

ADAPTIVE CASE MANAGEMENT AS A TOOL OF ASSESSMENT OF ISSUES OF CHILDREN IN DIFFICULTY¹

MANAGEMENTUL DE CAZ ADAPTIV CA INSTRUMENT DE EVALUARE A PROBLEMELOR COPIILOR AFLAȚI ÎN DIFICULTATE

Mihail CIOBANU²

Abstract

The unpredictability and lack of routine in the manifestation of many aspects of social and economic life makes it difficult to ensure accuracy in determining and implementing measures to address socio-economic problems that are faced by the population of vulnerable groups, especially such a category as children in difficulty due to social, economic, natural and other reasons. One such tool that could meet such requirements is the adaptive case management. This article reviews the concept and use of adaptive case management in various areas of human activity, identifies the challenges of applying this tool and the solutions to them, also it proposes an adaptation of a case template for assessment of the social and economic problems of children in difficulty and their support.

Keywords: *adaptive case management, assessment, child in difficulty, tool*

JEL: I30, I39, J13.

1. Introduction

The multitude of interactions of physical, chemical, biological, social, economic and other factors determine the structure of conditions from the external to the human (in a broad sense, not just in a narrow one (i.e. biological)) to the internal environment of the man (psychic and physiological factors), the latter influencing human resilience to the challenges they face throughout life. Throughout human history for the purpose of socio-human development in general and the perpetuation of life, in particular, both people, in particular, and entities made up of people (tribes, villages, cities, states, empires, etc.), in general, have used various approaches in dealing with human problems.

Some of the most frequently used approaches are of psychological, social and economic orders. As the potential future of human entities and, later, as precious human beings in themselves, children have been given more special attention since the modern era, and in the contemporary era they have been empowered with rights, benefiting from more formalized support from society, although previously they were seen as miniature adults, without any exclusive treatment, in the absence of the social contract, the support of children

¹This paper has been developed within the framework of the Scientific Project for the period 2020-2023, registered in the State Register of projects in the field of science and innovation of the Republic of Moldova with the code 20.80009.0807.29 Proiect Program de Stat "Perfecționarea mecanismelor de aplicare a instrumentelor inovatoare orientate spre creșterea durabilă a bunăstării populației Republicii Moldova" / Project State Program "Improving the mechanisms for applying innovative instruments aimed at sustainably increasing the welfare of the population of the Republic of Moldova".

² PhD Student, scientific researcher at Department of Social Research and Standard of Living at National Institute for Economic Research from Moldova, e-mail: ciobanu.mihail.s@gmail.com

being only in the effort of parents, extended family, community and less often the charity of some and political-administrative entities (city, state, empire, etc.). These changes mark the transition from prioritizing child support for society to prioritizing child support for oneself, in which case, addressing the need for “child for society” takes a back seat. Such approaches are called child-centered approaches. Contemporary child support measures are based on such approaches. However, before implementing child support measures, it is necessary to assess the targeted aspects of the child's life in order to identify children in difficulty who would need support.

