Community education materials:
   a. Public awareness campaigns.

5. Public education materials:
   a. Patient information sheets.

6. Professional education materials:
   a. Continuing education courses.
what reason are they taking that medication? Do they know/can they recognize side effects of their medications? Do they recognize the importance of maintaining a controlled blood pressure? Do they recognize hypertension as a risk factor for kidney disease? Are the medications that they are taking through the renal failure time able to monitor their blood pressure at home? Is the patient successfully following a specific diet? What other risk factors or health problems does the patient have? Are there any financial issues regarding the management of these additional problems and risk factors? Not all patients are concerned about the same risk factors such as hypertension and dyslipidemias, please see the ONA independent study called “Heart Failure: A New Look at an Old Problem,” by Barb Walton, MS, RN.

Viewing monitoring weights and blood pressures should be completed with each patient visit and minimally on an annual basis.

B. Stage 2: In Stage 2 chronic kidney disease, the patient’s GFR will fall to the 60 to 90 mL/min/1.73m² ranges. The individual most likely will not be experiencing any signs or symptoms of chronic kidney disease yet. So by monitoring the GFR, the physician can diagnose chronic kidney disease much earlier. Patients in Stage 2, continue the interventions identified in Stage 1 and add the following: • Vigilant monitoring of blood pressure, cholesterol, and weight should be completed with each patient visit. For patients over 90, use age 90

For obese patients use ideal body weight
For men 50 kg + 2.3 kg for each inch over 5 feet.
For women 45 kg + 2.3 kg for each inch over 5 feet.

C. Stages of Chronic Kidney Disease:
As managed care becomes more evident in our practices, we are seeing a movement toward staging diseases. By staging diseases it enables healthcare providers to more easily recognize disease trends in patients as well as provide guidelines for care. Recently, the National Kidney Foundation set forth stages of chronic kidney disease. Below is a chart that compares the historical model of chronic renal failure to the new model of chronic kidney disease.

The new model is beneficial for a number of reasons. One benefit of the new model is that by adding Stage 1 it enables us to be more proactive in recognizing patients who are at risk for developing kidney disease. In the past, we always waited for the patient to present with elevated blood urea nitrogen and creatinine levels, and then they were diagnosed with chronic renal failure. A problem with using the historical model for chronic renal failure is that using this model only when the blood urea nitrogen and creatinine levels are elevated. As you look at the chart below, notice the creatinine levels are elevated long before the proteins levels are elevated.

By the time both blood urea nitrogen and creatinine levels become elevated, patients would have experienced the loss of 50% of their nephrons. That is one entire kidney’s worth of nephrons that have ceased to function! Plus typically most renal patients would not begin to experience symptoms of renal failure until they are into the “renal insufficiency” stage of chronic renal failure, where they have now experienced a functioning loss of 75% of their nephrons. In other words, by the time the patient begins to feel ill, they are already in renal insufficiency and are a candidate for dialysis.

In Stage 1, chronic kidney disease, the patient’s GFR will begin to fall to 90 to 60 mL/min/1.73m². The patient may start to feel the loss of energy, muscle weakness, and decreased appetite. In Stage 1 chronic kidney disease, the patient is still able to function. The patient may initially not recognize the disease as Stage 1. As the disease progresses, anemia may present itself.

In Stage 2 chronic kidney disease, the patient’s GFR will fall to the 60 to 90 mL/min/1.73m² ranges. The individual most likely will not be experiencing any signs or symptoms of chronic kidney disease yet. So by monitoring the GFR, the physician can diagnose chronic kidney disease much earlier. Patients in Stage 2, continue the interventions identified in Stage 1 and add the following:

• Promote healthy lifestyle management. Encourage a diet rich in fiber, low in saturated fats, and/or avoid sodium/laden foods. Refer the patient to a nutritionist for diet and counseling and dietary changes. Elemental diet level of care is required for patients with Stage 2 disease. Patients in Stage 2, continue the interventions identified in Stage 1 and add the following:

The chart below compares the traditional model of chronic renal failure to the new model of chronic kidney disease.

### Chronic Renal Failure Compared to Chronic Kidney Disease

<table>
<thead>
<tr>
<th>Chronic Renal Disease</th>
<th>Chronic Kidney Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal to Early Failure</td>
<td>Normal to Early Reserve</td>
</tr>
<tr>
<td>Diminished Reserve</td>
<td>Diminished Reserve</td>
</tr>
<tr>
<td>Renal Insufficiency</td>
<td>Renal Insufficiency</td>
</tr>
<tr>
<td>End Stage Renal Disease</td>
<td>End Stage Renal Disease</td>
</tr>
</tbody>
</table>
| Creatinine level | GFR (normal or greater than 90)
| normal | 90mL/min/1.73m² |
| Normal | Normal |
| Decreased 60-90 | Moderately decreased 30-59 |
| Severely decreased 15-29 | Less than 15 |
| Kidney failure | Kidney failure |
| Nephron Loss | Nephron Loss |
| none to 25% | 50% |
| 25% to 50% | 75% |
| 75% to 90% | 90% or more |

Chronic Renal Failure

- Staging in the historical model of chronic renal failure is done based on the patient’s creatinine levels. In the new model for chronic kidney disease, staging is done based on the patient’s GFR and the presence of risk factors. Once the stage is identified there are treatment guidelines set forth by the National Kidney Foundation.

Nursing Care and Interventions for Chronic Kidney Disease

As in other chronic diseases, patient teaching is a key component of nursing care and teaching, care bearing in mind these are guidelines. Be aware the patient may have additional health care problems or comorbidities. Assess for the presence of kidney problems that could result in kidney disease. For example: Is this patient being treated for hypertension? If so the patient may have developed kidney disease? Are they taking medications that are known to cause renal problems, such as ACE inhibitors or Angiotensin-receptor blocker medications are the drugs of choice for reducing proteinuria and delaying the progression of proteinuria.

