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Self-Administration of Medication in Hospital: A Review

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Abstract
The idea of patients self-administering their medication in hospital is not new; it was first cited in literature in 1959. Up to date, there is a growing body of literature that recognizes the importance of this approach. In this current state of the literature, self-administration of medication in hospital is positioned in the context of the definition of health as proposed by Huber et al. and Orem’s self-care deficit theory: first identify the concept of medication self-administration, as well as the prevalence, existing procedures, tools, and proven effects of interventions; then the findings should point the way forward for research, practice, and policy.

Keywords
hospital, medication, nursing, self-administration

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Self-Management: Part of Health

The World Health Organization (WHO) formulated a definition of health in 1948, describing health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (WHO, 1948). This definition has not been amended since 1948 (WHO, 1948). In 2011 during a Dutch conference, Huber et al. (2011) proposed a new definition on health. This proposal was based on the various critiques on the WHO definition, stating the absoluteness of the word “complete” in relation to a person’s well-being, changes in the nature of disease in current times, a worldwide increase of chronic diseases, and the difficulty to objectify and measure “complete” physical, mental, and social well-being. The new definition of health was described as “the ability to adapt and self-manage in the face of social, physical, and emotional changes” (Huber et al., 2011, p. 1).

Self-Management: A Fundamental Principle in Nursing

The dynamic description of managing various types of changes in life in order to maintain health, as described by Huber et al. (2011), can also be found in Orem’s general theory of nursing (Orem, 2001).

From the viewpoint of Orem’s theory, it is possible to describe how and why people care for themselves. Individuals focus on the “self,” or the “I”; this includes all activities individuals perform or initiate on their own behalf in maintaining life, health, and well-being. If necessary, individuals perform self-care activities in line with their personal abilities in order to maintain life, health, and well-being. Yet these abilities could be influenced by their age, gender, stage of development, life experience, sociocultural factors, living patterns, healthcare or family system, available resources, and their health (Meleis, 2012; Orem, 2001).

When a demand to care for oneself is greater than the individual’s ability to meet this demand, a self-care deficit is present. As described within Orem’s self-care deficit theory, actions undertaken in order to deal with a self-care deficit focus on “we.” Concerning Orem’s approach, with the nursing process, nurses evaluate and determine self-care deficits and define both the role of the nurse and the patient in order to meet the self-care demands. This nursing process consists of three steps. First, an assessment is completed to determine the problem or deficit. During the second step, a nursing diagnosis is made, and a nursing care plan is described for delivering care. Three types of nursing systems can be proposed in order to fulfill the patient’s self-care needs: (a) wholly compensatory system, (b) partially compensatory system, or (c) supportive educative system (Meleis, 2012; Orem, 2001).

Self-Management and Self-Care

As stated in the above mentioned definition of health by Huber et al. (2011) in Orem’s theory, self-care and self-management are key aspects of maintaining health and a fundamental principle of nursing. Richard and Shea (2011) provided a thorough description of both self-care and self-management with the use of a concept delineation process. Self-care was defined as “the ability to care for oneself and the performance of activities necessary to achieve, maintain, or promote optimal health (including activities specific to acute and chronic health conditions)” (Richard & Shea, 2011, p. 261). Self-care was described as a wide range of health and human development applications. The aspect of self not only referred to an individual, it also included broader social support systems. Furthermore, it focused not only on an illness or disease but also on prevention and other applications beyond this. Self-management was defined as “the ability of the individual, in conjunction with family, community, and healthcare professionals, to manage symptoms, treatments, lifestyle changes, and psychosocial, cultural, and spiritual consequences of health conditions (particularly chronic diseases)” (Richard & Shea, 2011, p. 261). It was observed that the term self-management was mostly related to chronic disease. It included actions such as managing treatments and medications, safety, symptoms, and other implications of chronic diseases. Taken together, the conceptual model provided within this study showed self-management falls within the domain of self-care. In addition, the research revealed the use of self-management programs that provide interventions for facilitating patients’ abilities to self-monitor and be active partners in the health management process (Richard & Shea, 2011).