2. Literature review

The variety of internal and external factors of the child determine the formation of the diversity and severity of the difficult situations they can reach. The situation of difficulty can be physical-geographical (eruption of a volcano, flood, earthquake), biological (epidemic, attack of animals), psycho-physiological (any illness or any physical, mental, emotional, social disability), socioeconomic (poverty; lack of a parent's job, also including an existing, but inappropriate one for a decent living, etc.) or of other type. This diversity of situations has naturally led to various definitions of the term “children in difficulty”, including its conceptual family, which includes “children in need”, “vulnerable children”, “children at risk” and others both in the use of organizations that support the children (national and international, governmental and non-governmental or otherwise), and in the scientific literature. There doesn't exist an all-encompassing term and definition, but there is a big number of working definitions. UNICEF uses a variety of terms, referring to these children groups: „children at-risk”, “orphans and vulnerable children”, “children in need”, “disadvantaged children”. Children at-risk are seen as the ones who are orphans or abuse victims [UNICEF, 1997:15]. It is a very narrow definition used in the Central and Eastern European countries. Orphan and vulnerable children are those children “under the age of 18 whose mother, father, both parents, or a primary caregiver has died, and who is in need of care or protection”, according to the legislation of Namibia, which is used by UNICEF in Africa [UNESCO, 2010]. This definition includes orphans as the one before it and doesn't focus particularly on abuse, but on the need of care/protection. “Children in need” is a term used by UNICEF in the Eastern Asia, where “disadvantaged children” is also used, essentially meaning children in circumstances which require interventions and services for children protection [UNICEF, 2020:2]. Barbato & Schenk (2008) argue that such terms and their definitions are useful theoretical concepts, while admitting concerns over their issues of ethical order (like stigmatization by labeling), methodological order (appropriateness of the definition) and practical order (the degree of diversity/similarity of support needs) [Barbato & Schenk, 2008]. Also, it's difficult to separate exactly these children without neglecting some other children and that's why we will use the term “children in difficulty”, meaning “children in difficult situations”, as an umbrella term for all these groups of children mentioned earlier in the above-mentioned definitions.

The difficulty of identifying these children also determines the complexity of assessment of their issues, be it of economic order, social, psychological or other type. A tool of assessment that can match such a complexity is the case management, which according to the Commission for Case Manager is “a collaborative process that assesses, plans, implements, coordinates, monitors, and evaluates the options and services required to meet the client's health and human service needs [...] characterized by advocacy, communication, and resource management and [that] promotes quality and cost-effective interventions and outcomes” [Commission for Case Manager Certification, 2021]. One of its basic components is the assessment which can be understood as a thorough apprehension of the needs,

disponible resources, capabilities and community services through a series of actions which may or may not overlap [Luker Smith et al., 2016]: identification of needs; intake; social diagnosis; assessment of the client and his/her family; interviewing; needs assessment (for example: social support, care levels, readiness and willingness for services, living situation, financial resources, access, obstacles, evaluation of the home, need for referral); community assessment; gathering information; using comprehensive assessment instruments; identification of strengths and obstacles to attainment of goals; cognitive and behavioural assessment; identification of present achievements, interests, resources, interests and aspirations; documentation and communication of needs; documentation of aims and objectives; estimation of required level of case management support; screening for co-morbid conditions; determination of decision making capacity.

To overcome any rigidity in the case management and to face the constant growth of data, by the Workflow Management Coalition (WfMC) was proposed recently, in 2009, the concept of a particular type of case management – the adaptive case management (ACM), which was used initially in the business activities and afterwards in other areas of human activity. The original definition of adaptive case management, formulated by the Workflow Management Coalition (WfMC) is that ACM is the "information technology that exposes structured and unstructured business information (business data and content) and allows structured (business) and unstructured (social) organizations to execute work (routine and emergent processes) in a secure but transparent manner" [Workflow Management Coalition, 2017].

E. V. Burns sees the adaptive case management as „managing the work needed to handle a case in a flexible manner by adhering to the principle of planning-by-doing, considering the work context, and the ability to accommodate changes in the environment and the work context"[Burns, 2011]. Adaptive case management, according to Yangolenko, is the "technology that allows you to flexibly manage the process of solving the task (case), depending on the development of the situation"[Yangolenko, 2020]. The Burns' and Yangolenko's definitions look similar in pointing the flexible manner characteristic of ACM. These two definitions differ in that while Yangolenko (2020) argues that process management depends on situation development, but the Burns' definition mentions the ability to accommodate environment and work context changes.

The original definition of ACM narrows it to the business area, unlike the two above-mentioned, and also, besides this, it points to the use of both structured and unstructured information and organizations in ACM while maintaining two contra-distinct aspects - security and transparency. Given what was said, these are only a few of the many definitions of adaptive case management found in scientific literature.