If the patient smokes, smoking cessation or at least a decrease in the amount they smoke. There are many smoking cessation medications and nicotine products available that may assist the patient in reaching smoking cessation goals.

### Chronic Kidney Diseases continued on page 8
• Support efforts to maintain independence. Because patients begin to experience signs and symptoms of kidney disease in Stage 3, they may find the disease will impact their activities of daily living. Electrolyte imbalances and the accumulation of metabolic waste products may result in feelings of fatigue, nausea, vomiting, restless leg syndrome, pruritus, poor appetite, or sleeplessness. It is crucial for the nurse to continue to educate the patient regarding signs and symptoms in order to help them identify them when and if they do occur. Sit down with them to talk about their experiences, reactions, and concerns. Help them identify energy conservation techniques, stress management methods and ways they can take care of themselves.

• Involve significant others in planning care as the patient desires. Often in Stage 3 we begin to discuss renal replacement therapies, also known as dialysis. As the patient progresses further into Stage 3, devices such as AV fistulas are placed so they can be ready for use when the patient enters into Stage 4. It is important to involve the patient’s significant others in planning for future care of this individual. The patient may have to rely on family and/or friends to drive them to and from dialysis treatments. Some patients with chronic kidney disease undergo personality changes due to electrolyte imbalances, fatigue, or sleep deprivation. Besides helping the patient to understand their symptoms, it is important to help the significant others understand this as well.

Allow family, with the patient’s permission, to visit some of their feelings and share their observations of personal changes with you. As the patient begins to feel more fatigue in Stage 3, more household duties are likely to fall on the shoulders of the patient. Significant others may be left feeling unsure about a myriad of feelings including resentment. The significant other may feel they “have to do it all,” and in some cases the patient may seem sad or depressed as a way of showing that they can’t do it anymore. Other patients may become resentful of their spouse, as the patient is no longer able to work and may take it on the spouse. There can be any number of psychosocial and emotional responses to chronic kidney disease—both on the part of the patient and their family members. Prepare all of them with information. Refer the family and the patient to the American Association of Kidney Patients and National Kidney Foundation websites. Often there are local chapters of these organizations that have support groups and on-line chat rooms. Have open honest discussions with them. Chronic kidney disease affects the entire family unit, not just the individual patient.

• Review progress and revise plan of care. As the patient progresses further into the disease, other needs will arise. Review medications and current treatment modalities. Is there an opportunity to continue treatment. In some cases, medications will need to be discontinued or diets may need to be adjusted.

• Make referrals to other disciplines. Is this a diabetic patient? If so, across the board, there is a need for diabetes education. Are there any other specialists that may be needed. Some patients may find this is a small amount of protein intake tends to be much higher than needed. Some patients find this is a small amount of protein intake tends to be much higher than needed. Some patients find this is a small amount of protein intake tends to be much higher than needed. Some patients find this a small amount of protein intake tends to be much higher than needed. Some patients find this a small amount of protein intake tends to be much higher than needed. Patients may also have symptoms of dyslipidemias. Refer the patient to the appropriate specialist, i.e., cardiology, vascular surgeon, dietitian or dietician as necessary. Achieve optimal control of problems such as diabetes mellitus, hypertension, and dyslipidemias.

• Continue patient teaching to recognize and manage uremia symptoms including fatigue, anemia, itching and loss of appetite. Be sure to include the patient’s significant others in any teaching as previously planned. It is essential that they be informed about the patient’s condition and care.

• Continue patient teaching to recognize and manage uremic symptoms including fatigue, anemia, itching and loss of appetite. Be sure to include the patient’s significant others in any teaching as previously planned. It is essential that they be informed about the patient’s condition and care.

• If the patient has not seen a nephrologist, definitely refer the patient to a nephrologist when the GFR is less than 30. Hopefully the patient has seen a nephrologist prior to Stage 4, but in some areas where nephrologists are not very plentiful or for any other reason the patient has not seen a nephrologist, they should be referred to one now. It is essential they see a nephrologist as they are a key player in the patient’s care.

• Discuss the potential for renal transplant. In the past, kidney transplants were implemented as a “last resort” for patients on dialysis. Today, transplants are considered much earlier in the progression of kidney disease.

One advantage of a transplant is that the patient may no longer require dialysis, thus freeing them from the daily and/or three times per week routine of dialysis. Generally with a transplant, there may be an improvement in their quality of life and are often able to return to their “pre- kidney disease” status. Even though transplants and the anti-rejection medications required afterward are expensive, transplants are more cost-effective than dialysis. As the kidney begins to function, it slows the progression of kidney disease and prevents the complications of uremic syndrome. In recent years, transplantation medicine has began to pay for a portion of the costs of the anti-rejection medications for the first three years. Medicare will also cover some costs for patients who qualify. Refer the patient with transplantation concerns to the transplant centers, their transplant social workers or on-line. Be sure to determine eligibility for these benefits. The website for Social Security appears at the conclusion of this module. You may refer to this website for kidney disease criteria.

E. Stage 5: The patient who presents with a GFR of less than 15 mL/min/1.73 m² is in End Stage Renal Disease, or Stage 5. This includes patients who have been identified in Stages 1, 2, and 3, and the following may need to be added.

Parathyroid hormone and hemoglobin are minimally checked every 3 months. Calcium and phosphorous are minimally checked every month. We have previously discussed the importance of the laboratory results and treating the resulting problems.

• Assess for home care and hospice needs. Is the patient now home bound? Do they have a significant other to help provide care? Would the patient benefit from the services of a home health aide? Home health aides can assist with bathing, dental hygiene, meal preparation and feeding, and toileting. Does the individual require more frequent monitoring? Do they need assistance with medication administration? Some home care organizations even provide housekeeping services that may be an option. Is the patient expected to live for six months or less? If so the patient is a candidate for hospice services and should be referred to hospice. As the patient nears death, hospice provide some much needed respite for the significant others.

