User GuideThe Finnish Care Classification System, FinCC 4.0

v. 1.1

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Tässä dokumentissa kuvataan kansallinen hoitotyön kirjaamismalli ja päivitetty Suomalainen hoitotyön luokituskokonaisuus Finnish Care Classification (FinCC), versio 4.0. Tämän päivitetyn käyttäjäoppaan tarkoitus on ohjeistaa hoitotyön ammattilaista kirjaamaan sähköiseen potilaskertomukseen potilaan päivittäistä hoitotyötä päätöksenteon prosessimallin mukaisesti käyttämällä FinCC:tä. Kansallinen hoitotyön kirjaamismalli koostuu keskeisistä rakenteisista hoitotyön tiedoista (hoidon tarve, hoitotoimet, hoidon tulos, hoitoisuus ja hoitotyön yhteenveto), hoitotyön prosessista ja FinCC-luokituskokonaisuudesta. Käyttäjäoppaassa on esimerkein havainnollistettu kirjaamismallin mukaista kirjaamista. Mallin mukainen hoitotyön sisällön kirjaaminen toteutetaan käytännössä hoitoprosessin eri vaiheiden mukaisesti valitsemalla luokituksesta pää- tai alaluokka, jota täydennetään tarvittaessa vapaalla tekstillä luokan tietorakenteen mukaisesti. Kun hoitotyön kirjaaminen tapahtuu kaikkialla samalla, yhdenmukaisella tavalla, käyttäen sovittua termistöä, kirjaaminen on vertailukelpoista eri hoitoyksiköissä ja organisaatioissa. Tämä takaa potilaan hoidon jatkuvuuden hoidon ja hoitovastuun siirtyessä organisaatiosta tai hoitopaikasta toiseen. Rakenteisesti kirjatuilla hoitotyön tiedoilla on erityistä merkitystä potilaan päivittäisessä hoidossa, jolloin tietoja voidaan hyödyntää moniammatillisesti esimerkiksi erilaisten haku- ja lajittelutoiminnallisuuksien mukaisesti. Rakenteisesti kirjatuista hoitotyön tiedoista saadaan lisäksi muun muassa raportteja ja tilastoja laadun varmistukseen, potilashoidon kehittämiseen, toiminnan ohjaukseen, suunnitteluun, arviointiin, johtamiseen ja ammatillisen koulutuksen kehittämiseen.

FinCC muodostuu Suomalaisesta hoidon tarveluokituksesta (SHTaL), Suomalaisesta hoitotyön toimintoluokituksesta (SHToL) ja Suomalaisesta hoidon tulosluokituksesta (SHTuL). SHTaL:lla ja SHToL:lla on yhtenevä hierarkkinen rakenne (komponentti-, pääluokka- ja alaluokkataso). Komponentit kuvaavat kaikkein abstrakteinta tasoa. Hoitotyön sisällön kirjaaminen toteutetaan FinCC:n komponenttien sisältäviin pää- ja alaluokkiin niiden sallimien tietorakenteiden mukaisesti. SHTuL:n avulla arvioidaan hoidon tarpeeseen liitettävää hoidon tulosta kolmella eri vaihtoehdolla (tulos ennallaan, tulos parantunut, tulos heikentynyt). Versiossa 4.0 SHTaL ja SHToL sisältävät molemmat 17 komponenttia. Komponenttien pää- ja alaluokkien lukumäärät vaihtelevat.

Käyttäjäoppaan tavoitteena on ohjeistaa luokituksen yhdenmukaiseen käyttöön. Tämä opas on esimerkkeineen laadittu SHTaL ja SHToL luokitusten versioiden 4.0 sekä SHTuL version 1.0 mukaisesti. Uudet, nyt käyttöönotettavat versiot perustuvat käyttäjien antamaan palautteeseen, arviointeihin, kommentteihin ja ehdotuksiin. FinCC asiantuntijaryhmä on koonnut annetut palautteet luokitusten uusiksi versioiksi. Keväällä 2018 tehdyn käyttäjäkyselyn toteuttamiseen osallistuivat FinCC asiantuntijaryhmä ja Itä-Suomen yliopiston Sosiaali- ja terveysjohtamisen laitos.

Kansallinen hoitotyön kirjaamismalli, joka sisältää FinCC luokituskokonaisuuden, on kansallisen Potilastiedon arkiston edellyttämien tietorakenteiden mukainen koodistokokonaisuus, joka mahdollistaa rakenteisen hoitotyön kirjaamisen. Tämän oppaan rinnalla ohjeistetaan käyttämään myös Potilastiedon kirjaamisen yleisopasta (2021) (Jokinen, Taina; Virkkunen, Heikki (toim.)). Terveyden ja hyvinvoinnin laitos. Oppaan päivitetty ohjeistus Hoitokertomuksen osalta ilmestyy myöhemmin ilmoitettuna ajankohtana. Hoitokertomuksen uusi tietosisältörakenne julkaistaan Koodistopalvelimella 2020. FinCC 4.0 on hyödynnettävissä sekä nykyisessä hoitokertomuksessa että tulevassa hoitokertomuksen tietosisältörakenteessa. Vuoden 2020 aikana on tarkoituksena myös yhteensovittaa FinCC 4.0 ja HOIq-hoitoisuusluokitusmittari.

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Rakenteisella kirjaamisella tavoiteltavat ja koetut hyödyt jäävät vähäisiksi tai toteutumatta, jos potilashoidon kirjaamisessa käytetään runsaasti vain kertovaa, vapaamuotoista tekstiä tai tiedot kirjataan suurelta osin potilaskertomuksen eri osioille, esimerkiksi hoitotaulukkoon. Tällöin myös hoitoprosessin eri vaiheiden kirjaaminen voi jäädä puutteelliseksi, jos prosessin joku vaihe jää kirjaamatta kokonaan. Hoitotyön kirjaukset yhdistyvät prosessin eri vaiheissa hoidon tarpeiksi, hoitotoimiksi ja hoidon tuloksiksi, jolloin niistä muodostuu kansallinen hoitotyön minimitiedosto, ja edelleen jopa kansainvälinen minimitiedosto.

FinCC version 4.0 kehittämiseen ovat osallistuneet vuoden 2018 aikana asiantuntijaryhmän jäsenet Ulla-Mari Kinnunen, Kristiina Junttila, Pia Liljamo, Timo Ukkola, Sari Nissinen, Tiina Laaksonen, Anne Kuusisto ja Mikko Härkönen. Heidän lisäkseen suuri kiitos luokituskokonaisuuden päivityksestä kuuluu kaikille käyttäjäkyselyyn osallistuneille sekä muille kommentteja antaneille tahoille. Kiitos myös terminologille Virpi Kalliokuuselle ja Johanna Eerolalle heidän panoksestaan luokituksen viimeistelyssä sekä opasta kommentoineille Minna Mykkäselle ja Helena Ikoselle.