The evolution toward self-care and self-management in healthcare resulted in patients being more actively involved in their own health. During the 20th century, movements toward more self-care were observed (McCormack, 2003). This movement continued, resulting in several social movements, social reform, and self-help movements (Castro, Van Regenmortel, Vanhaecht, Sermeus, & Van Hecke, 2016; McCormack, 2003; Wilkinson & Whitehead, 2009). This shift toward individuals being more involved and taking responsibility for their health led to policy changes. These changes paved the way for the involvement of patients in the healthcare process. For example, the Canadian Minister of Health, Jake Epp, identified self-care as one of the three mechanisms to address health challenges in 1986. It was placed in a central position within a national framework for health promotion. Also, the burden of increasing chronic diseases and increasing numbers of older citizens
motivated participation in self-care and resulted in a focus on self-management programs (McCormack, 2003; Wilkinson & Whitehead, 2009). In addition, Vandeurzen, Belgian Minister of the Flemish Division of Wellbeing, Public Health and Family, also noted this shift. As stated in his position paper published in 2014 and his opinion paper published in 2010, he accentuated the importance of a self-reliant citizen and the need for patient-centered care. Both papers acknowledged that citizens expect more self-determination (Vandeurzen, 2010, 2014). In addition, De Block, Belgian Minister for Social Affairs and Public Health, described the increased use of eHealth influencing patient empowerment in her position paper in 2014 (De Block, 2014). Up to date, this resulted in a website for all Belgian citizens, which provided health records within a personal health viewer. The website aims to allow individuals to be actively involved in their care, make informed decisions about their care, and engage in a dialogue with healthcare providers (Federal Public Service for Public Health, 2018).

Together with increased patient participation and patients being actively involved in their own care, the approach of healthcare providers was transformed from a paternalistic approach, associated with compliance, toward a more empowering and egalitarian approach necessary for equal partnership and patient participation (Barlow, Wright, Sheasby, Turner, & Hainsworth, 2002; London Audit Commission, 2001; McCormack, 2003; Trappenburg et al., 2013; Wilkinson & Whitehead, 2009).

Medication Self-Management

Patients are increasingly involved in healthcare, as self-management—a part of self-care—is encouraged within healthcare systems. The aspect of medication self-management is considered a very important aspect, given that pharmacotherapy plays an essential role in the treatment of various illnesses. For this reason, patients should be able to correctly self-manage their medication (Richard & Shea, 2011). Therefore, healthcare professionals should focus on medication self-management.

Self-management of medication has been previously defined as “the extent to which a patient takes medication as prescribed, including not only the correct dose, frequency and spacing, but also its continued, safe use over time.” (Bailey, Oramasionwu, & Wolf, 2013, p. 22). This definition not only includes the act of administering medication but also takes into account patients’ needs to fulfill a set of actions in order to manage their medicines in ambulatory care. The process of self-management of medication has been translated into a model by Bailey et al. (2013). It starts with a prescription, which has to be filled and picked up. During the second step patients obtain their medicines and should learn how to use them correctly (know the name of the medicine, the administration route, the administration time). The third step includes organizing their medication intake and planning their daily medicines schedule. Actually taking the prescribed medication was described in the fourth step of the model. During Step 5, patients monitor their medication intake and evaluate, for example, possible side effects or symptoms related to their medicines in order to undertake any action if needed. The last step concerns the act of sustaining a correct medication intake routine in a safe and appropriate way (Bailey et al., 2015; Bailey et al., 2013).

The Impact of Medication Self-Management

Medication self-management requires patients to complete a set of actions, as can be derived from the medication self-management model. Literature on this aspect shows that individuals struggle in various ways during this process, influencing medication adherence.

A literature search indicated that 22.8% of community-based patients living in Portugal did not fill all their prescriptions (da Costa et al., 2015). These findings were in line of 29.5% of American women over 55 years old who did not pick up their bisphosphonate prescription within 60 days (Tamblyn, Eguale, Huang, Winslade, & Doran, 2014). A Canadian study on filling newly prescribed drugs in a population of those over 66 years of age showed 24.0% of the included population did not fill all of their prescriptions within 30 days after hospital discharge (Fallis, Dhalla, Klemensberg, & Bell, 2013).