3. The use of Adaptive Case Management

The ACM concept appeared in order to flexibilize data-intensive business processes. The development of the ACM takes place in the context of dynamic competition, multilayering and variability of workflow, as well as the growing dependence of companies on capabilities. Since 2009 ACM was used in the area of finances, healthcare, legal activities, citizenship or human resources and even in the social work, mainly in social entrepreneurship and social care companies. Recently, appeared discussions about the potential use of this tool in the social area of human activity and were proposed framework models, case templates for use in this direction. The ACM is seen as an advanced stage of Business Process Management (BPM), the main differences between them being stated in the **Table 1**. As is seen in the **Table 1** ACM focuses more on data than on the work process, like BPM does. The case flow and it's logic is not defined at the beginning, but it's flexible, dynamic.

Table 1. Comparison of main particularities of Business Process Management and Advanced Case Management

Business Process Management	Advanced Case Management
Centered on the process	Centered on the data
Predefinition of workflow of the process	Adhoc, unstructured case flow progress
Initially designed logic of the process flow	Non-deterministic or dynamically determined case flow
Expression of the flow logic in a process model	The case represents a collection of processes and isolated tasks
Flow designed by the process automation and improvement for the increase of efficiency	Flow determined by objectives, the case workers that choose actions to meet a certain goal
The work based on routine tasks	The work based on knowledge
Non-requirement of the collaboration	Requirement of a collaborative environment
Use of the structure data	Strong reliance on documents

Source: [ORACLE, 2016]

ACM focuses on cases, which itself contains a series of processes and tasks. The workflow in ACM is focused on objectives to be attained and the selection of actions based on this, unlike in BPM, where the priority is the increase of efficiency through automation and improvement. ACM require a collaborative environment to function, while for BPM that is optional. Also, ACM focuses of knowledge-based work and relies strongly on documents and doesn't focus on routine tasks and use of structure data like BPM does.

According to the Oracle the structure of ACM contains a number of key elements [ORACLE, 2016]: the case itself; the case model; the case instance; the case folder; the case data; the case lifecycle; the milestones; the case activities; the subcases and the case events. The case represents a set of processes, informations and interactions of various degree of structuredness (from unstructured to semi-structured and to structured) the aim of which is to realize a decision in business or other area of human activity. The case model defines the case itself through modelling.

The case instance represents a set of acts, data and case activities, the purpose of which is the processing the case and auditing the case progress. The case folder is the folder in the system of content management where the data about the case is preserved. The case data includes the data of the case preserved in the database of the Business Process Management. The case lifecycle represents the case state (active, stale, suspended, aborted or closed). The milestones are the checkpoints which show the case progress and the completion of a deliverable and can be used for a high level view of the case status.

The case activity includes the work that can be realized inside of a case. They can be mandatory, conditional or optional. The subcase represents a child task of the case and is used when supplementary activities need to be produced as a component of the parent case processing, the only difference between the subcase and case activity being the inheritance of the former of the data from the parent case. The case event contains the changes in the case lifecycle, in the case milestone, in the case activity.

Because the ACM is used to identify issues and propose solutions to them a framework of advanced case management with three main components (principles, challenges and solutions) can be constructed. Since the ACM is a knowledge-intensive tool, very frequently it is implemented in a digitalized framework using an application programming interface. In the **Table 2** it's shown such a framework with 5 main principles: the goal orientation, emergence, data centricity, collaboration and case templates.

Since the ACM is knowledge-based, the complexity challenges and the solutions approaches to these challenges is oriented to the work activities in the information systems.

Table 2. A framework of advanced case management with three main components: principles, challenges and solutions

