



Marta Hreńczuk

Department of Surgical and Transplantation Nursing and Extracorporeal Therapies, Faculty of Health Sciences, Medical University of Warsaw, Warsaw, Poland

# Provision of independent nursing services to kidney transplant recipients

## Abstract

Nursing is an independent profession according to the Act on Nurse and Midwife Professions. The exercise of the nursing profession involves the provision of health services by a person having appropriate qualifications and the license to practice the profession. In the literature, services provided by a nurse in primary healthcare are widely discussed,

while no precise definition of the scope of these services has been provided for the hospital setting. Therefore, this article aims to present the aspect of independence in the provision of nursing services to kidney transplant recipients.

**Renal Disease and Transplantation Forum 2021, vol. 14, no. 2, 107–112**

**Key words:** nurse, health services, independence, kidney transplant recipient

## INDEPENDENCE OF NURSES IN THE PROVISION OF PREVENTIVE, DIAGNOSTIC, THERAPEUTIC, AND REHABILITATION SERVICES

On 23 March 2017, the Ordinance of the Minister of Health of 28 February 2017 on the nature and extent of preventive, diagnostic, therapeutic, and rehabilitation services independently provided by a nurse or a midwife without the physician's order (Journal of Laws 2017.497) came into force. According to this Ordinance, a nurse or a midwife may provide certain prophylactic, diagnostic, therapeutic, and rehabilitation services without the physician's order and in line with the knowledge and skills acquired upon completion of a nursing or midwifery school. Independent nursing functions include:

1. diagnosing patients' condition and their health-related needs;
2. identifying patients' needs related to nursing;
3. planning and providing nursing care to patients;
4. independently providing any preventive, diagnostic, treatment, rehabilitation, as well

as medical emergency services within the specified scope;

5. deciding on the kind and scope of nursing services;
6. conducting health education and health promotion activities.

After appropriate post-graduate training, a nurse is entitled to provide independently (i.e. without the physician's order):

1. prophylactic services including:
  - a. psychoeducation of patients with psychiatric and dependency disorders and/or their families — provided that the nurse has completed a specialist course in this particular field or a qualification course in the field of psychiatric nursing, holds the title of a psychiatric nursing specialist, or has the Master's degree in nursing;
  - b. education of patients with diabetes and/or their families — provided that the nurse has completed a specialist course or a qualification course, or holds the title of a nursing specialist if relevant knowledge was included in the curriculum, or has the Master's degree in nursing;

▶▶According to Regulations of Minister of Health of February 28 2017 a nurse or a midwife may provide certain prophylactic, diagnostic, therapeutic, and rehabilitation services◀◀

### Address for correspondence:

Marta Hreńczuk  
Zakład Pielęgniarstwa Chirurgicznego,  
Transplantacyjnego i Leczenia  
Pozaustrojowego, Wydział Nauk o Zdrowiu  
Warszawski Uniwersytet Medyczny  
ul. Nowogrodzka 59, pawilon 11D1  
02–007 Warszawa  
phone: +48 22 502 19 20  
e-mail: marta.hrenczuk@wum.edu.pl

2. diagnostic services including:
  - a. carrying out physical examinations — provided that the nurse has completed a specialist course, holds the title of a nursing specialist obtained after 2001, has completed a first-cycle degree program in nursing starting in 2012/2013, or holds a professional Advanced Physical Assessment certificate;
  - b. performing standard, resting electrocardiography (ECG) examinations and recognizing electrocardiographic features of pathological conditions in health emergencies — provided that the nurse has completed a specialist course in this field;
  - c. performing arterial blood gas examinations using a cannula previously installed by a physician arterial blood gas in health emergencies — provided that the nurse has completed a qualification course or holds the title of a nursing specialist if relevant knowledge was included in the curriculum;
  - d. assessing and monitoring the level of anesthesia and muscle relaxation under general anesthesia — provided that the nurse has completed a qualification course in anesthesiological and intensive care nursing or holds the title of a nursing specialist in anesthesiological and intensive care nursing;
3. therapeutic services including:
  - a. the choice of wound treatment methods — provided that the nurse has completed a specialist course or a qualification course, holds the title of a nursing specialist if relevant knowledge was included in the curriculum, or has the Master's degree in nursing;
  - b. emergency modification of the therapeutic doses of analgesic drugs and medicinal products used to relieve pain in palliative care patients — provided that the nurse has completed a specialist course or a qualification course, holds the title of a nursing specialist if relevant knowledge was included in the curriculum;
  - c. preparing a patient to be treated using continuous ambulatory peritoneal dialysis (CAPD). Independent nursing should be performed according to your knowledge and skills acquired after graduating from nursing school or midwife school — provided that the nurse has completed a specialist course or a qualification course, holds the title of a nursing specialist if relevant knowledge was included in the curriculum, or has the Master's degree in nursing;
  - d. performing endotracheal intubation in health emergencies — provided that the nurse has completed a qualification course or holds the title of a nursing specialist if relevant knowledge was included in the curriculum;
  - e. administration of blood products, recombinant clotting factor concentrates, and desmopressin in health emergencies;
4. providing rehabilitation, including rehabilitation of psychiatric patients — provided that the nurse has completed a specialist course in this particular field or a qualification course in the field of psychiatric nursing, holds the title of a nursing specialist if relevant knowledge was included in the curriculum, or has the Master's degree in nursing [1].
 