After correctly filling and picking up their medicines in Step 2, they should have knowledge and understanding of their medicines. Yet understanding prescription labeling and written information sources remains difficult. In order to overcome this hurdle, Mullen and colleagues (2018) provided a recent systematic review on best practices for the prescription medication information. Previous Spanish research on medication knowledge has established that out of 7,278 individuals attending their pharmacy, only 28% had sufficient medication knowledge. Participants scored lowest on the dimension of medication safety issues (Romero-Sanchez et al., 2016).

It has been demonstrated that not only having knowledge and understanding on medicines is important but also organizing how and when to take medicines within daily routines is an essential third step within the process of self-management of medication. A meta-analysis on the impact of dosing frequency on adherence in patients with chronic cardiovascular diseases indicated a once-daily administration was associated with a 56.0% reduction on
the risk of nonadherence compared to two or more daily administrations (RR: 0.44, 0.35-0.54) (Caldeira, Vaz-Carneiro, & Costa, 2014). A systematic review by Conn, Ruppar, Enriquez, and Cooper (2016) on medication adherence intervention studies highlighted the positive effect of creating a link between medication administration and daily routines. This specific intervention was effective in increasing medication adherence (Conn et al., 2016). Also, the guidelines for the management of arterial hypertension of the European Society of Hypertension indicated single-pill fixed-dose combinations can reduce pill burden and simplify treatment regimens (Mancia et al., 2013).

In the next stage, patients will actually administer medication. Performing this act of medication administration and hereby adhering to the therapy has been defined by the WHO as “the extent to which a person’s behavior – taking medication, following a diet, and or executing lifestyle changes – corresponds with the agreed recommendations from a provider” (Sabate, 2003). The WHO report “Adherence to Long-term Therapies: Evidence for Actions” stated only 50% of patients suffering chronic diseases adhered to their medication therapies (Sabate, 2003). More recent estimated rates of nonadherence to medication in Middle Eastern countries ranged from 1.4% to 88% and an average of 57% in a large meta-analysis in cardiovascular diseases (Al-Qasem, Smith, & Clifford, 2011; Naderi, Bestwick, & Wald, 2012).

The act of monitoring requires health literacy and knowledge on potential side effects, risks, contraindications, interactions, and warnings in order to act correctly upon symptoms or signs related to medication intake (Sabate, 2003). Research by Romero-Sanchez et al. (2016) indicated that these competences were inadequate.

The last step of the model of medication self-management is sustaining a correct medication intake routine in a safe and appropriate way (Bailey et al., 2013). This final step was described in literature as persistence, which was defined as “the length of time between initiation and the last dose, which immediately precedes discontinuation.” (Vrijens, Antoniou, Burnier, de la Sierra, & Volpe, 2017, p. 696; Vrijens et al., 2012). A recent systematic review on the persistence rates in rheumatoid arthritis, psoriasis, and psoriatic arthritis patients indicated that persistence rates were low. Factors such as younger age, female gender, high medication-related costs, greater disease severity, and increased comorbidities were associated with lower persistence rates (Murage et al., 2018). In addition, a retrospective study evaluated the persistence in six medication classes (prostaglandin analogs, statins, bisphosphonates, oral antidiabetics, angiotensin II receptor blockers, and overactive bladder medications). Overall, it was possible to conclude persistence rates differed; mostly, prostaglandin analogs and overactive bladder medications (37% to 35%) were not optimal compared to other classes (range: 60% to 72%) (Yeaw et al., 2009).

**Self-Management of Medication in Hospital**

The importance of self-management in maintaining health was previously described by Huber et al. and confirmed by Orem’s general theory of nursing (Huber et al., 2011; Meleis, 2012; Orem, 2001). An important aspect of self-management included self-management of medication (Richard & Shea, 2011). Literature on this topic revealed that individuals not succeeding in self-management of medication have profound implications. As stated in a review by Costa et al. (2015) on interventions employed to improve medication adherence, self-management interventions have proven to positively influence adherence.