• Assess for end of life decisions. Does your patient have medical advanced directives? If so, where is a copy of the living will or advanced directives? Is the patient in the medical power of attorney? Is there a will or trust for the patient? Is the patient aware of the power of attorney for this individual? Do these documents still reflect the patient’s wishes? It may be necessary to refer the patient to an attorney to make sure that the patient’s wishes are still in order. Would providing home care and hospice services be of benefit to your patient. Is the patient a candidate for hospice services and should be referred to hospice. In some cases there may be an option to have documents for updates. One may also refer the patient and family to their county Bar Association for a referral to a lawyer who may establish documents that may be needed.

The county Bar Association phone number may be found in the local phonebook, through directory assistance or on-line. While many of these topics regarding the end of life decisions, some of these topics may be very difficult to discuss, many individuals are reluctant to discuss them, it is critical to have these discussions. Certainly it is easier to have these discussions prior to the patient needing these decisions earlier. As chronic kidney disease progresses, patients may become more resentful and depressed as the conditions and sleep deprivation that may cloud their abilities to think rationally. Making end of life decisions while they are still mentally able, and while they still have the ability to make these decisions and execute their desires when they no longer be able to be their own advocate, will serve to insure that their wishes are carried out properly.

F. General Nursing Care for Chronic Kidney Disease:

• Assess for kidney transplant. Is the patient a candidate for renal transplant? Are the patient’s GFR below 50? Does the patient have a functioning graft? Are there any contraindications? There are many factors that may be needed.

• Phosphorus: 800 to 1000 mg/day. Not all dietary labeling offers phosphorus content. Be sure to refer to the nutrition facts as well as the nutritional labeling on foods. The American Association of kidney patients offers a free nutrition counter. This is an invaluable tool for kidney patients to assist them with meal planning, and stay within their diet restrictions. They can help the patient to find out the optimal amount of phosphorus, potassium and protein content for commonly consumed foods as well as commercially prepared foods.

• Foods and especially the frozen meals also contain as these all contain high amounts of phosphorus. Canned tuna, salmon, sardines and other small fish should be avoided as these all contain high amounts of phosphorus. Milk, cheese, dried beans, peas, nuts, and especially those products that may be used as these all contain high amounts of phosphorus. These products may result in feelings of fatigue, nausea, vomiting, restless leg syndrome, pruritus, poor appetite, or sleeplessness. It is crucial for the nurse to continue to educate the patient regarding signs and symptoms in order to help them identify them when and if they do occur. Sit down with them to talk about their experiences, reactions, and concerns. Help them identify energy conservation techniques, stress management methods and ways they can take care of themselves.

• Calcium: less than 2000 mg/day. While some food labeling does provide this information, again the
American Association of Kidney Patients’ nutrition counter will be useful. Caution patients to limit intake of dairy products. In some instances patients are limited to one half cup per meal.

- Potassium intake is adjusted to maintain blood levels between 3.5 to 5 mEq/L. In some instances patients may need to supplement potassium intake. For example, in early stages of chronic kidney disease, if they have hypertension, they may need to replace potassium lost due to diuretic therapy. In later stages of the disease, as more kidney function loss results in hyperkalemia, potassium restrictions will be necessary. Teach the patient to avoid high potassium containing foods such as avocados, bananas, beets, brussel sprouts, cantaloupe, clams, dates, figs, lime beans, milk, nectarines, oranges and orange juice, pears, peanuts, potatoes, prunes and prune juice, raisins, sardines, spinach, tomatoes, winter squashes and yogurt.

- Electrolyte Considerations:
  - Sodium: less than 2000 mg/day. Again teach the patient to avoid salty foods and to read nutritional labeling on foods or consult the nutrition counter available from the American Association of Kidney Patients.
  - Potassium: intake is adjusted to maintain blood levels between 3.5 to 5 mEq/L. In some instances patients may need to supplement potassium intake. For example, in early stages of chronic kidney disease, if they have hypertension, they may need to replace potassium lost due to diuretic therapy. In later stages of the disease, as more kidney function loss results in hyperkalemia, potassium restrictions will be necessary. Teach the patient to avoid high potassium containing foods such as avocados, bananas, beets, brussel sprouts, cantaloupe, clams, dates, figs, lime beans, milk, nectarines, oranges and orange juice, pears, peanuts, potatoes, prunes and prune juice, raisins, sardines, spinach, tomatoes, winter squashes and yogurt.

2. Medications for Kidney Patients: Generally medications are given in reduced dosages and/or increased intervals of time between doses of medications. Often pharmacy services are utilized to monitor for drug toxicities and calculate dosages of medications based on the patient’s laboratory studies. Be sure to teach patients signs of medication overdoses and toxicities. Advise patients not to take any over the counter medications, including vitamin, mineral and herbal supplements without first checking with their healthcare professional.

3. More General Nursing Care for Chronic Kidney Disease Patients: Below is a table summarizing common problems encountered with chronic kidney disease and nursing considerations.

