

## Nursing diagnoses in patients with new onset heart failure

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**Abstract:** The authors present the most important risk and actual nursing diagnoses in patients with new onset heart failure.

**Key words:** nursing, diagnosis, heart failure.

**Rezumat:** Autorii prezintă cele mai importante riscuri și cele mai actuale diagnostice nursing pentru pacienții cu insuficiență cardiacă nou instalată.

**Cuvinte cheie:** nursing, diagnostic, insuficiență cardiacă.

The nursing process means organizing „the care of individuals, families, and communities” (Lunney 2009). The nursing process has several steps: assessment, diagnosis, outcome identification, planning, implementation, and evaluation (Saba 2009).

The diagnosis, as the second part of the nursing process, is divided into five types: actual diagnosis, risk diagnosis, health-promotion diagnosis, wellness diagnosis, and prioritizing diagnosis. The actual nursing diagnosis components are: the label (a concise phrase), the definition (a clear description), the defining characteristics, the risk factors (genetic, physiological and the psychological conditions or environmental agents associated with higher incidence of the disease), and related factors (conditions that could lead to the existing symptomatology) (NANDA 2009).

The terminology is especially standardized by the North American Nursing Diagnosis Association (NANDA), the American Heart Association (AHA) Council on Cardiovascular Nursing (CVN), the Clinical Care Classification System of Nursing Diagnoses (CCC), and the European Society of Cardiology (ESC) Council on Cardiovascular Nursing and Allied Professions (CCNAP) (Saba 2009, NANDA 2009, AHA 2009, ESC 2009).

Heart failure is a syndrome defined by some symptoms (breathlessness, fatigue), signs (tachycardia, pulmonary rales, turgescient jugular veins, hepatomegaly, oedema of the legs) and evidence of anatomical and/or functional alterations (echocardiogram abnormalities, elevated natriuretic peptide level) (Dickstein et al 2008; Hunt et al 2005).

„Acute” heart failure may indicate the severity (pulmonary oedema) or the short time interval between the occurrence and worsening of symptoms (slow onset or new onset heart failure). Therefore, to avoid confusion, heart failure is divided into

three types: new onset (first presentation, acute onset, and slow onset), transient (recurrent), and chronic (persistent) (Dickstein et al 2008).

There are some important methods to avoid cardiovascular nurses' misdiagnosis in patients with new onset heart failure and to reduce the mortality: identifying and counseling patient subpopulations at risk (e.g. vulnerable to acute myocardial infarction or with congestive/ end-stage heart disease) (Buckley et al 2007; Hadjistavropoulos et al 2008; Bader et al 2009), recognizing defining characteristics of new onset heart failure (Bird et al 2009; Craft-Rosenberg et al 2009; Hill 2009), knowing how to monitor devices (Rathman et al 2008), and observing response to medical treatment (Hill 2009)

The most important elements of cardiac patient education are: motivating patients to improve their well-being, maintaining the balance rest-exercise, stopping gain weight, reducing sodium and water intake, and taking specific pills (Hill 2009; Wu et al 2008).

Concerning to health promotion, there are at least two types of diagnoses (NANDA 2009):

- Ineffective Self Health Management (Domain 1. Health Promotion. 00078)
- Sedentary Lifestyle (Domain 4. Activity/Rest. 00168)

According to NANDA Classification, patients with well-defined illness (new onset heart failure) may have two types of diagnoses – risk and actual diagnoses (NANDA 2009).

The main risk diagnoses are as follows (NANDA 2009):

- Risk for Electrolyte Imbalance (Domain 2. Nutrition. 00195)
- Risk for Deficient Fluid Volume (Domain 2. Nutrition. 00028)
- Risk for Imbalanced Fluid Volume (Domain 2. Nutrition. 00025)
- Risk for Decreased Cardiac Tissue Perfusion (Domain 4. Activity/Rest. 00200)
- Risk for Ineffective Renal Perfusion (Domain 4. Activity/Rest. 00203)
- Risk for Shock (Domain 4. Activity/Rest. 00205)

The most important actual diagnoses in patients with diagnosed heart failure are as follows (NANDA 2009):

- Deficient Fluid Volume (Domain 2. Nutrition. 00026)
- Activity Intolerance (Domain 4. Activity/Rest. 00094)
- Noncompliance (Domain 10. Life Principles. 00079)

According to CCC, noncompliance, defined as „failure to follow therapeutic recommendations“, is a concept included in G category (health behavioral) whose code is 20 (SABA 2009). Patients with new onset heart failure may have noncompliance of diagnostic test (code CCC 20.1), dietary regimen (code CCC 20.2), fluid volume (code CCC 20.3), medication (code CCC 20.4), and therapeutic regimen (code CCC 20.6) (SABA 2009). Poor adherence or nonadherence to indications and medications are the major causes of preventable rehospitalizations for heart failure (Wu et al 2008; Finch et al 2003)

There are some risk diagnoses in patients undergoing treatment (NANDA 2009):

- Risk for Shock (Domain 4. Activity/Rest. 00205)
- Risk for Electrolyte Imbalance (Domain 2. Nutrition. 00195)
- Risk for Ineffective Renal Perfusion (Domain 4. Activity/Rest. 00203)

Registered nurses' clinical judgement and relationships with patient based on trust must improve the quality of patient care and minimize the risk of fatal complications (Gardetto et al 2007; Ekman et al 2007).