During hospitalization, medication administration is a key responsibility of nurses. This results in a disruption in the continuity of the patient’s medication self-management. When allowing patients to continue their medication self-management, nurses—and other healthcare providers—should evaluate the patient’s individual ability to self-manage during their hospital stay. This approach fits Orem’s theory. Patients who are not capable of self-managing medication during their hospital stay require aid. Healthcare providers can, for example, provide nurse-administered medication, allow patients to self-manage, but yet guide them during the act of self-administration, or teach patients concerning their medicines. In line with Orem’s theory, nurses first assess and evaluate the precise self-care deficits related to medication self-management in hospital. Afterwards, a care plan is provided defining the extent to which a patient should be supported. Therefore, medication self-management in hospitals could provide continuity in the medication self-management process of the patient, detect problems related to medication self-management, and intervene, for example, by providing education.

**Self-Management of Medications in Hospital: Not New**

The concept of self-management of medication in hospital was described in the literature in 1959. The article described self-management of medication in hospital as bedside self-medication and self-administered medications. Bedside self-medication was a part of a program for postpartum patients, in which nurses teach mothers about their medicines by showing labels, calling out the name of the medicine, and explaining its purpose. Also, these nurses encouraged mothers to take their medicines, just like they would do in their own home (Parnell, 1959). In recent years, the London Audit Commission, the Society of Hospital Pharmacists of Australia (SHPA),
the Royal Pharmaceutical Society (RPS), and the United Kingdom Nursing and Midwifery Council (NMC) encouraged the implementation of self-management of medication in hospital. Again, the term “self-administration of medication” was used (Davis et al., 2002; London Audit Commission, 2001; RPS, 2005; United Kingdom Central Council for Nursing Midwifery and Health Visiting, 2002). As a result of this, several organizations within the English National Health Service (NHS) provided their guideline on self-administration of medication online available (e.g., the Peninsula Community Health; Palmer, Finnegans, & Darko, 2014).

When looking into the concept of self-administration of medication, it was observed that there are different underlying assumptions and different approaches to self-administration during hospitalization. The SPHA described that self-administration of medication aims to evaluate the medication management of hospitalized patients in order to prevent medication-related problems after discharge. This approach could identify and address problems as a part of the discharge planning process. It enables assessing potential problems or risks concerning medication management in the future (Davis et al., 2002). Compared to the SPHA, the RPS focused more on self-administration of medication as being a transfer of responsibility, which depends on the patient’s ability to manage the involved tasks, as well as giving their consent to self-administer medication in hospital (RPS, 2005). Recent nursing research suggested the term “self-administration of medication” should be adjusted. Self-administration of medication seems to focus mainly on the act of administering medication. Given the significant impact of self-administration on healthcare, the term “self-management” was suggested. Vanwesemael, Van Rompaey, Petrovic, Boussery, and Dilles (2017) indicated this term “includes a broader range of aspects: protocol, screening tool, observation tool, multidisciplinary approach, and social and legal context” (p. 284).