The presented prophylactic, diagnostic, therapeutic and rehabilitation services may be provided as part of independent nursing functions, without the physician's order, provided that the nurse has completed appropriate post-graduate training (specialist course, qualification course, or specialization) or has a Master's degree in nursing, or in the event of a health emergency. It should, therefore, be highlighted that in the cases where certain health benefits have not been listed in the provisions of §3 in relation to nurses, and are, therefore, not subject to the requirements laid down in those provisions, nurses may independently provide such services without the physician's order, provided that they had acquired relevant knowledge and skills in the nursing or midwifery school (i.e. as part of graduate training). As a consequence, a nurse is obliged to determine whether his/her graduate training had provided him/her with skills and knowledge relevant to carrying out specific activities [1, 2].

According to Article 3(6) of the Act of 8 September 2006 on the State Emergency Medical Services (Journal of Laws 2016.1868, as amended), medical emergency procedures may be carried out independently by healthcare system nurses. In addition, prophylactic and therapeutic services are provided by nurses employed or at service in state-funded healthcare facilities established by the Minis-

try of Defense and military units. With regard to the aforementioned activities, the provisions of the Ordinance enumerate (in §4 and §6) the specific activities that may be carried out by nurses without the physician's order [3].

Although nurses are entitled to provide certain services without the physician's order or supervision, they should, according to paragraphs 8(1) and (2) of the Ordinance, notify the attending physician of all services provided, medications administered, and examinations performed in the patient as part of independent practice [1].

### **INDEPENDENCE IN THE ADMINISTRATION OF DIAGNOSTIC TESTS AND MEDICINAL PRODUCTS**

Nurses may, independently and without the physician's order, collect any type of examination material as specified in their professional qualifications acquired as part of graduate and post-graduate training for diagnostic purposes. This includes, in particular, samples of venous blood, urine, saliva, stool, hair, nail scrapings, upper respiratory tract swabs, wound swabs, urinary tract and genital swabs, rectal swabs, eye swabs, buccal swabs, and cytological swabs. Diagnostic tests that may be carried out as part of independent nursing activities include

1. tests involving the use of analyzers, i.e. hematology with differential counts and platelet counts, sodium, potassium, creatinine, glucose, lactates, prothrombin time, thyroid-stimulating hormone (TSH), capillary blood gas, venous blood gas;
2. tests involving the use of rapid diagnostic tests, i.e.: C-reactive protein (CRP), troponin, glycated hemoglobin, urinalysis (protein, ketones, glucose, pregnancy tests);
3. tests involving the use of measuring devices, i.e. transcutaneous bilirubin measurements, glucose measurements involving the use of glucometer [4].

Table 1 lists the 32 types of medicinal products (active ingredients) which may be administered to the patient by nurses and/or midwives without a medical order.

Nurses are entitled to order independently supportive materials from a list comprised of 17 items, in particular, disposable catheters for upper airway suctioning and urological catheters, single-use self-adhesive stoma bags

(single-piece systems or dual bag/plate systems) and other stoma equipment, absorbent materials (adult diapers, anatomical diapers, absorbent pants, soaker pads, anatomical inserts), anti-bedsore mattress, dressings, diagnostic strips for glucose measurements, and nebulizers [4].

### **INDEPENDENCE IN PROVIDING CARE TO KIDNEY RECIPIENTS**

Immediately after the transplantation procedure, care to kidney recipients is provided by surgical nurses. Further care is provided by nurses employed at the transplantation or nephrological wards. After discharge, the patient remains under maintenance care of the outpatient transplantation clinic team [5]. Table 2 lists the typical services required (in the opinion of the authors of this article) as part of medical care for kidney transplant recipients, which can be provided by nurses without a medical order.