Vuoden 2019 alusta FinCC asiantuntijaryhmään kuuluvat Ulla-Mari Kinnunen (pj, Itä-Suomen yliopisto), Pia Liljamo (OYS, PPSHP), Timo Ukkola (Kuntaliitto), Anne Kuusisto (Satasairaala, SATSHP), Mikko Härkönen (THL),Tiina Hassinen (Tyks, VSSHP) ja Katri Moilanen (Tays Hatanpää, PSHP). Minna Mykkänen (KYS, PSSHP) on aloittanut asiantuntijaryhmässä 1.11.2019.

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Sammanfattning

Ulla-Mari Kinnunen, Pia Liljamo, Mikko Härkönen, Timo Ukkola, Anne Kuusisto, Tiina Hassinen, Katri Moilanen. FinCC-luokituskokonaisuuden käyttäjäopas (Manual för klassificeringshelheten FinCC, på finska). SHTaL 4.0, SHToL 4.0, SHTuL 1.0. Institutet för hälsa och välfärd (THL).

I detta dokument beskrivs den nationella vårddokumentationsmodellen och uppdateringen av det finländska vårdklassificeringssystemet Finnish Care Classification (FinCC), version 4.0. Syftet med denna uppdaterade manual är att hjälpa skötaren att dokumentera i den elektroniska patientjournalen patientens dagliga vård enligt beslutsprocessmodellen genom att använda FinCC. Den nationella vårddokumentationsmodellen består av central strukturell information om vården (vårdbehov, vårdåtgärder, vårdresultat, vårdtyngd och sammanfattning av vården), vårdprocessen och FinCC-klassificeringshelheten. I manualen finns dokumentering enligt dokumenteringsmodellen som åskådliggörs med hjälp av exempel. Dokumentering av innehållet i vården i enlighet med modellen genomförs i praktiken enligt de olika skedena i vårdprocessen genom att välja från klassificeringen en huvud- och underklass som kompletteras vid behov med fri text enligt informationsstrukturens klass. När dokumenteringen av vården sker på alla ställen på samma, enhetliga sätt, genom att använda överenskomna termer, kan dokumenteringen jämföras i olika vårdenheter organisationer. Detta garanterar en kontinuitet i patientens vård när vården och vårdansvaret flyttas från en organisation eller vårdplats till en annan. Information som dokumenterats på ett strukturerat sätt är av särskild betydelse i den dagliga vården av en patient då information kan utnyttjas multiprofessionellt i enlighet med till exempel olika typer av sök- och sorteringsfunktioner. Ur information som dokumenterats strukturerat kan man få bland annat rapporter och statistik för att säkerställa kvaliteten, utveckla patientvården, styra av verksamheten, planera, uppskatta, leda och utveckla yrkesutbildningen.

FinCC utgörs av Finländsk klassifikation av vårdbehov (SHTaL), Finländsk klassifikation av vård (SHToL) och Finländsk klassifikation av behandlingsresultat (SHTuL). SHTaL och SHToL har en enhetlig hierarkisk uppbyggnad (komponent-, huvudklass- och underklassnivå). Komponenterna beskriver den mest abstrakta nivån. Dokumenteringen av innehållet i vården görs i huvud- och underklasserna som innehåller FinCC-komponenter i enlighet med datastrukturerna som de tillåter. Med hjälp av SHTuL uppskattas vårdresultatet i anknytning till vårdbehovet genom tre olika alternativ (oförändrat resultat, förbättrat resultat, försämrat resultat). Versionen 4.0 SHTaL och SHToL innehåller vardera 17 komponenter. Antalet huvud- och undergrupper i komponenterna varierar.

Målet för manualen är att anvisa en enhetlig användning av klassificeringen. Denna manual inklusive exempel har sammanställts enligt SHTaL- och SHToL-klassificeringar version 4.0 samt SHTuL version 1.0. De nya versionerna som tas nu i bruk grundar sig på den respons som användarna lämnat, utvärderingar, kommentarer och förslag. FinCC-expertgruppen har samlat inkommen respons till nya versioner av klassificeringen. I användarenkäten som genomfördes våren 2018 deltog FinCC-expertgruppen och Sosiaali- ja terveysjohtamisen laitos vid Östra Finlands universitet.

Den nationella vårddokumentationsmodellen som innehåller FinCC-klassificeringshelheten, är en helhet av kodsystemet i enlighet med datastrukturen i det nationella Patientdataarkivet som möjliggör strukturerad dokumentation av vård. Parallellt med denna manual ges även anvisningar för användning av Potilastiedon rakenteisen kirjaamisen opas, osa 1, versio 2018 (pdf 2670 kt) (Handboken för strukturerad dokumentation av patientdata, del 1, på finska) Jokinen, Taina; Virkkunen, Heikki (red.). Institutet för hälsa och välfärd. Uppdaterade anvisningar i manualen gällande Vårdjournalen kommer ut vid en senare angiven tidpunkt. Den nya strukturen för datainnehållet i Vårdjournalen publiceras på Kodservern 2020. FinCC 4.0 kan utnyttjas i såväl den nuvarande vårdjournalen som i datainnehållsstrukturen i den kommande vårdjournalen. Under 2020 är avsikten att även samordna FinCC 4.0 och HOIq-mätaren för vårdtyngdsklassificering.

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Nyttan som uppnås och upplevs med strukturerad dokumentering förblir liten eller uteblir om man vid dokumenteringen av patientvård endast använder en stor mängd berättande, fritt formulerad text eller om uppgifterna dokumenteras till stor del i olika delar av patientjournalen, till exempel i vårdtabellen. Då kan även dokumenteringen av de olika skedena i vårdprocessen förbli bristfälliga om något skede i processen inte dokumenteras alls. Dokumentationen av vården kombineras i processens olika skeden till vårdbehov, vårdåtgärder och vårdresultat och då bildar de en nationell minimifil för vård och ytterligare till och med en internationell minimifil.

I utvecklingen av FinCC version 4.0 har deltagit under 2018 medlemmarna i expertgruppen Ulla-Mari Kinnunen, Kristiina Junttila, Pia Liljamo, Timo Ukkola, Sari Nissinen, Tiina Laaksonen, Anne Kuusisto och Mikko Härkönen. Förutom dessa personer ska alla som har deltagit i användarenkäten samt andra aktörer som lämnat kommentarer ha ett stort tack för uppdateringen av klassificeringshelheten. Tack även till terminologer Virpi Kalliokuusi och Johanna Eerola för deras insats vid färdigställandet av klassificeringen samt till Minna Mykkänen och Helena Ikonen som har lämnat kommenterat manualen.