**Prevalence of Self-Administration of Medication in Hospital**

Two systematic reviews performed by Wright, Emerson, Stephens, and Lennan (2006) and Richardson, Brooks, Bramley, and Coleman (2014) regarding the effects of self-administration of medication in hospital included studies from Australia, Hong Kong, United States of America, France, United Kingdom, Canada, Ireland, and New Zealand (Richardson et al., 2014; Wright et al., 2006). Nevertheless, actual literature on the prevalence rates of self-administration in hospitals remains scarce. A study commissioned by the NHS in 2001 showed the actual uptake of self-administration of medication was limited in the 183 NHS hospitals included. Policies are in place, yet they are only applied to a limited category of patients (London Audit Commission, 2001). More recent, in 2011 a study on the medication systems and processes used within 100 NHS hospitals indicated that 93% of the hospitals were equipped with a self-administration of medication policy (McLeod, Ahmed, Barber, & Franklin, 2014). A pilot study conducted at a Flemish medical and surgical ward showed that 32.1% of the included patients (n = 81) self-administered at least one medicine during hospitalization. The majority of these were oral medications (58%) or inhalation therapy (39%) (Vanwesemael, Hellemans, & Dilles, 2014). In a more recent cross-sectional multicenter observational study of 1,269 Flemish hospitalized patients, 22% self-administered at least one medicine during hospitalization, and 13.8% self-administered at least 50% of their total amount of medication. In the opinion of the head nurse, 40.9% of the hospitalized patients would have been able to self-administer their medication during hospitalization. Only a few wards had an available procedure and screening tool to assess the competence of the patients to self-administer their medication. Self-administration occurred significantly more at surgical short-stay wards, compared to other wards. Self-administering patients were on average younger and female and had a lower number of different medications per day before and during hospitalization. These patients had a good health status and were independent to mildly dependent on nurses on the ward (Vanwesemael et al., 2017).

**Interventions and Tools**

In order to facilitate and provide implementation of self-administration of medication in hospitals, guidelines, procedures, or policies are needed. A pilot study conducted at a Flemish medical and surgical ward identified the absence of a procedure or screening tool for self-administration of medication (Vanwesemael et al., 2014). These study findings were acknowledged during a study in 57 Flemish hospital wards in 2015 (Vanwesemael et al., 2017). As previously described, the majority of NHS hospitals are equipped with self-administration of medication guidelines (Glinn, 2013; London Audit Commission, 2001; Palmer et al., 2014). These guidelines consist of several components, based on the Standards for Medicines Management provided by the NMC (2010). Yet after comparing three available guidelines online, it was possible to conclude the content was not similar and sometimes focused differently on some components (London Audit Commission, 2001; Palmer et al., 2014). In conclusion, it is possible to state guidelines within the NHS hospitals were based on the NMC Standards for Medicines Management (NMC, 2010). When evaluating the aforementioned guidelines, it is possible to state that their content was not based on the current body of existing evidence. In addition, the NMC withdrew their standards on January
28, 2019 and provided additional online referrals on management and administration of medicines (Nursing Midwifery Council, 2019).

Literature review on the types of self-administration of medication interventions in hospitals described a great diversity (Richardson et al., 2014; Wright et al., 2006). Two systematic reviews indicated the majority of included studies on self-administration of medication had a variety of levels for a patient to complete during self-administration. A total of 12 studies out of 43 provided 3 levels, 10 studies provided 1 level, and other studies had levels varying between 2 and 9 (Richardson et al., 2014). Acute settings tended to have more single-stage approaches compared to rehabilitation wards (Wright et al., 2006). The vast majority of the self-administration intervention comprised an educational element, in which the pharmacist and/or nurse provided education (Richardson et al., 2014). Education was provided verbally or via written information sheets, diary cards, record sheets, and compliance aids (Wright et al., 2006). A literature search identified one more recent self-administration of medication intervention in hospitals: the SelfMED procedure. This procedure consists of a stepped assessment in order to evaluate the patient’s competencies for self-management performed by healthcare providers and the patient. It provides an overview of practical issues for starting self-management of medication. In addition, a monitoring tool that monitors the patient’s intake of self-managed medication was included. The development of this procedure was evidence-based, and afterward the SelfMED procedure was validated (Vanwesemael, Boussery et al., 2018).