Principles	Particularities of the principles	Complexity challenges	Solutions approaches to the challenges
Goal orientation	➤ Goal defines the case ➤ Goal guides activities and stream of work ➤ Goal replaces traditional process model	➤ Case interrelations and their consequences ➤ Determination and visualization of case progress ➤ Flexibility versus time and budget constraints	➤ Case trees and hyperbolic browser ➤ Visualization of progress with state, due date, and tasks ➤ Notification of derivations to goal ➤ Reminders and calendaring
Emergence	➤ Enabled by the technology empowerment ➤ Combines traditional planning and execution phases ➤ Defines processes with dynamic tasks instead of rigid flow charts	➤ Fully adjustable working environment (Usability) ➤ Flexibility versus business roles and rules ➤ Automation of recurring elements and patterns	➤ Customized dashboard ➤ Personalized tagging ➤ Case progression based on business rules ➤ APIs* and interfaces for BPM** integration
Data centricity	➤ Data is integral to knowledge work ➤ Data drives and shapes the case ➤ Case enables goal-oriented data and transformation	➤ Wide range of possible data types ➤ Integration of external resources ➤ Account for security and access control	➤ ECM-like*** data management ➤ Integration of external resources based on connectors ➤ Integration of cloud applications
Collaboration	➤ Knowledge work mainly consists of human interactions ➤ Demands a high degree of transparency ➤ Case must support social interactions and negotiations	➤ Enable transparency with monitoring and control ➤ Sufficient toolset (wikis, chat, blogs, decision support) ➤ Danger of "information overload"	➤ News feed and activity timeline ➤ Subscription model to prioritize information ➤ Comprehensive decision support suite
Case templates	➤ Enables sharing and preservation of knowledge ➤ Provides access to recurring elements and	➤ Potential for large amount of templates ➤ Change management for templates ➤ Incorporation of template "quality"	➤ Central repository ➤ Rating, usage and success statistics ➤ Private versus public templates ➤ History of template changes ➤ Templates based on process mining

	patterns ➤ Allows continuous improvement of knowledge		
--	---	--	--

Source: compiled and adapted by the author on the basis of [Huber et al., 2013]

Notes: *API - Application Programming Interface

** BPM – Business Process Management

***ECM – Enterprise Content Management

The goal itself conceptualizes the case and directs the work activities. The use of case trees and hyperbolic browsers can determine better the case interrelations and their consequences. Such elements as the state, the due date and tasks help further the case progress and it's visualization. Balancing through the dilemma of the need of flexibility from one part to the constraints of time and money from other part can be made easier through reminders and calendaring and notification of derivations to the goal.

The emergence in the ACM is fueled by technology through combination of phases of planification and execution in a dynamic way without a rigid flow chart. To make the working environment fully usable, to maintain flexibility and to automatize recurring elements and patterns the informational framework has a customizable dashboard, personalized tagging, uses APIs and interfaces for BPM integration and furthers case progression through business rules. An important key element in the ACM framework is the data centricity which is integral to the work based on knowledge, the data develops and forms the case itself, which, in turn, enables data with a goal. In practice there is a wide variety of data types, which necessitates an integration of external resources and security and access control.

These challenges can be tackled through the use of an ECM-like data management, the use of connectors and cloud applications. The collaboration in the ACM is also a central principle, because knowledge work is not possible without human interaction, which also demands a high degree of transparency and needs to support social interactions and negotiations. To enable transparency with monitoring and control, to have a sufficient toolset (wikis, chat, blogs, decision support), to face the danger of "information overload" there is a need for a news feed and an activity timeline, for a subscription model to prioritize information and for a comprehensive decision support suite.

ACM can't do without using case templates which helps sharing and preservation of knowledge, offers access to recurring elements and patterns and allows continuous improvement of knowledge.

In order to face a potentially large amount of templates, changes in the management for templates and the incorporation of template "quality" there is a need for a central repository, for the rating, usage and success statistics, for private and public templates, for preserving the history of template changes and for the templates based on process mining.

The main areas of activity and examples of use where Adaptive Case Management is used are shown in the **Figure 1**. As it was expected, the majority of ACM applications are in business, where it initially originated (financial services – 11, energy and utilities – 4, customer service – 3, human resources – 4, insurance – 6, legal – 3), a shorter, but important number - in healthcare – 8 and in the public sector – 5 applications.