Many actual nursing diagnoses can be established in patients with "acute" heart failure (NANDA 2009):

- Decreased Cardiac Output (Domain 4. Activity/Rest. 00029)

- Ineffective Peripheral Tissue Perfusion (Domain 4. Activity/Rest. 00204) in case of cardiogenic shock
- Impaired Urinary Elimination (Domain 3. Elimination and Exchange. 00016). Changes in the kidney function define the concept of renal alteration (category T – urinary elimination; code CCC 50) (SABA 2009)
- Impaired Gas Exchange (Domain 3. Elimination and Exchange. 00030) in patients with cyanosis
- Ineffective Breathing Pattern (Domain 4. Activity/Rest. 00032) if dyspnea is important
- Deficient Fluid Volume (Domain 2. Nutrition. 00026) if diuretics are in excess
- Insomnia (Domain 4. Activity/Rest. 00095) in patients with chest pain and dyspnea
- Anxiety (Domain 9. Coping/Stress Tolerance. 00146) if breathlessness is impressive
- Bathing Self-Care Deficit (Domain 4. Activity/Rest. 00108) in subjects with dyspnea and fatigue
- Dressing Self-Care Deficit (Domain 4. Activity/Rest. 00109)
- Feeding Self-Care Deficit (Domain 4. Activity/Rest. 00102)
- Toileting Self-Care Deficit (Domain 4. Activity/Rest. 00110)

In conclusion, nursing diagnoses are very important for the management of patients with new onset heart failure and contribute to improved patient outcomes.

## References

- Bader M. K., Neal B., Johnson L., Pyle K., Brewer J., Luna M. et al, 2009 Rescue me: saving the vulnerable non-ICU patient population. *Int Comm J Qual Patient Saf* 35:199-205.
- Bird M.W., Woods A. G., Warren N. A., 2009 Factors influencing treatment delays for acute myocardial infarction. *Crit Care Nurs Q* 32:19-23.
- Buckley T., McKinley S., Gallagher R., Dracup K., Moser D. K., Aitken L. M., 2007 The effect of education and counselling on knowledge, attitudes, and beliefs about responses to acute myocardial infarction symptoms. *Eur J Cardiovasc Nurs* 6:105-111.
- Craft-Rosenberg M., Smith K., 2009 Nursing diagnosis in education. In: NANDA International. *Nursing Diagnoses. Definitions and Classification 2009-2011*. Wiley-Blackwell Chichester UK:24-27.
- Dickstein K., Cohen-Solal A., Filippatos G., McMurray J. J. V., Ponikowski P. et al, 2008 ESC Guidelines for the diagnostic and treatment of acute and chronic heart failure 2008. *Eur Heart J* 29:2388-2442.
- Ekman I., Schaufelberger M., Kjellgren K. I., Swedberg K., Granger B. B., 2007 Standard medication information is not enough: poor concordance of patient and nurse perceptions. *J Adv Nurs* 60:181-186.
- Finch N., Sneed N., 2003 Quality of life when living with heart failure. *Crit Care Nurs Clin North Am* 15:511-517.
- Gardetto N. J., Carroll K. C., 2007 Management strategies to meet the core heart failure measures for acute decompensated heart failure: a nursing perspective. *Crit Care Nurs Q* 30:307-320.
- Hadjistavropoulos H. D., Dunn-Pierce T., Biem H. J., 2008 Provider perceptions of implementation of integrated care pathways for patients with chronic heart conditions. *Can J Cardiovasc Nurs* 18:20-26.
- Hill C. A., 2009 Acute heart failure: too sick for discharge teaching. *Crit Care Nurs Q* 32:106-111.

- Hunt S. A., Abraham W. T., Chin M. H., Feldman A. M., Francis G. S., Ganiats T. G., 2005 ACC/AHA 2005 Guideline update for the diagnosis and management of chronic heart failure in the adult-summary article. *Circulation* 112:1825-1852.
- Lunney M., 2009 Assessment, clinical judgement, and nursing diagnoses: how to determine accurate diagnoses. In: NANDA International. *Nursing Diagnoses. Definitions and Classification*. Wiley-Blackwell, Chichester UK:3-17.
- NANDA International, 2009 *Nursing Diagnoses. Definitions and Classification 2009-2011*. Wiley-Blackwell, Chichester UK 53-70, 71-156, 235-304.
- Rathman L., Repoley J., Delgado S., Trupp R., 2008 Using devices for physiologic monitoring in heart failure. *J Cardiovasc Nurs* 23:159-168.
- Wu J. R., Moser D. K., Lennie T. A., Burkhart P. V., 2008 Medication Adherence in patients who have heart failure: a review of the literature. *Nurs Clin North Am* 43:133-153.
- [www.sabacare.com](http://www.sabacare.com) The Clinical Care Classification System of Nursing Diagnoses (CCC) Virginia K Saba
- [www.nanda.org](http://www.nanda.org) North American Nursing Diagnosis Association (NANDA)
- [www.americanheart.org/presenter.jhtml?identifier=1148](http://www.americanheart.org/presenter.jhtml?identifier=1148) American Heart Association (AHA) Council on Cardiovascular Nursing (CVN),
- [www.escardio.org/communities/councils/CCNAP/Pages/welcome.aspx](http://www.escardio.org/communities/councils/CCNAP/Pages/welcome.aspx) European Society of Cardiology (ESC) Council on Cardiovascular Nursing and Allied Professions (CCNAP)

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