Från och med början av 2019 ingår i FinCC expertgruppen Ulla-Mari Kinnunen (ordf, Östra Finlands universitet), Pia Liljamo (OYS, PPSHP), Timo Ukkola (Kommunförbundet), Anne Kuusisto (Satasairaala, SATSHP), Mikko Härkönen (THL),Tiina Hassinen (Åucs, EFSVD) och Katri Moilanen (Tays Hatanpää, PSHP). Minna Mykkänen (KYS, PSSHP) har börjat i expertgruppen den 1 november 2019.

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Abstract

Ulla-Mari Kinnunen, Pia Liljamo, Mikko Härkönen, Timo Ukkola, Anne Kuusisto, Tiina Hassinen, Katri Moilanen. FinCC classification system, user's guide. FiCND 4.0, FiCNI 4.0, FiCNO 1.0. Finnish Institute for Health and Welfare (THL).

This document describes the Finnish National Nursing Documentation Model and the updated Finnish Care Classification system (FinCC) version 4.0. The purpose of this updated user's guide is to provide nurses with guidance on entering data on the daily care given to a patient in the electronic patient record in accordance with the decision-making process model using the FinCC. The Finnish National Nursing Documentation Model consists of the structured core nursing data (need for care, nursing interventions, nursing outcomes, nursing care intensity and nursing summarydischarge?), the nursing process and the FinCC system. The user guide illustrates with examples the process of making entries in accordance with the documentation model. In practice, the documentation of the nursing content in accordance with the model is carried out in response to the various stages involved in the care process by selecting a main or sub-category from the classification and, if applicable, completing it with free text in accordance with the data structure of the category concerned. When the nursing entries are made in the same, consistent way everywhere using the agreed-upon terminology, the documentation is comparable between different treatment units and organisations. This ensures the continuity of the patient's treatment care?when the treatment and treatment responsibility is transferred from one organisation or place of treatment to another. Structured nursing data entries are of special significance in the daily care of a patient, enabling multi-professional utilisation of the data according to, for example, various kinds of search and sorting functionalities. Additionally, structured nursing data entries can be used for compiling reports and statistics in support of, among other things, quality assurance, the development of patient care, the steering, planning, assessment and management of operations, and the development of vocational education.

The FinCC system consists of the Finnish classification of nursing diagnoses (FiCND), the Finnish classification of nursing interventions (FiCNI) and the Finnish classification of nursing outcomes (FiCNO). FiCND and FiCNI have similar hierarchical structures (component, main category and sub-category levels). The component level is the most abstract. The nursing documentation entries are made in the main and sub-categories included in the FinCC components in accordance with their allowed data structures. FiCND is used for evaluating the outcome of the care process in relation to the care need on the scale of three possible outcomes: improved, stabilised and deteriorated. In version 4.0 of the system, both FiCND and FiCNI have 17 components. The number of main categories and sub-categories under each component varies.

The purpose of the user guide is to provide guidance on the consistent use of the classification. This guide and the examples it contains are based on FiCND and FiCNI version 4.0 and FiCNO version 1.0. The new versions being introduced were shaped on the basis of the feedback, evaluation, comments and suggestions received from users in the field. The FinCC expert group has compiled the feedback received as new versions of the classifications. The user survey conducted in spring of 2018 was implemented by the FinCC expert group and the Department of Health and Social Management of the University of Eastern Finland.

The National Nursing Documentation Model, which contains the FinCC system, is a code set consistent with the data structures required by the national Patient Data Repository, enabling structured nursing documentation. In addition to this guide, users are recommended to also use the Manual for structured patient data entry, part 1, version 2018 (in Finnish, pdf, 2670 kt) Jokinen, Taina; Virkkunen, Heikki (eds.). Finnish Institute for Health and Welfare. Updated instructions in the manual concerning the patient record will be published on a later date to be announced. The new data structure of the patient record will be published on the Code server in 2020. FinCC 4.0 can be utilised both in the current and in the future patient

record content structure. The integration of FinCC 4.0 and the HOIq care intensity metric is also planned to take place during 2020.

The benefits sought and experienced with structured data entry remain minor or unaccomplished if the documentation of patient care is mainly done using descriptive, free-form text or if the data is mainly entered under different sections of the patient record, for example, in the treatment table. In this case, the documentation of the different stages of the care process may remain insufficient if a specific stage in the process is entirely omitted. The nursing documentation entries are combined at different stages of the process as care needs, nursing interventions and nursing outcomes, as a result of which they will constitute a national Nursing Minimum Data Set and, furthermore, even an international Nursing Minimum Data Set.

The members of the expert group who contributed to the development of the FinCC version 4.0 during 2018 included Ulla-Mari Kinnunen, Kristiina Junttila, Pia Liljamo, Timo Ukkola, Sari Nissinen, Tiina Laaksonen, Anne Kuusisto and Mikko Härkönen. Additionally, we wish to extend our thanks for the contributions made to the updating of the classification to all those who responded to the user survey and all those who otherwise provided us with comments. We would also like to thank terminologist Virpi Kalliokuusi and Johanna Eerola for their contribution to the finalisation of the classification, and Minna Mykkänen and Helena Ikonen for their comments on the guide.

As of the beginning of 2019, the FinCC expert group includes Ulla-Mari Kinnunen (Chair, University of Eastern Finland), Pia Liljamo (Oulu University Hospital, Northern Ostrobothnia Hospital District), Timo Ukkola (Association of Finnish Local and Regional Authorities), Anne Kuusisto (Satasairaala Hospital, Satakunta Hospital District), Mikko Härkönen (Finnish Institute for Health and Welfare),Tiina Hassinen (Turku University Hospital, Southwest Finland Hospital District) and Katri Moilanen (Tays Hatanpää Hospital, Pirkanmaa Hospital District). Minna Mykkänen (Kuopio University Hospital, Kuopio University Hospital District) started as a member of the expert group on 1 November 2019.

Keywords: documentation, nursing, classification systems, medical records systems, computerized, terminology

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1 Introduction

This document is the User Guide of the new version of the Finnish Care Classification system, FinCC 4.0. This new version of the classification is the result of an update process that took place over the years 2018 and 2019. The update process was implemented in two stages. In the first stage, the FinCC expert group worked intensively for approximately one year updating the previous version of the classification system, version 3.0, which dates back to 2012. The objective was to enhance the usability of the FinCC system in such a way that data could be entered taking maximum advantage of the instruments already in clinical use (pain, wound, nutrition and fall scales, for example). A secondary objective was to ensure that the FinCC system is more thoroughly founded on evidence-based data. To accomplish this, the expert group searched for evidence, including Current Care Guidelines and other guidelines for care, familiarised themselves with the legislation, relevant guidebooks by the Finnish Institute for Health and Welfare, instructions, various models, and searched scientific publications. Additionally, expert, or experience-based, evidence was requested to accomplish this task. The task of the expert group was to evaluate and develop the Finnish Classifications of Nursing Diagnoses (FiCND) and Interventions (FiCDI), the used terminology, their clarity and their logical structure, and in this take feedback from the users into consideration.