Financial services	• loan origination • credit and debit card dispute management • financial crime management (suspicious activity reporting) • wealth management • brokerage • trading • new business account opening • e-bank account opening • accounts payable • accounts receivable • B2B order management
Insurance	• Property & Casualty claims processing • policy management • policy servicing • underwriting • fraud prevention • customer on-boarding
Health Care	• payer claims processing • policy and procedure management • virtual patient records management • member service management • provider service management • group sales management • health plan insight • clinical and operational insight
Energy and utilities	• process safety management • Federal Energy Regulatory Commission e-tariff (in USA) • transmittal process • Standard Operating Procedure processing
Public sector	• citizen benefits eligibility and benefit's enrollment • grant management • public safety • tax and custom filling • court solution and judicial matters
Human resources	• employee on-boarding • employee off-boarding • employee performance review • employee benefits administration
Legal	• contract management • legal matter management • auditing and compliance
Customer service	• customer correspondence • call center • constituent services

Figure 1. The main areas of activity where Adaptive Case Management is used
Source: elaborated by the author on the basis of [ORACLE, 2016]

The ACM is used in the management of a wide variety of financial services like: loan origination (where the lender may use to manage the process of offering a mortgage from application to the loan granting); suspicious activity reporting; various accounts; trading; brokerage; wealth management and others. In the insurance activities ACM is also used for the fraud prevention and other uses include: the management of policies, of deliverance of client-centric solutions. ACM has many uses in the healthcare: the management of patient records, policies, procedures, services, sales; clinical and operational practices. In the area of energy and utilities ACM is used for the management of transmittal processes, e-tariffs, process safety. In HR area the uses of this tool includes the management of employee's benefits, the review of employee's performance, the introduction/the laying off of the employee to/from the organization. In the public sector it's used for managing public safety, judicial issues, fiscal matters, grants, citizen benefits eligibility and benefit's enrollment. In the legal services this tool can be used for managing the legal matters, contracts, auditing and

compliance. In the customer service ACM can be used to manage the call center, the customer correspondence and constituent services. The use of ACM in social work and, especially, in child support is relatively new, as is also shown in [Herzog et al., 2019].

4. A specific case template for the Adaptive Case Management

An application of this tool in the child support is shown in the **Figure 2**, which represents a schematic template case for the assessment and assistance for a child in difficulty in the framework of Adaptive Case Management, which was adapted by the author for the children in difficulty.