<table>
<thead>
<tr>
<th>System/Problem</th>
<th>Nursing Considerations and Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid Volume/Excess usually seen in Stage 5.</td>
<td>Implement fluid restrictions as prescribed and monitor for compliance. Monitor daily weights or “dry” weight that is the patient's weight after diuresis. Evaluate effectiveness of diuresis. Assess edema and promote skin integrity. Assess lung sounds for rales and signs of fluid overload.</td>
</tr>
<tr>
<td>Electrolyte imbalance</td>
<td>Correct any electrolyte imbalance as they present. Most common imbalances that occur are hyperkalemia, hypocalcemia, and hyperphosphatemia. Use phosphate binding medications such as PhosLo, Calcium Citrate, Calcium Carbonate, Renagel, or Fosrenol for long term control. Be sure the patient takes phosphate binders with their meal. These medications bind the phosphorus as it is ingested and simply pass through the gastrointestinal tract without being absorbed. Hold these medications if the patient is not eating. It is essential that patients take phosphate binding agents as dialysis does not remove phosphorus. Avoid consumption or use of phosphate containing products such as cola colored soft drinks and phosphate enemas.</td>
</tr>
<tr>
<td>Metabolic Acidosis</td>
<td>Most metabolic waste products tend to have an acidic pH, thus as these chemical accumulate, the patient will develop a metabolic acidosis. Assess effectiveness of dialysis for control of metabolic acidosis. Dialysis bath contains acetate or lactate that is converted into bicarbonate. This will help to neutralize the acidosis, as well as dialysis will remove the metabolic waste products. Oral sodium bicarbonate may be necessary for long term. Monitor for Kussmaul respirations. Kussmaul respirations are seen as an elevated respiratory rate and depth of respiration, and indicate respiratory compensation for acidic states. Correcting the patient’s pH will eliminate Kussmaul respirations.</td>
</tr>
<tr>
<td>Anemia</td>
<td>Beside the lack of erythropoietin causing anemia, the red blood cells the patient does possess will have a shorter life-span and be more fragile, thus compounding the anemia problem. Maintain hemoglobin at, but not greater than 11g/dl for the general hemodialysis population, with epoetin. Epoetin alfa is a DNA recombinant human erythropoetin, and usually one will see a near normal Hgb after 6 months of administration. Watch for higher than normal hematocrit and adjust epoetin dose accordingly. High hematocrit or hemoglobin values will cause increased blood viscosity, which may lead to problems with dialysis, shortened life of fistula, or contribute to hypertension.</td>
</tr>
</tbody>
</table>

4. Dealing with Uremic Syndrome: Patients in Stage 3, 4, and 5 will begin to experience various signs and symptoms of uremic syndrome. Again, because each patient is different, they will present differently and may not develop all of the symptoms of uremic syndrome. Be sure to educate the patient and his or her significant others regarding uremic syndrome. Then as symptoms present themselves, the patient can bring these to their attention so that we may interpose appropriately. As you will see, uremic syndrome affects every physiologic system. Remember the body is functioning in a toxic waste dump and it is the accumulation of metabolic waste products that is damaging each system, thus creating the wide range of problems.

Uremic Syndrome

Cardiovascular
- Pericarditis/pericardial friction rub, chest pain, ST elevations. Chest pain due to pericarditis is usually relieved by sitting up and leaning forward.
- Cardiac tamponade: severe hypotension, decreased cardiac output. Pulmonary edema: seen with fluid overload and left ventricular failure. Arteriosclerosis acceleration: the most common cause of death in hemodialysis patients.
- Hypertension (due to hypersecretion of renin), hypertensive retinopathy, hypertensive encephalopathy. Keep BP under control.

Pulmonary
- Pleural effusions: may need to be drained. Uremic pneumonitis may mimic Adult Respiratory Distress Syndrome in severe cases. Usually due to fluid overload.
- Manage airway with pulmonary toilet, antibiotics, oxygen, and more frequent dialysis.

Neuro/Sleep
- Encephalopathy usually due to electrolyte imbalances and accelerated atherosclerosis, may present as fatigue, confusion or as a dementia.
- Peripheral neuropathy: restless leg syndrome, burning sensation in feet progressing to paresthesia, intense pain, foot drop, impaired gait.
- Peripheral neuropathy, especially restless leg syndrome may be treated with gabapentin or Mirapex™
- Seizure risks: precautions should be taken, may need anticonvulsants.

Assess sleep patterns using BEARS tool:
- Bedtime environment and habits
- Excessive daytime sleepiness
- Awakenings during the night
- Regularity and duration of sleep
- Sleep-disordered breathing

Endocrine/Metabolic
- Gout (joint pain and inflammation, low-grade fever, HTN) due to accumulation of uric acid is usually treated with allopurinol.
- Secondary hyperparathyroidism: High calcium and demineralization of the bone is treated by limiting phosphorous intake and with a parathyroidectomy.
- Hyperlipidemia due to an increase in lipoproteins commonly seen with chronic kidney disease. Adjust dietary intake of fats, may treat with low dose corticosteroids to reduce serum lipid levels. Treat with statin medications.
- Glucose intolerance: due to loss of glucose threshold. Dialysis may improve glucose levels, may need to initiate insulin therapy and diabetes mellitus care.

Sexuality/Fertility
- Sexual dysfunction: anorexia, impotence, infertility, decreased libido. Transplant may normalize sexual function. Dialysis may provide some improvement.

Gastrointestinal
- The presence of metabolic waste products and electrolyte imbalances usually are the cause of gastrointestinal problems. Anorexia, nausea, vomiting, diarrhea, constipation, malabsorption syndrome, weight loss, fatigue, peptic ulcer, may all be minimized with dialysis, protein restricted diet. Zinc may improve taste sensation. Patients should be referred to a dietician or nutritionist.

Hematologic
- Platelet dysfunction: decrease in platelet adhesiveness, a shortened lifespan for platelets, accompanied by mild thrombocytopenia, which will lead to bleeding tendencies. Usually this problem can be corrected with dialysis, iron and folate acid supplements. Monitor the platelet and the bleeding tendencies. If they are a dialysis patient, they will be anticoagulated, be sure to monitor INR, PT and PTT levels.

Available in print in Nursing Today, issue of June 2015 Ohio Nurse.
Osteomalacia

Also known as "Renal Rickets." seen in end stage renal disease: Hypocalcemia with Hyperphosphatemia (due to kidney’s inability to convert Vitamin D to its active form), bone pain, pathologic fractures, poor dentition due to great bone demineralization. Usually treated with Calcitriol (vitamin D so they are able to absorb calcium back into bone), Calcium supplements and phosphate binding antacids.