The objective of single entry structured data is to reduce the number of times data need to be entered into a patient record system to one. In practice, a single entry is linked to various screens in the nursing records and, thus, available for use by the different professionals participating in patient care and for the nursing discharge summary (primary use) and for research purposes, management, the improvement of clinical processes, and the development of quality indicators (secondary use). Additionally, numeric data on nursing entries is required for managing the nursing processes. Comparative data on nursing, including data on pressure ulcers, malnutrition, falls and pain experienced by a patient, are monitored on a national level. This first stage resulted in the first version of FinCC 4.0.

In the second stage, the objective was to evaluate how well the updated FinCC system corresponds to nursing in practice, and whether it is practical to implement and readily understood by its users. To accomplish this, the FinCC expert group organised a survey in April 2018 to the end-users of the classification system, i.e. nurses, together with the Finnish Institute for Health and Welfare and the University of Eastern Finland as per the classification's maintenance agreement. The survey form was distributed to other operators in the field also, including physiotherapists and nurse teachers. An electronic questionnaire was sent to various health care organisations (n=34) and Universities of Applied Sciences (n=14). A link to the questionnaire and instructions were emailed to the acquired contact persons. The survey comprised a total of 34 pages of statements on the 17 components in the FiCND and FiCNI including each main category and subcategory. The participants were asked to express their opinion on each category on a five-step (1 to 5) Likert scale from "Fully disagree" to "Fully agree". Space for additional feedback, comments and suggestions for improvement was provided after each statement.

Survey participants (n=27) included individual nurses and groups comprising nurses, ward managers and nursing officers. Responses were delivered by email also (3 from health care organisations, 1 from a physiotherapist, 1 from an orderly and from students specialising in wound care (3 groups) and their teachers on skin integrity). All of the responses were transferred into an Excel file. Comments and other feedback in free-form were collected into a single file and organised by component. All were studied and discussed, because the comments raised a lot of questions. Often, the given comments were contradictory.

Implemented changes:

- The "Activities" component was deleted and in the current version the related items can be found under the component "Activities of daily living and independence".
- A new component "Pain Management" was added. Experts were consulted during the development process.
- In some components, subcategories have been promoted to the main category level.
- According to the future data structure model of the national nursing record system, this change enables the documentation of nursing interventions in the main category level using:
    - Structured classification (existing or specifically constructed), e.g. wound dressings; or
    - Instruments, e.g. pain scales, AUDIT, risk assessment scales; or
    - Numeric data, e.g. 540 ml; or
    - free text.
- The consistent use of terminology in the classifications has been developed.
- The component "Coordination of care and follow-up care" now includes all main categories related to patient instruction (transferred here from other components).
- The Finnish Classification of Nursing Diagnoses (FiCND): 57 new codes, 84 updates, 47 deletions.
- The Finnish Classification of Nursing Interventions (FiCNI): 198 new codes, 180 updates, 163 deletions.
- The Finnish Classification of Nursing Outcomes (FiCNO): no changes.
- The components are listed in alphabetical order.

In the future, the classification system is developed and updated according to the received feedback and evidence-based data.

The average response score to all of the components and for all statements (FiCND and FiCNI) was 4.1 to 4.9. The new component "Pain Management" was welcomed by many of the respondents who considered it a positive addition. The components "Fluid balance", "Respiratory", "Circulation", "Life cycle", "Nutrition", "Elimination", and "Sensory and neurological functions" were rather widely accepted (comments were uniform). However, the respondents agreed that "Skin integrity" was divided into too many sections - there were several comments on this. Hence, this component was re-processed. The same was true for "Safety" and "Mental capacity". Based on the received comments, the FinCC expert group once more consulted specialists including a wound care specialist, physicians, a regional nursing documentation work group, and psychiatric nurses and psychiatrists, for example. The updating of classifications based on feedback from the survey and comments from other specialists was completed in the spring of 2019, and the expert group submitted the classifications to the approval process in accordance with the Code service process of the Finnish Institute for Health and Welfare.

The FinCC system has been available on the Code server since September 2008. In 2008, the development and maintenance responsibility of the classification system was transferred to the University of Eastern Finland. User feedback is collected regularly using targeted surveys. Furthermore, it is possible to provide feedback anytime via the Code service (koodistopalvelu[at]thl.fi). Any development requirements are assessed based on the received feedback, and the classification system is updated, if necessary. Any further improvements to the classification system should be carefully controlled and centrally coordinated to ensure everyone in the nursing field is using the classification system of the Finnish National Nursing Documentation Model and its most recent updates, as this was the original goal.

The expert group maintains FinCC web site. The web site is intended for the users, and we are looking forward to receiving feedback from the implemented new version of the classification system. For more detailed information, please send your questions to: http://fincc.fi/yhteydenotto.

Current research and guidelines provided by the Finnish Institute for Health and Welfare have been applied when writing this User Guide. The text is based on the publications and research articles listed under "References". However, these have not been separately referenced in context.

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2 Structured data elements in patient records

Patient care data are saved and stored into an electronic patient record system according to a predefined structure. The structure of an electronic patient record comprises hierarchically arranged entities which can be organised by screens, the phases of the nursing process and by headings, and where documentation classifications and codes are used. Structured data may be supplemented with free-form text. A uniform structure of patient data and predefined content enable the usability and transfer of patient data across different systems within the limits of patient consent and restrictions. Generating information content using uniform concepts promotes the accessibility of patient record data in different systems and across care organisations. Terminologies (term lists, nomenclature, classifications) are used to uniformly describe clinical practices, care and interventions.

In Finland, predefined key structured data elements are used in electronic patient records to describe health care and care data generated during the phases of the nursing process. These predefined key structured data elements include the identification data of the patient, service provider, service event and service entity, problems, diagnoses, factors related to general health, physiological measurements, key structured data elements in nursing, capabilities, tests and examinations, interventions, medication management, statements and certificates, assistive products, information on follow-up care, and consent.