The above mentioned systematic reviews evaluated the structure of self-administration interventions. Evidence on the assessments used for evaluating the patients’ competences in order to self-administer medication could not be obtained, as this was not discussed within these reviews. Also, as previously stated, the assessments provided within the NHS guidelines for self-administration did not appear to be evidence-based, nor were they validated instruments. Therefore, further literature research on validated tools to examine a patient’s ability to self-administer medication in hospitals was performed. This search identified the self-administration of medication (SAM) screening tool. This tool was developed and validated in Australia on three medical wards by Manias, Beanland, Riley, and Hutchinson (2006). The SAM screening tool consisted of two parts. The first part had to be answered by the patient and was filled in by an administrator and evaluated the patient’s desire to self-manage and some demographic data on the patient’s discharge destination and responsibility for medication management following discharge. The second part had to be filled in by the nurses if the patient was willing to self-manage. It consisted of questions on the patient’s capability to self-medicate (11 questions), knowledge of medications and behavior (7 questions), and experience with self-medicating (6 questions). In the end, the nurse needed to make a global assessment with the use of a visual analog scale, resulting in a maximum score of 96 points. The cut-off was installed at 60; below this cut-off patients were not able to self-manage medication (Manias et al., 2006). Afterwards, a study by Anderson, Manias, Kusljic, and Finch (2014) on the validity, reliability, and utility of the SAM screening tool in a rehabilitation unit showed the SAM screening tool could be used to predict patient’s ability to self-administer medication. Also, this tool identified itself as a more objective approach compared to healthcare professionals subjectively evaluating patients’ abilities (Anderson et al., 2014). The recently developed and validated SelfMED procedure also included a patient assessment (SelfMED assessment). This assessment consists of a nurse assessment, patient self-assessment, and a physician assessment. Based on 10 statements, nurses are able to evaluate the patient’s eligibility for medication self-management. If found eligible, the patient has to complete a self-assessment, otherwise the assessment stops. The self-assessment questions reveal the current medication management at home, the patient’s willingness to self-manage medication in hospitals, a possible need for aide while self-managing in hospitals, and the patient’s therapy adherence out of hospitals. If patients indicate that they do not self-manage medication at home or are not willing to do so in hospitals, the assessments stops. Based on both the nurse and the self-assessments, the nurse formulates advice (positive/negative; end of assessment) for the treating physician. In the final phase of the assessment, the treating physician provides the final decision of allowing or declining medication self-management. If the patient is allowed to self-manage, the actual self-managed medicines should be identified by the treating physician (Vanwesemael, Dilles, Van Rompaey, & Boussery, 2018).

**Consequences of Self-Administration.**

Self-administration of medication in hospitals results in consequences for patients and healthcare providers. Two systematic reviews on the effect on outcomes related to above mentioned stakeholders, two qualitative studies on potential benefits and barriers to self-administration concerning patients and healthcare providers, and one cross-sectional study on the willingness and attitude of patients toward self-administration were identified (Manias, Beanland, Riley, & Baker, 2004; Richardson et al., 2014; Wright et al., 2006). Both systematic reviews evaluated patient adherence: one during self-administration of medication in hospital and the other after discharge. It was seen that self-administering patients in hospitals were significantly more adherent in five studies, compared to the
control group (n = 9 studies). However, three studies found lower adherence rates or even more errors in the self-administering group compared to controls. Adherence during self-administration in hospitals was also measured over a period of time in four studies, including a high-quality paper observing a significant reduction in noncompliant behavior. Descriptive studies (n = 7) reported high rates of adherence (40% to 100%) to medication regimens and error rates ranging from 2.5% to 7.5% (Richardson et al., 2014). Results on adherence after discharge were found to be inconclusive (Wright et al., 2006). Two studies on the opinion of inpatients and healthcare providers on self-administration of medication indicated self-administration would result in increased medication adherence rates after discharge. In both studies, participants emphasized possible medication abuse or misuse during self-administration of medication. The effect of self-administration of medication on the knowledge of patients on their own medication was tested in multiple studies. The following aspects concerning knowledge were evaluated: drug name, purpose, appearance, dosage, frequency, and side effects. In summary, the patient’s knowledge on self-administering medication significantly increased. Yet it was not possible to state which aspects of knowledge increased most, as this varied among studies. Also, differences between the education provided (type of counselling) made it difficult to draw conclusions (Richardson et al., 2014; Wright et al., 2006). In addition, when questioning patients on the consequences of self-administration, three out of four patients stated that they would gain knowledge on their prescribed medicines, because of the support they would receive from healthcare professionals. Concerning patients, self-administration of medication does allow respect for the patients’ own knowledge on their medicines (Manias et al., 2004). The measurement of patient satisfaction when self-administering medication showed some contradictory findings. On the one hand, patients reported high satisfaction rates (90% to 100%); on the other hand, 80% of questioned patients from the control groups stated they prefer nurse administration if they could choose between self-administration or nurse administration. These results seem to acknowledge patients who experienced self-administration are more likely to do so again. Also, the patient’s age influenced the willingness for self-administration of medication; 45% of patients younger than 60 years of age were willing to self-administer compared to 18% of patients over 60 years of age (Richardson et al., 2014; Wright et al., 2006). When evaluating the study on the patients’ attitude toward this topic, it is possible to conclude that they stated self-administration would increase their autonomy, their feeling of being independent, and it would make them more satisfied about their hospital stay. The systematic review by Richardson et al. (2014) provided evidence concerning the satisfaction of healthcare providers and possible effects on workload. It was observed that healthcare providers very much preferred to use self-administration of medication interventions. They stated it would benefit structured teaching, multidisciplinary communication, nurse’s medication knowledge, and collaboration between the team and patient. Nevertheless, self-administration was stated to be time-consuming and resulted in increased work stress and workload (preparing medication cards, clerical work, educating patients). Yet it was also mentioned the invested time was eliminated if patients were following the protocol reliably and by saving time on prescriptions and dispensing and drug rounds. It should be noted that currently no evidence on the actual time investment spent on education or facilitating self-administration of medication has been described in the literature (Richardson et al., 2014). According to the opinion of patients, self-administration would lead to a decrease in time devoted to medication rounds. Patients confirmed self-administration encourages a shared relationship and improves the nurse-patient relationship (Manias et al., 2004).