Vaccinations

Monitor for periodontal disease (increases risk of infection, cavities, poor dentition). Monitor for soft tissue calcification. This occurs when calcium phosphate accumulates in the soft tissues, brain, hinge and heart wall. The patient’s skin will actually feel gritty. Soft tissue calcification will accelerate dementia, heart failure and hypotension. It is recommended chronic kidney disease patients receive vaccinations for influenza and pneumonia, but should always consult their health care provider first.

Prior to beginning hemodialysis, patients should be screened for hepatitis B antigen and antibody, and if negative, administer hepatitis B vaccine and vaccination. Follow up tests for antibody are necessary.

Psychosocial

Assess for depression using the Medical Outcomes Study Short Form-36 (SF-36), or the Kidney Disease Quality of Life Instrument. The work for them should be flexible and available at the end of this module. These tools assess the patient’s psychosocial status and used consistently will yield a baseline for comparison. Assess the patient’s emotional, social/family roles, and feelings of vitality. Assess the significant others’ as well as the patient’s capacity for coping with chronic illness.

5. Dialysis: Dialysis works based on the following principles.

Osmosis: movement of water across a semipermeable membrane from an area of low to high osmolality.

Diffusion: movement of molecules from an area of high to lower concentration.

Ultrafiltration: (also known as convection) is the movement of particles through a semipermeable membrane by hydrostatic pressure.

Hemodialysis: The hemodialysis filter provides the semipermeable membrane and the dialyzer or dialysis solution provides the medium to remove excess fluids, electrolytes and metabolic waste products. The interdialytic period is the interval between dialysis and are anticoagulated prior to initiating hemodialysis, thus monitor for bleeding tendencies. Hemodialysis requires approximately 250 mL to prime the system from patient to filter and back to the patient again. So the patient has to be able to tolerate a 250 mL blood loss while on hemodialysis. A typical hemodialysis run will last 3-4 hours, usually 3 times per week. After hemodialysis the patient may sense an increase level of fatigue due to the increased heart rate and cardiac output they experience during hemodialysis. Often patients describe this fatigue as feeling like they just ran a marathon for three hours and they can be absolutely exhausted. Be sure to provide proper care for the patient’s particular access site and monitor circulatory status of affected limb. Blood pressures should never be taken and blood should never be drawn from the affected limb. Common products. Patients must be hemodynamically stable to tolerate higher osmolality.

Access Devices for Hemodialysis:

Arteriovenous Fistula (AVF): consists of a surgical anastomosis of an artery to a vein. An AVF is used for high flow access requiring venous enlargement that is adequate for hemodialysis may take weeks or months to develop, therefore it should be placed when the patient is in late Stage 3 or early Stage 4 disease. AVF have a history of the lowest incidence of infection and the longest patency rates when compared to the device of choice.

Arteriovenous Graft (AVG): consists of surgical anastomosis by implanted tubing, either synthetic or biologic, to an artery at one end and a vein at the other end. AVG can be used immediately, but has higher rates of thrombosis and infections. AVG are not the first choice device.

Central Venous Catheters (CVCs): can be used immediately, but are not recommended for long-term use. A dual lumen catheter is typically placed in the internal jugular, femoral or subclavian vein, with two distal ends used to connect to hemodialysis. As with all catheters, these are susceptible to infection and occlusion, plus patients usually do not find these as comfortable.

Home Hemodialysis: Is becoming an option for more patients as more hemodialysis centers are offering the required 3 to 8 weeks of training. It is also recommended the patient have assistance at home provided by another family member or friend. The home hemodialysis patient is at risk of the same complications as a clinic dialysis patient such as low blood pressure, air embolism, blood loss due to catheter separation, and infection. Therefore it is important both his or her helper know how to recognize and intervene should one of the complications occur.

The home advantage: An advantage of home hemodialysis is that is allows the patient to set his or her dialysis schedule. This allows the dialysis to align with work, care giving for family members and family activities. Patients can dialyze more frequently at home, often 5 to 7 times per week, for shorter periods of time. This prevents the large fluid loss associated with multiple long dialysis sessions per week. Another advantage for the home dialysis patient is that the dialysis may be done at night while the patient is sleeping, thus giving the patient more control of their dialysis. An intermittent peritoneal dialysis has a longer run time due to a slower blood flow rate. This is a gentler treatment and is easier on the access site and the patient’s heart. Another advantage of the long nighttime run is that more phosphorus and waste products are removed. If patients using nighttime dialysis, find they no longer need to take phosphate binder or blood pressure medications.

Hemodialysis patients, besides saving time and trips to a dialysis clinic, report an improvement in the quality of their lives. They often report they have more energy, sleep better, experience less nausea, and appreciate the control they gain in doing their own dialysis.

Home dialysis and insurance: Generally the home dialysis machine is small in size and supplies can be delivered to the patient’s home on a monthly basis. There are a growing number of clinics offering home dialysis. Patients may inquire at their local dialysis center, nephrologist’s office or locate a clinic offering home hemodialysis at www Hiệp www.homedialysis.org. Currently Medicare does not pay for home hemodialysis for three hours and they can be absolutely exhausted. Be sure to provide proper care for the patient’s particular access site and monitor circulatory status of affected limb. Blood pressures should never be taken and blood should never be drawn from the affected limb. Common products. Patients must be hemodynamically stable to tolerate higher osmolality.

Types of Peritoneal Dialysis:

Continuous Ambulatory Peritoneal Dialysis (CAPD): usually consists of 4 to 5 cycles per day with 3 to 4-hour dwell times. The cycles are completed during the day while the last exchange dwells overnight to allow for uninterrupted sleep.

Continuous Cycle Peritoneal Dialysis (CCPD): requires a machine or cycler and usually consists of 4 to 5 cycles per day with 3 to 4-hour dwell times. The final fill remains in the patient throughout the day. CCPD also limits the opening of the abdominal catheter to 2 times per day, vs. 4 to 5 times with CAPD. This greatly reduces infections and peritonitis rates.

Intermittent Peritoneal Dialysis (IPD): is typically cycled 3 to 4 times per week in 10 to 14 hour cycles, giving much flexibility to the patient.