Since 2017, nurses have been offered an opportunity to participate in a qualification course in transplantation nursing. Having completed the course, a nurse is entitled to perform certain services including:

1. collection and interpretation of laboratory tests based on the diagnosed patient's condition;
2. physical and mental preparation of adult or pediatric recipients for transplantation;
3. planning and provision of measures aimed at preventing infections in patients after transplantation;
4. monitoring and assessment of the transplanted organ function on the basis of the overall condition of the recipient, as well as additional investigations;
5. diagnosing surgical complications and complications of immunosuppressive treatment on the basis of observation, as well as collection and interpretation of laboratory studies;
6. providing the recipient and his/her family with appropriate pre-transplantation education as part of procedure preparations;
7. providing the recipient and his/her family with appropriate education on post-transplantation lifestyle requirements;
8. development of educational programs for living donors (preoperative) and recipients after the transplantation.

▶▶ Although nurses are entitled to provide certain services without the physician's order or supervision, they should, according to paragraphs 8(1) and (2) of the Ordinance, notify the attending physician of all services provided, medications administered, and examinations performed in the patient as part of independent practice◀◀

**Table 1.** A list of medicinal products administered to the patient by nurses and/or midwives without a medical order [1]

No.	Common name (name in English)	Formulation
1	<i>Acidum acetylsalicylicum</i> (acetylsalicylic acid)	Tablets
2	<i>Budesonidum</i> (budesonide)	Nebulizing suspension
3	<i>Captoprilum</i> (captopril)	Tablets
4	<i>Clemastinum</i> (clemastine)	Tablets, syrup
5	<i>Drotaverini hydrochloridum</i> (drotaverine hydrochloride)	Tablets, suppositories, solution for injection
6	<i>Furosemidum</i> (furosemide)	Tablets
7	<i>Glyceroli trinitras</i> (glycerol trinitrate)	Tablets, sublingual spray
8	<i>Glucagoni hydrochloridum</i> (glucagone hydrochloride)	Solution for injections
9	<i>Glucosum</i> 5% (glucose 5%)	Solution for infusions
10	<i>Glucose</i> 20% (glucose 20%)	Solution for injections
11	<i>Hydrocortisonum</i> (hydrocortisone)	Solution for injections, cream, ointment
12	<i>Hydroxyrinum</i> (hydroxyzine)	Tablets, syrup
13	<i>Ibuprofenum</i> (ibuprofen)	Tablets
14	<i>Ketoprofenum</i> (ketoprofen)	Tablets
15	<i>Lidocaini hydrochloridum</i> (lidocaine hydrochloride)	Gel, aerosol
16	<i>Loperamidi hydrochloridum</i> (loperamide hydrochloride)	Tablets
17	<i>Magnesii sulfas</i> (magnesium sulphate)	Solution for injections
18	<i>Metamizolum natricum</i> (metamizole sodium)	Tablets, suppositories
19	<i>Metamizolum natricum + papaverinum + atropinium</i> (Metamizole sodium + papaverine + atropine)	Suppositories
20	<i>Metoclopramidum</i> (metoclopramide)	Tablets
21	<i>Metoprololi tartas</i> (metoprolol tartrate)	Tablets
22	<i>Natrii chloridum</i> 0.9% (sodium chloride 0.9%)	Solution for infusions
23	<i>Papaverini hydrochloridum</i> (papaverine hydrochloride)	Solution for injections
24	<i>Paracetamolum</i> (paracetamol)	Suppositories, tablets, solution for injections
25	Isotonic standard polyelectrolyte solution	Solution for infusions
26	<i>Salbumolum</i> (salbutamol)	Nebulizing solution
27	<i>Suppositoria glyceroli</i> (glycerol suppositories)	Suppositories
28	<i>Solutio Ringeri</i> (Ringer's solution)	Solution for intravenous infusions
29	<i>Thiethylperazinum</i> (thiethylperazine)	Suppositories, tablets
30	<i>Oxygenium medicinalis</i> (medical oxygen)	Gas
31	<i>Epinephrinum</i> (epinephrine)	Solution for injections
32	OTC medicinal products	All available

OTC — over-the-counter drugs

▶▶The greater professional autonomy has a significant impact on strengthening the position of nurses in the healthcare system. Today, a nurse plays an important role in the comprehensive health services provided to kidney recipients◀◀

## SUMMARY

From 23 March 2017, nurses should comply with the new Ordinance which comprehensively regulates the scope of health services to be independently provided by nurses and describes their new professional competencies and specific occupational conditions (emergency medical services, the military).

The Ordinance empowers nurses to perform a wider scope of activities that can be carried out without medical order and in emergency settings. The greater professional autonomy has a significant impact on strengthening the position of nurses in the healthcare system. Today, a nurse plays an important role in the comprehensive health services provided to kidney recipients.