In an electronic patient record, topics can be grouped using various screens. A screen refers to a specific data entity or context that enables compiling data related to specific content or a specific topic in a patient record. For example, care related to a specific specialty, profession or service. The nursing record screen (HOKE, HOitoKErtomus) is used for entering daily nursing notes, and the nursing discharge summary drawn up by a nurse is saved in the HOI Screen. Daily nursing notes are entered by phase of nursing process using predefined classifications and free-form text. The nursing discharge summary is compiled based on key events during the period of care with the help of key structured data elements in nursing (nursing diagnosis, nursing interventions, nursing outcomes, nursing care intensity and nursing discharge summary) that may be supplemented with nursing classifications and free-form text, if necessary.

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3 Key structured data elements in nursing

3.1 Nursing diagnosis

Nursing diagnosis is a description of existing or possible future health problems that could be cured or alleviated with proper nursing interventions. The description is drawn up by the nursing staff. Nursing diagnosis involves mapping the problems and issues related to the patient's care or current situation in life. Patients tell about their symptoms to the nurse who observes the patient and takes the necessary measurements (including blood pressure and body temperature, for example). Based on the acquired data, the nurse together with the patient determines the patient's need for care.

Needs significant in terms of patient care are entered into the nursing records. The level of certainty is an additional attribute to care needs and is entered when it is relevant in terms of patient care. AR/YDIN codes are used when entering data related to the level of certainty. The nurse should be sufficiently skilled to be able to observe and anticipate possible future issues the patient is likely to face. Sometimes a patient may be unable to express their condition verbally. In such cases, the nurse needs to interpret what could be the cause of the observed change in the patient's condition or behaviour.

3.2 Nursing intervention

Nursing intervention describes the planning and implementation of patient care. Nursing interventions significant in terms of patient care are entered into the patient record. Nursing interventions are implemented in assistance and instructive situations that take place between a patient and a nurse. The knowledge and skills of the nurse form the basis of these interventions. Such knowledge and skills include manipulation skills, observational and communication skills, the ability to offer health care and care-related guidance and advice, and provide adequate psychosocial support according to the needs of the customer, patient or family. The customer's/patient's and any family caregiver's knowledge and perception of the situation provide another essential aspect. The nursing staff aims to meet the patient's need for care by implementing various nursing interventions.

The Finnish Classification of Nursing Interventions (FiCNI) 4.0 comprises 18 headings related to the evaluation of the success/efficacy of nursing interventions. These headings include the assessment of coping abilities, the evaluation of non-pharmacological pain management and the assessment of cognitive function, for example. The evaluation of these nursing interventions refers to the evaluation/clarification of the implementation of a specific nursing intervention. It is considered appropriate to enter the evaluated implementation in connection with these main categories only. Assessment may also be performed via these main categories with the help of various scales such as VAS or GCS.

3.3 Nursing outcomes

On the component level, nursing outcome describes a change in the patient's condition. The patient's current condition, general wellbeing or coping is evaluated in relation to the patient's need for care, goals of care, planned interventions and/or implemented care. Nursing outcomes are evaluated using the scale

introduced in the Finnish Classification of Nursing Outcomes (FiCNO 1.0): improved, stabilised or deteriorated. Free-form text may be used to add supplementary data, if necessary.

Improved: When there is a significant improvement in the patient's general wellbeing, condition and/or coping compared to baseline. (Abbreviation: PA)

Stabilised: When there has been no discernible change in the patient's general wellbeing, condition and/or coping. (Abbreviation: EN)

Deteriorated: When there is a significant deterioration in the patient's general wellbeing, condition and/or coping compared to baseline. (Abbreviation: HUO)

Nursing outcomes are evaluated to monitor the efficacy, quality and performance of care. Evaluations are performed daily or once per shift, if necessary, when a change is observed in the patient's condition, and always when care is completed.

3.4 Nursing Intensity

Nursing intensity refers to the patient's dependency on the nurses' work input. It is an estimate of how demanding the implemented care has been. Patient care plans and implemented care documented using the Finnish Classification of Nursing Diagnoses and he Finnish Classification of Nursing Interventions, provide the basis for assessing a patient's nursing intensity. Diligent documentation of implemented care provides the content for assessing a patient's nursing intensity and supports the credibility of the classification of nursing intensity.

In nursing interventions, various classification metrics of nursing intensity are applied. In many Finnish hospitals, the OPCq instrument which is part of the RAFAELA system has been applied in the daily assessment of the nursing intensity of somatic patients in inpatient care. The OPCq instrument was integrated into the classification of nursing diagnosis and interventions in the FinCC version 3.0. The HOIq care intensity metric was developed based on the OPCq instrument for better applicability in inpatient and outpatient care. The integration of FinCC 4.0 and the HOIq care intensity metric is to take place during 2020. The integration of classifications promotes the use of structured daily nursing notes entered using the FinCC system when assessing a patient's nursing intensity. The credibility of data on nursing intensity improves when the assessments are demonstrably based on implemented and appropriately recorded care. The nursing intensity classification data of the final day of a patient's care period are included in the nursing discharge summary.

3.5 Nursing discharge summary

A summary is drawn up for each period of care at the end of which care is completed or the responsibility for patient care is transferred to another health care unit. In addition to nursing interventions, the summary includes clear and precise instructions on the implementation of follow-up care. Developments in the patient's general wellbeing and care are described in the final summary. The nursing discharge summary is saved on the national archive service starting on the arrival day. If a single data entry or visit is essential in terms of the distribution of information and follow-up care, the entry may be included in the summary. A final evaluation of a care period or spanning several appointments can cover home care or several care periods, for example. In long-term care, an interim evaluation should be drawn up at least every three months, or when there has been a significant change in the patient's situation. An interim evaluation

includes a summary of the significant developments in the patient's general wellbeing and care during a care period, rehabilitation or therapy, and any change from anamnesis or a previous interim/final evaluation.

A nursing discharge summary comprises daily nursing notes, and its purpose is to secure the continuity of care, adherence and patient safety. The nursing discharge summary provides the patient with information about their care and progress (My Kanta Service) which promotes self-care. As the implementation of care continues, professionals can quickly get an overview of the patient's situation (Patient Data Repository). A nursing discharge summary is drawn up in every unit (outpatient policlinic, intensive care unit, emergency room, inpatient ward, etc.) during care (interim evaluation) and at the end of a care period (final evaluation).

A nursing discharge summary is drawn up separately for each patient, the use of medical terminology is avoided, and the information requirements of the place of follow-up care (home/health care unit) are taken into consideration. The instructions presented in Table 3.1 and the example in table 3.2 are based on national guidelines and an example from the previous FinCC User Guide. Furthermore, instructions and examples used in different organisations, and information necessary for patient discharge as defined by social welfare and health care professionals, have been implemented.