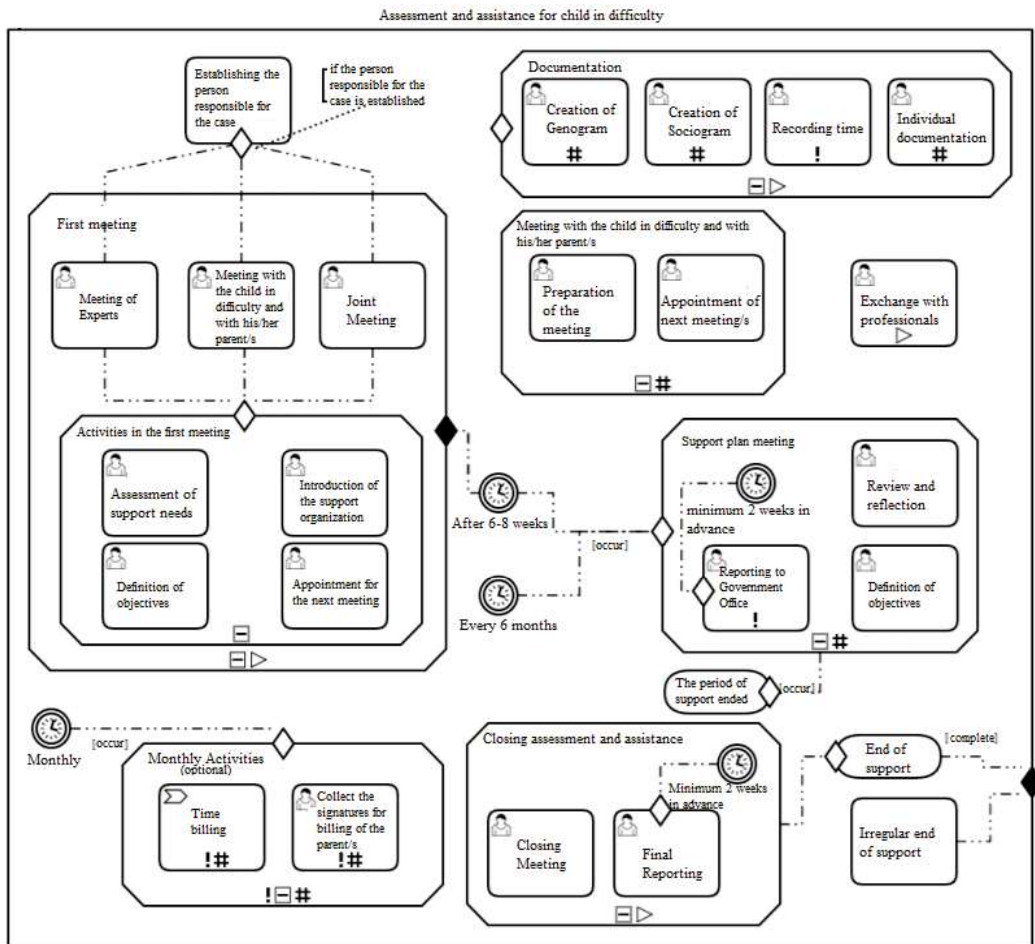


Figure 2. A schematic template case for the assessment and assistance for a child in difficulty in the framework of Adaptive Case Management

Source: adapted by the author on the basis of the case template proposed by [Herzog et al., 2019]

Notes on symbols and explanations:

- Repeatable status

! - Mandatory status

□ - Sign of a phase/subphase

▷ - Manual activation of an/a activity/phase (only in a computer software for graphical representation of cases for ACM)

◇ - Beginning of the phase/case

◆ - End of a phase/case

 -The sign of an/a activity/task

Dash-dotted line – the link between activities/phases

Solid line– outline of the framework of an/a activity/phase/case

The rectangles with rounded corners show an activity, the ones with cut corners – a phase, with right corners – a case.

The first thing to be done is to establish the person that will be responsible for the case. If this step was done we can proceed to the management of case itself. The first meeting contains three separate sub meetings: one with experts in the field, the second - with the child in difficulty and with his/her parent/s and the third – a joint meeting. In these meetings four types of activities are to be done: assessment of support needs; definition of objectives; introduction of support organization and the appointment for the next meeting. With this the first phase of the ACM is finished. The meeting with the child in difficulty and with his/her parent/s have two subphases: the preparation of the meeting and the appointment of the next meeting/s. Parallely with this there are exchanges with professionals. Also, parallely, there is a phase of documentation of the case which has four subphases: the creation of genogram, which is a graphic representation of the family tree with details on relationships between it's members; creation of sociogram, which is a graphic representation of the social links of the person; recording time and individual documentation. After 6-8 weeks of the first phase, if it occurs, begins the second phase – the support plan meeting, which can be repeated every 6 months if necessary. This phase is composed by three subphases: reporting to the Government Office or another state organization relevant to the socioeconomic support of children, which may need prior preparation of minimum 2 weeks in advance; review of the case and reflection on the case and the definition of the objectives of the support plan. After the support plan meeting/s occurs the next step is the closure of the period of assessment and support which contains the closing meeting and the final reporting prepared minimum 2 weeks in advance. With this the case is complete. Since support plan meetings may be more than one and there may be optional monthly activities which include time billing and the collection of the signatures for billing of the parent/s of children in difficulty (in cases where it may be needed at all) and/or other actors that are implicated there may be an irregular end of support. It should be noted that the time intervals used in the template case are orientative and may be subject to change if necessary.

All that being said, the empowerment of knowledge workers, the mobile support and the social collaboration, the creation of an environment which has agility and is oriented towards innovation, the possibility of implementing a guidance and mechanisms of monitoring that are transparent, the base of the process knowledge that is growing and is actionable, the advanced decision support, the possibility of using instruments to link processes to overall support strategy, in-process handling of the content of activities are the main advantages of ACM which can be useful in the assessment of issues of children in difficulty and their families and looks promising in the further development of their socio-economic support.