In this module we’ve covered a lot of material about this very complex, but interesting disease. It is hoped the reader will have a better understanding of chronic kidney disease and the nursing ramifications as a result of completing this module. Below is a list of references and helpful kidney disease websites. Use these websites for yourself, or give them to your patients so they might take an active role in learning about this very challenging disease.
Chronic Kidney Diseases: Stages and Nursing Care
Post-Test and Evaluation

DIRECTIONS: Please complete the post-test and evaluation form. There is only one answer per question. The evaluation questions must be completed and returned with the post-test to receive a certificate.

Name: ___________________________

Date: ___________________________

Final Score: ______________________

Please indicate whether the answer is True or False. There is only one correct answer.

1. Chronic kidney disease is easily recognized early in its development.
2. Nephrons are capable of enlarging to handle a larger volume of solute.
3. Proximal convoluted tubules are responsible for secreting foreign substances such as drugs.
4. The distal convoluted tubule is the target organ for antidiuretic hormone and aldosterone.
5. Angiotensin II causes vasoconstriction and is part of the autoregulation mechanism of the kidney.
6. It is best to advise patients with hypertension to use non-steroidal anti-inflammatory drugs to treat pain they may have.
7. When released, antidiuretic hormone acts on the nephron to cause water conservation.
8. Blood urea nitrogen and creatinine levels are reliable indicators of kidney function and are not influenced by any other factors.
9. Erythropoietin is a substance released from the kidneys that stimulates the production of red blood cells.
10. In Stage 1 chronic kidney disease, patients have low GFR readings and are at risk of developing the disease.
11. Modifying risk factors such as managing hypertension, diabetes, and dyslipidemias is an intervention for Stage 1 chronic kidney disease.
12. In Stage 2 chronic kidney disease patients begin to experience signs and symptoms of the disease.
13. As in Stage 1, healthy lifestyle choices and management of risk factors for chronic kidney disease should be continued.
14. If they are not already doing so, for the chronic kidney disease patient with hypertension and/or diabetes, self-monitoring of blood pressure and/or blood glucose should be initiated in Stage 2.
15. In Stage 3 chronic kidney disease, patients begin to experience signs and symptoms of the disease.
16. An important nursing intervention for Stage 3 is to teach the patient signs and symptoms of chronic kidney disease and uremic syndrome so they will be able to recognize and report signs and symptoms as they present themselves.
17. Osteomalacia or renal rickets results when high phosphorus levels demineralize teeth and bones.
18. Parathormone is the hormone that controls potassium levels and plays a role in the development of osteomalacia and secondary hyperparathyroidism.
19. In Stage 3, involving the significant others as you continue to educate the patient regarding signs and symptoms of chronic kidney disease and self-care becomes an important nursing intervention.
20. In Stage 4, renal replacement therapy usually is initiated.
21. Minimally, the patient should be referred to a nephrologist in Stage 4.
22. Renal transplants are now performed earlier, have proven to be more cost effective than dialysis and improve the quality of life for chronic kidney disease patients.
23. Stage 5 is also known as end stage renal disease and all treatment is stopped in this stage.
24. A benefit of home care is that it may provide much needed respite for the patient’s significant other.
25. An aspect of Stage 5 care is to have end of life discussions and decisions such as advanced medical directives and powers of attorneys in place.
26. All kidney disease diets are basically the same for each patient.
27. The American Association of Kidney Disease Patients offers a free nutrition counter to patients.
28. Protein intake for chronic kidney disease patients is severely restricted.
29. Potassium intake is always restricted for chronic kidney disease patients.
30. It’s OK for chronic kidney disease patients to take over the counter medications, herbal and vitamin supplements.
31. Chronic kidney disease causes metabolic alkalosis due to an accumulation of waste products and is treated with dialysis and sodium bicarbonate tablets.
32. To monitor fluid status in dialysis patients, use the dry weights for comparison.
33. Periphereral neuropathies such as restless leg syndrome and complaints of burning sensations of the feet may occur as part of uremic syndrome.
34. Diabetes and gout may develop as a result of chronic kidney disease.
35. Besides anemia, the chronic kidney disease patient may develop thrombocytopenia which will result in more frequent blood clotting.
36. Besides keeping phosphorous levels in check with phosphate binding agents, Calcitriol is also administered to control osteomalacia.
37. Dialysis disequilibrium syndrome is due to a fluid shift and results in hypotension and is treated with normal saline.
38. Home hemodialysis may be done while the patient sleeps and offers more removal of phosphates and waste products.
39. An advantage of peritoneal dialysis is that it gives slow and steady removal of waste products and patients do not experience the highs and lows that a clinic hemodialysis patient does.
40. Teaching the patient sterile technique is key in preventing infection which is the number one complication of peritoneal dialysis.

Evaluation:

1. Were you able to achieve the following objectives? YES NO
   a. Describe the four stages of chronic kidney disease.
   b. Discuss the nurse’s role in caring for patients in each stage of chronic kidney disease.
2. Was this independent study an effective method of learning? YES No
   If no, please comment:

3. How long did it take you to complete the study, the post-test, and the evaluation form?

4. What other topics would you like to see addressed in an independent study?

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Evidence-based online educational courses from the Home Health Quality Improvement National Network — many with free continuing education credits! Enroll today. Visit www.HomeHealthQuality.org/Ohio
This independent study has been developed to enable nurses to recognize and deal with horizontal violence (HV). It provides clinical guidelines for successful completion of this independent study.

The authors and planning committee members have no conflicts of interest. This information is provided for educational purposes only. For legal questions, please consult appropriate legal counsel. For nursing-related questions, please consult an appropriate health care professional.

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OBJECTIVES
1. Describe horizontal violence in healthcare.
2. Describe strategies to deal with horizontal violence.