**Table 2.** Nursing services provided without medical order to kidney transplant recipients

Service type	Service characteristics	Comments
PROPHYLACTIC	Counseling to patients and their families on self-care and coping with disease and impairment	Graduate training
	Counseling on adult nutrition	Graduate training
	Counseling on pediatric nutrition (pediatric recipients)	The title of pediatric nursing specialist
	Education of patients with diabetes and their families	Specialist course or qualification course or a title of a nursing specialist if relevant knowledge was included in the curriculum, or the Master's degree in nursing
	Maintaining proper hygiene of skin and mucous membranes with pharmaceuticals and medical materials	Graduate training
	Delivering protective vaccinations according to vaccination schedules or as ordered by relevant healthcare institutions, issuance of vaccination certificates	Specialist course in relevant field
DIAGNOSTIC	Carrying out a physical examination	Specialist course or qualification course or a title of nursing specialist obtained after 2001, completion of the first-cycle degree program in nursing starting in 2012/2013, or a professional Advanced Physical Assessment certificate
	Performing standard, resting ECG examinations, and recognizing electrocardiographic features of pathological conditions in medical emergency situations	Specialist course in relevant field
	Arterial blood gas examinations using a cannula previously installed by a physician arterial blood gas in medical emergency situations	Qualification course or a title of a nursing specialist if relevant knowledge was included in the curriculum
	Diagnostic tests for determination of blood and urine ketones and glucose levels	Graduate training
	Blood glucose measurements taken using a glucometer	Graduate training
	Collection of specimens for microbial assays (urine, stool, saliva, nasal swabs, pharyngeal swabs, genital swabs, other secretions)	The title of nursing specialist
THERAPEUTIC	Pulse oximetry measurements	Graduate training
	Water balance monitoring	Graduate training
	Assessment of the patient's consciousness using appropriate evaluation methods (schemes, classifications)	Graduate training
	Choice of wound treatment methods	Specialist course or qualification course or a title of a nursing specialist if relevant knowledge was included in the curriculum, or the Master's degree in nursing
	Planning appropriate patient diets based on relevant guidelines	Graduate training
	Selection and use of different patient feeding techniques	Graduate training
	Delivering heat and cold treatments	Graduate training
	Urinary catheter insertion and removal	Graduate training
	Bladder washout	Graduate training
	Rectal procedures (enemas, drip infusions)	Graduate training
	Suture removal	Specialist course
	Emergency oxygen supply	Graduate training
Administration of blood products, recombinant clotting factor concentrates, and desmopressin in health emergencies	Graduate training	

**Table 2.** Nursing services provided without medical order to kidney transplant recipients

Service type	Service characteristics	Comments
THERAPEUTIC	Peripheral venous cannulations	Graduate training
	Intravenous administration of drugs and intravenous infusion of fluids as part of cardiopulmonary resuscitation proceedings in line with relevant emergency care standards	Specialist course in cardiopulmonary resuscitation
	Emergency modification of fixed-dose short-term insulin treatments	Graduate training
REHABILITATION	Delivering bedside rehabilitation to prevent immobilization-related complications	Graduate training
	Supervision of mobilization (sitting, verticalization, self-care training)	Graduate training

## REFERENCES

1. Ordinance of the Minister of Health of 28 February 2017 on the nature and extent of preventive, diagnostic, therapeutic, and rehabilitation services independently provided by a nurse or a midwife without the physician's order, Journal of Laws 2017.497. <https://dziennikustaw.gov.pl/DU/2017/497> (April 10, 2021).
2. Paszkowska M. Pielęgniarka w polskim systemie ochrony zdrowia. *Wiad Lek.* 2020; 73(8): 1771–1779.
3. Notice by the Speaker of the Sejm the Republic of Poland of 31 October 2016 on the publication of consolidated text of the Act on the State Emergency Medical Services (Journal of Laws 2016.1868, as amended). <https://dziennikustaw.gov.pl/DU/2016/1868> (April 10, 2021).
4. Paszkowska M. Samodzielne udzielanie świadczeń zdrowotnych przez pielęgniarki w świetle nowego rozporządzenia. *Pielęgniarstwo w Stanach Nagłych.* 2017; 1: 69–76.
5. Czerwiński J, Małkowski P. *Medycyna transplantacyjna dla pielęgniarek.* PZWL, Warszawa 2017.
6. Program Kursu Kwalifikacyjnego w Dziedzinie Pielęgniarstwa Transplantacyjnego dla pielęgniarek. Centrum Kształcenia Podyplomowego Pielęgniarek i Położnych. <https://ckppip.edu.pl/wp-content/uploads/2020/10/Pielęgniarstwo-transplantacyjne.pdf> (April 10, 2021).