5. Conclusions

With the increase of data flows and the complexity of the processes that take place in the fields of human activity, there was a need for a new, more advanced approach to management, such as is the Adaptive Case Management. Elaborations and applications of this concept in the social work have appeared relatively recently, the concept itself being used for about a decade. It offers an approach centered on data, with a case flow that is unstructured, non-deterministic, dynamically determined by objectives, knowledge-based work, with requirement of a collaborative environment and a strong reliance on documents. It can be used

as a complex tool for approaching issues of children in difficulty in general and the assessment of their issues in particular, intended for case workers, knowledge workers and collaborators who have to deal with complex and unpredictable processes or projects, cases, decisions and tasks in these cases.

References

1. Barbato K. & Schenk M. (2008). *Web site links to valued post-discharge resources*. In: Hospital Case Management: the Monthly Update on Hospital-based Care Planning and Critical Paths. 16(3): pp. 40-41. PMID: 18383913.
2. Burns E. V. (2011). *Case management 101: 10 things you must know about case management*. In: Taming the Unpredictable, Real-world Adaptive Case Management: Case Studies and Practical Guidance, pp. 17-26.
3. Commission for Case Manager Certification (2021). *Definition and Philosophy of Case Management*, [Accesat 31.07.2021], Disponibil: <https://ccmc certification.org/about-ccmc/about-case-management/definition-and-philosophy-case-management>
4. Fischer L. (Ed.) (2012). *How knowledge workers get things done: real-world adaptive case management. Future Strategies*.
5. Herzog P., Lantow B. & Wichmann J. (2019). *Adaptive Case Management - Creating a Case Template for Social Care Organizations*. In: Joint Proceedings of the BIR, pp. 83-71, [Accesat 31.07.2021], Disponibil: <http://eprints.win.informatik.uni-rostock.de/785/1/paper07.pdf>
6. Huber S., Hauptmann A., Lederer M. & Kurz M. (2013). *Managing complexity in adaptive case management*. In: International Conference on Subject-Oriented Business Process Management, pp. 209-226, Springer, Berlin, Heidelberg.
7. Lukersmith S., Millington M., Salvador-Carulla L. (2016). *What is Case Management? A Scoping and Mapping Review*. In: International Journal of Integrated Care, 16(4):2. DOI: <http://doi.org/10.5334/ijic.2477>, [Accesat 31.07.2021], Disponibil: <https://www.ijic.org/articles/10.5334/ijic.2477/>
8. ORACLE Help Center (2016). *Working with Adaptive Case Management*, [Accesat 31.07.2021], Disponibil: <https://docs.oracle.com/middleware/1221/bpm/bpm-develop/GUID-AEDABD08-9F14-4F7C-B655-4638AD1778F1.htm#BPMMPD87407>
9. UNESCO Office Widhoek (2010). *Orphans and Vulnerable Children*, [Accesat 31.07.2021], Disponibil: http://portal.unesco.org/en/ev.php-URL_ID=25301&URL_DO=DO_TOPIC&URL_SECTION=201.html
10. UNICEF (1997). *Children at risk in Central and Eastern Europe: Perils and promises*, [Accesat 31.07.2021], Disponibil: <https://www.unicef-irc.org/publications/pdf/monee4.pdf>
11. UNICEF (2020). *The Legal Framework for Child Protection in South Asia*, Kathmandu, [Accesat 31.07.2021], Disponibil: https://resourcecentre.savethechildren.net/node/17650/pdf/the_legal_framework_for_child_protection_in_south_asia.pdf
12. Workflow Management Coalition (2017). *What is Case Management?*, [Accesat 31.07.2021], Disponibil: <http://www.adaptivecasemanagement.org/AboutACM.html>
13. Янголенко В. В. (2020). *Адаптивный Кейс-Менеджмент в преподавании эндокринологии*. In: Достижения фундаментальной, клинической медицины и фармации, pp. 513-515, [Accesat 31.07.2021], Disponibil: <https://www.elibrary.ru/item.asp?id=42716477>