STUDY
Horizontal violence and bullying has been extensively reported and documented in healthcare, with health care staff, their patients, and health care employers. In this article horizontal violence (HV) will be defined and extensively reported and documented in healthcare, by the American Nurses Credentialing Center's accredited as a provider of continuing nursing education

There are several terms used to describe this phenomenon, interactive workplace trauma, bullying, horizontal hostility, bullying, incivility, and horizontal or lateral violence (Bartholomew, 2014). The effects of HV are reflected in poor patient and employee satisfaction scores and ultimately in the reputation of the hospital or setting where it was exhibited and will be discussed. There has been quite a bit of research done on this topic and several studies will be highlighted. The Joint Commission has instated and actions to establish, enforce and measure a culture of safety will also be reviewed.

On the international level, one out of every three nurses worldwide have to leave their position or career due to HV. In the United States, 90 - 97% of nurses report experiencing verbal abuse from physicians (Bartholomew, 2014). The effects of HV are reflected in poor patient and employee satisfaction scores and ultimately in the reputation of the hospital or setting where it was exhibited and will be discussed. "We must make it clear that bullying and incivility are not acceptable in healthcare, as they do not contribute to patient care, patient safety, or the hospital’s bottom line. Bullying and incivility may be related to personal characteristics of individual nurses (e.g. anger, burnout), personality style, beliefs and values, but often arise from the organizational climate and culture that foster them" (Bartholomew, 2014). Can you explain the negative effects of HV on nurses and healthcare settings?
the organizational climate, and increasing social capital by building a strong internal network. (Bartholomew, 2014)

In addition to the institution adopting a zero tolerance policy for HV, other strategies identified by the International Council of Nurses (ICN) include sensitizing the public and the nursing community to the various manifestations of violence against nursing personnel, supporting nurses, including facilitating access to legal aid when appropriate, ensuring awareness of and access to existing resources available to nurses to deal with workplace abuse, and providing improved education and on-going training in the recognition and management of workplace abuse and violence (ICN, 2004).

Some institutions have instituted a code pink, which is a technique nurses employ to address unacceptable behavior in hospitals and other settings. It works like this: RNs go to a location where their nurse colleague is being verbally abused and stand in support of their peer and against the bullying that is taking place. (Trossman, 2014).

Individual Strategies

Individual strategies include courageous leadership. Every nurse must lead this cultural change. Working cooperatively despite feelings of dislike, not speaking negatively about superiors, addressing co-workers by the first name and asking for help as necessary, and looking people in the eye when having conversation with them are other strategies that can be used. Not being overly inquisitive about each other's lives, reaping favors and compliments, not engaging in a conversation about a co-worker with another co-worker, standing up for the “absent member” in a conversation where they are not present, and not criticizing publically are other effective strategies (Bartholomew, 2014).

Strategies identified by the Center for American Nurses (2008) included: nurses adopting and modeling professional ethical behavior, recognizing and addressing bullying and disruptive behaviors in the workplace, reflecting on own behavior and communicating respectfully participating in collaborative interdisciplinary initiative to prevent abuse, and working to ensure the mission, vision and values of their workplaces are reflective of the Code of Ethics for Nurses and standards set by the profession in order to eliminate disruptive behavior.

Evinrud (2008) shared how journaling helped her deal with a personal case of bullying in the workplace. Journaling helps the individual reflect on the situation and think of ways to deal with issues over time. It also is helpful to keep track of the nature, time, date, place and names of all individuals who were present.

Strategies to stop the cycle at the individual level include:

Horizontal Violence continued on page 14

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OBJECTIVE

1. Describe how social media opportunities and related technologies can result in violations of nursing laws, rules and professional ethics.

This video has been developed to give nurses a better understanding of the responsibilities/requirements when using social media in the workplace and around patients/families.

This video has been developed by: Janice Lanier, JD, RN. The author and planning committee members have declared no conflict of interest. This information is provided for educational purposes only. For legal questions, please consult appropriate legal counsel. For medical questions or personal health questions, please consult an appropriate health care professional.

1.0 contact hour of Law and Rules (Category A) will be awarded for successful completion of this video, post-test and evaluation.
Infighting – Always avoid unprofessional discussion in nonprivate places. This is not the time or place. Please stop (physically walk away or move to a neutral spot).

Insinuating – Avoid referring to the right connection

Backstabbing – I don’t feel right talking about him/her, the situation, what he/she didn’t do or don’t know the facts. Have you spoken to him/her?

Intimidation – This bothers me to talk about that without his/her permission or I only overheard that – it shouldn’t be repeated.

Broken confidence – Am I being childish in confidence? Or that sound like information that should remain confidential (Griffin & Clark, 2014).

Johnson (2009) examined the literature on workplace bullying among nurses with the aim of reaching a better understanding of the phenomenon. The literature has been found to impact the physical and psychological health of victims, as well as their performance at work. Workplace bullying impacts are deceiving. Decreasing productivity, increased sick time and employee attrition. More nurse-specific research is needed. Research needs to be conducted in a systematic and uniform manner so that generalizations across studies can be made. Bigony et al. (2009) further discussed the issue of verbal and non-verbal testing. They concluded that support from administration and colleagues can increase one’s perceived awareness, together with a zero tolerance policy, should be the standard for all health care organizations. HV is defined as the abuse or bullying of all nurses and becomes a patient safety issue.

Thomas and Birk (2009) did a content analysis of data written by nurses. They defined bullying as the habitual and persistent behavior of injustice perpetrated by staff RNs during their clinical experiences. Four levels of injustice were described: “we were unfairly criticized,” “we were unfairly assessed were distrusted and disbelieved,” “we were unfairly blamed,” and “we were publicly humiliated.” Nursing leadership, both at the organizational and institutional level, must become engaged in efforts to eradicate HV towards students.