Table 3.1 National headings, descriptions, content and purpose in a nursing discharge summary

National heading	National description	Content	Purpose
Final evaluation/ interim evaluation	Headings used when entering summary notes at the end of inpatient care or other long-term care (psychiatric day-patient care or home care, for example) or in an interim evaluation (not individual appointments). Note! A final evaluation includes a description of implemented care and the actual developments and outcomes in the patient's general wellbeing and care. For individual appointments, enter case history, if necessary, under "Anamnesis" / "Permanent background information" / "Background information specific to a care event".	Treatment day/Date of appointment Reasons for seeking medical attention Progress in treatment/rehabilitation/therapy Housing arrangements: lives alone / lives with another person / high-intensity assisted living / institution	To give a concise description of the reasons why the patient has sought medical attention and how the treatment/rehabilitation/therapy has progressed from the nursing perspective. **For data to be transferred to the Kanta system, the Final Evaluation and Interim Evaluation headings must have a recorded entry.**

National heading	National description	Content	Purpose
Nursing diagnosis	Existing or possible future problems related to the patient's health that are to be solved or alleviated via proper care and instruction are entered under this heading. Resources that support the patient in the management of self-care.	*Key nursing problems/needs* *The patient's insight into their condition* *What the patient wishes* Apply existing **instruments**: pain, fall, pressure ulcer, malnutrition, memory, depression, capability scales etc.	To describe the key nursing problems/needs of the patient when the patient arrived at the current service provider. Include problems that should be monitored in follow-up care (e.g. elevated risk of malnutrition, falls or pressure ulcer).
Nursing interventions	Care implemented to meet the care needs of the patient and achieve the goals of care not recorded under other headings related to the implementation of care, such as Interventions, Rehabilitation or Medication, is entered under this heading.	*Key nursing interventions implemented in the care of the patient* *Giving instructions and guidance regarding the care and follow-up care of a patient* *The patient's own experience*	To describe the key nursing interventions implemented in the care of the patient. If necessary, include a description of nursing interventions that did not yield a desired outcome (e.g. a commonly used wound care measure was ineffective in the treatment of this patient).

National heading	National description	Content	Purpose
Nursing outcomes	Changes in the patient's condition evaluated against the patient's need for care, goals of care and/or implemented care are entered under this heading.	*Changes in the patient's general wellbeing resulting from care as seen from the nursing perspective* *The patient's own experience* *General wellbeing and capabilities when discharged/transferred* *Memory: orientation in time and place / impaired orientation* *Mood: normal/depressed/distressed* *Functional mobility: independent/assisted/uses an* assistive product *Toileting: independent/assisted/wears pads or incontinence briefs* *Bathing/showering: independent/assisted* *Dressing: independent/assisted* *Nutrition: diet independent/assisted* *Nutrition: follows a special diet/independent/assisted(prepares food/uses catering services* Assistive products*: assessed/arranged*	To describe the changes in the patient's general wellbeing resulting from care **during the care period** as seen from the nursing perspective. The patient's general wellbeing and capabilities when discharged. Use existing instruments. Take into consideration the patient's own experiences. = Select: Situation Stabilised Situation Improved Situation Deteriorated

National heading	National description	Content	Purpose
Nursing Intensity	An estimate of the amount and intensity of care the patient needs or has received (implemented scale and outcome class) is entered under this heading.	For example: Category I - Minimal need for care Category II - Average need for care Category III - Need for care above average Category II - Maximal need for care Category V - Need for intensive care (Rafaela OPCq)	Enter the nursing intensity on the last day of the care period when the responsibility for patient care is transferred to another service provider (placement in follow-up care). If the classification of nursing intensity is not in use in the unit, this heading is removed (nursing intensity is not recorded).
Plan	A plan for follow-up care addressing the patient's condition, examinations, treatment, rehabilitation and how they are arranged is entered under this heading.	*Planned follow-up care/rehabilitation/therapy* *Items agreed upon with the patient and their caregivers* • Information about scheduled control appointments and informing the place of follow-up care • Devices, consumables etc. (none/patient acquires/given to the patient to bring along)	To describe factors supporting self-care and the plans for follow-up care/rehabilitation/therapy. Includes information on the reason for follow-up care, the place providing follow-up care and information about services (meals/home help services/hospital-care at home). Information about whether the patient's relatives know about the transfer or not, if necessary.
Medication	Notes on prescriptions, administration and review of medications and any assessments, comments or arguments decisions were based on relating to medication management, are entered under this heading. NOTE! Structured notes on medications are always entered in the LÄÄ screen.	*Medications administered today, and at what time*	If caring for the patient requires that information about medications is disclosed (e.g medications administered on the day the patient was discharged (warfarin) and at what time), enter this information.

National heading	National description	Content	Purpose
Other notes	Any data not readily applicable elsewhere are entered under this heading.	*Name of the unit, Hospital* *Address* *Telephone number of the unit* *Relatives/caregivers informed about the transfer/discharge* *Personal items transferred with the patient* *Entries made by (name and title)*	

Table 3.2 Example of nursing discharge summary

National heading	Example
Final assessment	Care period 23 September 2019 - 28 September 2019. Admitted to ward due to lower abdominal pain and abdominal swelling. Laparotomy performed to determine the cause of symptoms. Lives alone, cannot cope independently, family members live far away. Has not received home help services before.
Nursing diagnosis	PAIN MANAGEMENT / **Acute pain.** Lower abdominal pain daily. Ibuprofen ineffective. Intermittent severe pain at the incision site. SKIN INTEGRITY / **Surgical wound.** Laparotomy performed four days ago. COPING / **Needs support to cope.** Can not cope at home without assistance. Cancer causes fears.
Nursing interventions	PAIN MANAGEMENT / **Assessment of the type of pain.** Severe, aching pain at the incision site and lower abdomen after morning routines and mobility. VAS 6 to 7. SKIN INTEGRITY / **Monitoring wound exudate.** No wound discharge. Sutures clean and intact. NUTRITION / **Monitoring feeding.** No appetite. Stomach feels full, abdominal swelling. Nutritional supplements offered, and took them. COPING / **Providing support for coping.** Issues related to the disease discussed. Worried about what comes next. Discussion with an oncology nurse.
Nursing outcome	SENSORY AND NEUROLOGICAL FUNCTIONS. Situation Stabilised "EN" Abdominal pains continue (VAS 3 to 4), standard pain medications are not enough, needs strong additional pain medication 2 to 3 times a day. Fear of pain, moving increases pain, careful about moving because of pain. ELIMINATION Situation Stabilised "EN" Good bowel movements after micro-enema on 27 September. SKIN INTEGRITY. Situation Improved "PA". Progress in healing of the wound. COPING. Situation Stabilised "EN". Needs assistance in bathing and encouragement to move about. Uses a walker. Visit by oncology nurse provided some relief. Would very much like to discuss topics related to disease.
Nursing Intensity	Total score: 15 points Category III - Need for care above average (Rafaela OPCq)
Plan	COORDINATION OF CARE AND FOLLOW-UP CARE. Transferred to the health care centre of Sinervä for follow-up care. Suture removal on 10 October 2019. Information regarding follow-up care according to pathology statement.
Medication	MEDICATION / Medications administered orally. Morning medications administered at 7:00 am and OXYCODONE HYDROCHLORIDE 1 x 5 mg capsule for abdominal pain at 10:00 am
Other notes	Surgical Ward 3, Sinervä Hospital. Sinerväntie 4, 26660 SINERVÄ, Finland. Tel. 040 556 6227. Son knows about the transfer. Sari Saarni, nurse.