Discussion

The definitions of health by Huber et al. and Orem both accentuate the importance of individuals being able to provide self-care and self-management. Moreover, in recent years, an evolution toward increased patient self-management and self-care was observed. Nonetheless, literature indicated individuals still struggle in self-managing their medicines correctly. Inadequate medication self-management leads to a significant economic burden on healthcare systems, increased hospitalizations, decreased quality of life, loss of productivity, and an increased risk of the individual outcomes of all-cause mortality (Cutler, Fernandez-Llimos, Frommer, Benrimoj, & Garcia-Cardenas, 2018; Fitzgerald et al., 2011; van Boven et al., 2014). Therefore, focusing on the specific aspect of medication self-management, as one of the actions within self-management, is important.

Taking into consideration that a majority of individuals do not succeed in medication self-management and the essential role of healthcare providers in supporting such deficits, it is important to allow and stimulate patients to self-manage their medicines in hospitals under supervision and with the support of healthcare providers. Medication self-management can provide continuity in the medication self-management process of patients, detect problems related to medication self-management, and intervene by providing education, and this would result in better medication self-management and therapy adherence.

Literature on the prevalence of self-administration of medication in hospitals indicated self-administration of medication occurs in daily practice in some countries. Further research should be undertaken to investigate the
prevalence worldwide. An evaluation of existing evidence-based guidelines for self-administration of medication in hospitals identified only one procedure: the SelfMED procedure. In addition, the validated SAM tool and the SelfMED assessment were identified for evaluating the patient’s ability to self-administer medication in hospital.

When implementing the aforementioned procedure or tool in daily practice, a thorough evaluation of the legal possibilities should be provided—for example, evaluating whether self-administration is possible within the current legal rules or providing clarity concerning the responsibilities of all stakeholders during self-administration. In addition, embedding self-administration in daily practice requires some major changes. For example, Belgian research already provided an overview of the advised changes in the medication management process for implementing medication self-administration in hospitals. Literature on the effects of self-administration of medication suggested an increased patient adherence during hospitalization, increased patient medication knowledge, and increased patient satisfaction. Notwithstanding the current body of evidence, it is highly recommended to further refine and validate the existing procedures and tools. Also, it is encouraged to test the feasibility of science-based self-administration of medication policies in hospitals. In addition, as both patients and healthcare providers can take advantage of this approach, the authors suggest investing in evaluating the effect of self-administration of medication on different outcomes and to embed this approach in daily practice.

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