Purposive sampling included the incidence of horizontal violence among hospital RNs and looked at the effects on patient care. They tested two hypotheses. The first hypothesis predicted that bậc nurses working at the randomized sample of 175 hospital staff RNs drawn from the California Board of Registered Nursing’s mailing list who participated in a survey. The second hypothesis was the secondary analysis that 21% (n=37) of participating nurses. Findings suggested a positive relationship between beliefs consistent with an oppressed self and horizontal violence. A change in the oppressive social structure in hospitals may be needed to address horizontal violence.

Recent studies have included findings. A 2012 study of the psychological consequences of bullying in Australia found that impact varied depending on factors such as gender, role in the workplace, and the time spent at work. The study also found that aged care nurses reported higher depression. More than half of those who participated had expressed feelings of dread and anxiety about being involved in similar incidents. The study also found that the psychological consequences of bullying varied depending on factors such as gender, role in the workplace, and the time spent at work. The study also found that aged care nurses reported higher depression. More than half of those who participated had expressed feelings of dread and anxiety about being involved in similar incidents.

Establishing a culture that fosters a sense of cohesiveness among nurses is an important factor in creating safety. It is not only the nurses who are responsible for creating a safe environment for all patients. Nurses, individually and collectively, must enhance their understanding of the phenomenon. Workplace bullying can create collaborative relationships on their unit and can create collaborative relationships on their unit and can decrease workplace conflicts and promote workplace policies to eliminate HV.

The Joint Commission Culture of Safety

The Joint Commission has recognized the impact of poor interpersonal relationships on patient safety and quality and created several standards regarding patient safety. The Joint Commission is a nonprofit organization that aims to improve quality of care and patient safety, an approach that aligns with The Joint Commission’s mandate to improve patient safety. The ultimate purpose of The Joint Commission’s accreditation process is to enhance quality of care and patient safety. Hospitals must have a survey process, the Sentinel Event Policy, and other Joint Commission initiatives are designed to help hospital and physicians as a performance improvement tool.

The Joint Commission [TJC] (2014) is a voluntary organization and is open to all members of the healthcare team in order to provide safe patient care. It is more than a simple conflict between two nurses. It can create collaborative relationships on their unit and can increase the chances of creating collaborative relationships on their unit and can decrease workplace conflicts and promote workplace policies to eliminate HV.

I don’t feel right talking about him/her, the situation, what he/she didn’t do or don’t know the facts. Have you spoken to him/her? This bothers me to talk about that without his/her permission or I only overheard that – it shouldn’t be repeated. Broken confidence – Am I being childish in confidence? Or that sound like information that should remain confidential (Griffin & Clark, 2014).
Breaking the Cycle of Horizontal Violence
Post-Test and Evaluation

DIRECTIONS: Please complete the post-test and evaluation form. There is only one answer per question. The evaluation questions must be completed and returned with the post-test to receive a certificate.

Name: ____________________________________________ Date: ______________________ Final Score:  __________

Please circle one answer.

1. Bullying is behavior which is generally persistent, systematic, and ongoing.
   a. True
   b. False

2. Name-calling, backstabbing, and gossip are three examples of what type of hostility?
   a. Overt
   b. Covert
   c. Severe
   d. Illegal

3. Which of the following is an example of covert behavior?
   a. Fault-finding
   b. Criticism
   c. Sabotage
   d. Shouting

4. Associations that have issued statements regarding horizontal violence include all of the following EXCEPT:
   a. American Nurses Association
   b. American Nurses Credentialing Center
   c. American Association of Critical Care Nurses
   d. International Council of Nurses

5. Characteristics of an oppressed group include:
   a. High self-esteem
   b. Self-hatred
   c. Heightened sense of identity
   d. Sense of power and control

6. Nurses who are most vulnerable to horizontal violence are newly hired or licensed nurses, float nurses, and male nurses.
   a. True
   b. False

7. There are numerous myths about horizontal violence. Which of the following statements is true and is not a myth?
   a. Workplace violence is only physical
   b. Workplace violence is inevitable
   c. Prevention is more expensive than repairing the damage
   d. The level of physical violence at work has changed

8. According to Bartholomew, the most frequent form of horizontal violence is:
   a. Backbiting
   b. Broken confidences
   c. Non-verbal innuendos
   d. Withholding information

9. The number one strategy to deal with horizontal violence is to:
   a. Increase awareness of the problem
   b. Report incidences to management
   c. Monitor employee satisfaction scores
   d. Maintain culture of blame

10. Individual impacts of horizontal violence include:
    a. Increased self-esteem
    b. Increased motivation
    c. Anger
    d. Decreased absenteeism

11. Organizational strategies to deal with horizontal violence include all of the following EXCEPT:
    a. Adopting a zero tolerance policy
    b. Embracing transformational leadership
    c. Promoting a culture of safety
    d. Developing reactive institutional policies

12. Individual strategies to deal with horizontal violence, as identified by the Center for American Nurses, include:
    a. Keeping a journal
    b. Adopting and modeling professional ethical behavior
    c. Accepting a fair share of the workload
    d. Reflecting on the behavior of others

13. In the study by Bailey a mentoring culture included all of the following EXCEPT:
    a. Management and executive support
    b. Incentives and recognition
    c. Inflexible schedules
    d. Transformation leadership

14. The organization that recognized the impact of poor interpersonal relationships on patient safety and quality and created several standards relating to this was:
    a. The American Hospital Association
    b. The Occupational Safety and Health Administration
    c. The Joint Commission
    d. The American Medical Association

15. Suggestions given by Lindeke to develop collaborative relationships included all of the following EXCEPT:
    a. Self-development
    b. Team development
    c. Communication development
    d. Organizational development

Evaluation:
1. Were you able to achieve the following objectives? YES NO
   a. Describe horizontal violence in healthcare. Yes No
   b. Describe strategies to deal with horizontal violence. Yes No

2. Was this independent study an effective method of learning? YES NO
   If no, please comment:

3. What one idea will you take from this study and apply to your setting?

4. How long did it take you to complete the study, the post-test, and the evaluation form?

5. What other topics would you like to see addressed in an independent study?

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