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4 Entering structured nursing data using the FinCC system

Key structured data elements in nursing provide the content structure for the recording of daily nursing notes. Key structured data elements in nursing (nursing diagnosis, nursing interventions, nursing outcomes, nursing intensity and nursing discharge summary) are entered using the Finnish Care Classification (FinCC) system according to the phases of the nursing process. The FinCC, or the Finnish Care Classification system, consists of the Finnish Classification of Nursing Diagnoses (FiCND 4.0), the Finnish Classification of Nursing Interventions (FiCNI 4.0) and the Finnish Classification of Nursing Outcomes (FiCNO 1.0) (see Figure 4.1).

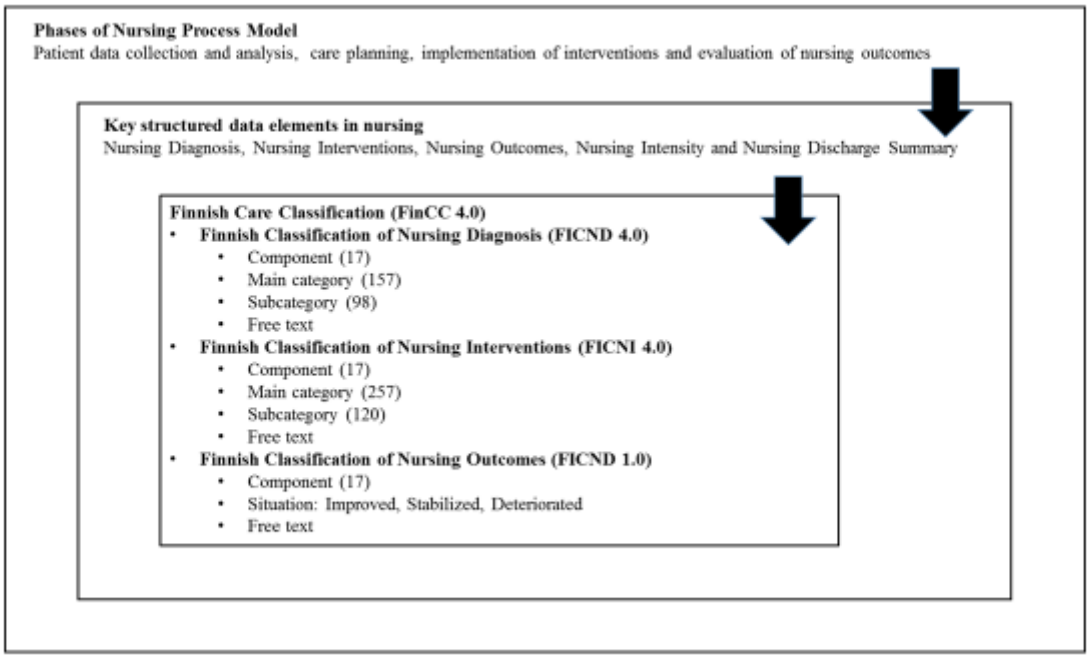

Figure 4.1 The Finnish Nursing Documentation Model according to FinCC 4.0 (Mykkänen 2019, adapt. Tanttu 2009)

The Finnish Classification of Nursing Diagnoses and the Finnish Classification of Nursing Interventions are used for entering structured data of daily patient care in policlinics and inpatient wards in both primary health care and specialised care. The classifications can be used separately, but the greatest benefits can be gained when they are used in parallel. Describing the patient's need for care and the care implemented during different phases of the nursing process using the above mentioned classifications offers a consistent picture of the patient's condition and any changes in it.

The Finnish Classification of Nursing Diagnoses (FiCND) and the Finnish Classification of Nursing Interventions (FiCNI) both comprise 17 components, or areas of nursing content, and each component comprises a number of main categories and subcategories. The components and their contents are described in Table 4.1.

Table 4.1 Description of the components (17) of the FinCC 4.0 and their content

Component	Description of component content
Metabolic	Items related to metabolism and the immune system.
Sensory and neurological functions	Items related to sensory functions and neurological functions.
Life cycle	Items related to the different stages in life.
Elimination	Items related to digestion, urinary tract function, haemorrhage and other eliminations.
Respiratory	Items related to pulmonary function and breathing.
Coordination of care and follow-up care	Coordination and instruction regarding multi-professional care and follow-up care and the patient's personal care and care need(s).
Pain Management	Items related to pain and the management of pain.
Skin integrity	Items related to the mucous membrane, cornea, skin and subcutaneous layers including the skin graft donor site, skin graft and cutaneous flap.
Medication	Items related to the use of medications and to medication management.
Fluid balance	Items related to hydration.
Mental capacity	Items related to mental capacity.
Activities of daily living and independence	Items related to independence and physical capability.
Nutrition	Items related to securing adequate nutrition.
Coping	The ability of an individual or a family to cope with problems related to or caused by a health condition, changes in health, everyday routines, work and social interaction.
Health behaviour	Items related to health promotion.
Safety	Safety hazards caused by the patient's right to self-determination, disease or caring environment.
Circulation	Items related to blood circulation in various organs.

The highest hierarchical level, or component level, is the general heading encompassing the main categories and subcategories. Components are the most abstract level of documentation.

Table 4.2 illustrate how the phases of nursing decision-making, key structured data elements in nursing and the FinCC complement each other. Background information is collected from the patient through interviews, and the collected data is analysed to assess the patient's need for care. The components, main categories and subcategories of the Finnish Classification of Nursing Diagnoses are applied to determine care needs. Additionally, the care need can be allocated a level of certainty. When planning care, goals are set for the care prioritised according to determined care need(s), and the implemented nursing interventions are selected using the main categories and subcategories of the Finnish Classification of Nursing Interventions. During the implementation phase, implemented interventions are recorded using the Finnish Classification

of Nursing Interventions. Finally, nursing outcomes are evaluated in relation to the patient's need for care, the set goals and the implemented interventions, and the status of the nursing outcome is selected. Nursing intensity is typically assessed once a day using a specifically developed nursing intensity instrument to estimate the intensity of implemented care. At the end of the care period or service event, a nursing discharge summary is drawn up using predefined national structured data (nursing diagnosis, nursing intervention, nursing outcome, nursing intensity) supplemented with free-form text.

Table 4.2 Creating entries according to the phases of the nursing process model in decision-making using FiCND and FiCNI.

Phases of the nursing process model in decision-making	Key structured data elements in nursing	Use of the FinCC system
Determine the need for care: Patient data collected and analysed.	Nursing Diagnosis	FiCND main categories and subcategories FiCND and the level of certainty of a care need are scored using the scale: VAR (certain), TOD (likely) and EP (suspected).
Care Planning Reaching a conclusion, i.e. determine and prioritise care need(s). Setting goals, i.e. define expected outcomes, and selecting the nursing interventions.		FiCND component and/or main categories and subcategories Nursing interventions defined FiCNI main categories and subcategories
Implementation of Interventions Implementation of care plan.	Nursing Interventions	FiCNI main categories and subcategories
Evaluation of Nursing Outcomes The patient's need for care, goals of care, and implemented care are taken into consideration in the evaluation. Evaluations are performed daily or once per shift, if necessary, when a change is observed in the patient's condition, and always when care is completed.	Nursing Outcomes	FiCNO component Status of nursing outcome: improved ("PA") / deteriorated ("HU") / stabilised ("EN"). Supplemented with free text, if necessary (depending on the data system, it might be possible to make entries on the component level and the main category and subcategory levels also).
	Nursing Discharge Summary	Compiled using key nursing data covering the care period and supplemented where necessary using the main categories and subcategories of the Finnish Classification of Nursing Interventions and free-form text, if necessary. Nursing intensity class on the day of transfer/discharge given in numeric and verbal format.
	Nursing Intensity	Assessment of nursing intensity using a nursing intensity classification instrument. Where possible, implemented interventions recorded with the FinCC are used in the evaluation.

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5 The Finnish Classification of Nursing Diagnoses, FiCND 4.0

The Finnish Classification of Nursing Diagnoses (FiCND 4.0) is described by component in alphabetical order. Each component name is followed by a brief overview of the content and then a more detailed description of the content of the component. For each component, the key concepts and those with possible interpretational obscurity, in particular, are explained in detail. The definitions of concepts are based on the publications and research articles listed under "References". However, these have not been separately referenced in context.

Following the component content, the main categories and subcategories of the component are presented in a table. The main category is first on the left in bold, and the subcategories are listed under the main category without any font styling. An explanation of the term or concept is added for some of the main categories and subcategories.

Finally, a few examples of how to use the main categories and subcategories when recording nursing diagnosis entries are included. Nursing diagnosis is a description of existing or possible future health problems that could be cured or alleviated with proper nursing interventions. The description is drawn up by the nursing staff. Usually, the main category or subcategory is in itself a sufficient description of the nursing diagnosis. However, the nurse may choose to supplement or specify the selected FiCND main category or subcategory with free-form text. Several of the following examples include additional information given as free text. However, it is necessary only when the main category or subcategory is not in itself sufficiently explicit in describing the nursing diagnosis of the patient in question.

Metabolic

- Items related to metabolism and the immune system.

This component includes nursing diagnoses describing the follow-up, monitoring and treatment of a patient's metabolism, hormonal disorders and changes in the immune system. New main categories in version 4.0 include separate categories for high and low blood sugar. New categories have been added for fracture risk, lymph circulation disorder and precautions for infection control also. These enable entering and using data from patient monitoring, e.g. documenting blood sugar levels directly from a system or device.

Sensory and neurological functions

- Items related to sensory functions and neurological functions.

This component includes nursing diagnoses noting changes or disorders in hearing, vision, balance and the sense of touch, smell and taste, and measures promoting the function of the senses. This component can be used to describe a change in the level of consciousness and neurological changes also. New main categories include stroke symptoms, tic disorder and flaccidity, for example.

Life cycle

- Items related to the different stages in life.

This component includes nursing diagnoses that are used in the health-related situations of the patient's or customer's life. These include nursing diagnoses related to reproductive and sexual health, pregnancy and labour, for example. New categories include the ability to work and functional ability, impending death, and parenting needs.

Elimination

- Items related to digestion, urinary tract function, haemorrhage and other eliminations.

This component includes nursing diagnoses related to the patient's digestion and intestinal and urinary tract function. Faecal and urinary incontinence, vomiting and nausea are included in this component. Nursing diagnoses can be entered directly under the main category in free-form text.

Respiratory

- Items related to pulmonary function and breathing.

This component includes nursing diagnoses that can be used to enter details about breathing, the volume and quality of respiratory discharge, and oxygen deprivation, for example. This component includes several new categories including hypoventilation, increased or decreased respiration rate, abnormal breath sounds, fluctuations in respiratory rhythm, airway obstruction and oxygen deprivation.
The objective is to transfer respiratory quality, rate and rhythm entered into the nursing records automatically to the nursing table using a subcategory. Mucus production and irritative cough are included in this component.

Coordination of care and follow-up care

- Coordination and instruction regarding multi-professional care and follow-up care and individual care and care need(s).

This component includes the care-related information and instruction needs of the patient regarding the implemented nursing interventions, examinations and measures that are planned to be implemented during an appointment or care period.These may also include health and specialist services provided afterwards. This version of the classification includes new knowledge deficit categories related to fluid balance, pain and mobility. The objective is that a patient's knowledge deficit can be entered under that particular category instead of using a single category to define a patient's knowledge deficit.

Pain Management

- Items related to pain and the management of pain.

This component is a new component in this version of the classification. Abdominal, ear, back and labour pains each have their own categories. Please note that knowledge deficit regarding pain is under the component "Coordination of care and follow-up care". When documenting pain, it is important to recognise the various items related to the type and intensity of the experienced pain.

Skin integrity

- Items related to the mucous membrane, cornea, skin and subcutaneous layers including the skin graft donor site, skin graft and cutaneous flap.

This component includes main categories describing nursing diagnoses related to skin and skin integrity. To facilitate recording the patient's need(s) there are no sub-categories in this component. New categories in version 4.0 include intertrigo, muscle flap, contusion, cut, puncture wound and contused wound. New main categories include gunshot wounds and bite wounds.

In Finland, several pressure ulcer risk assessment scales are in use. One of the most commonly used scales is perhaps the Braden Scale. It is the most researched scale and used in acute cases, in particular. The Braden risk assessment scale comprises six items: sensory perception, moisture, activity, mobility, nutrition, and friction and shear. Each item gets a score between 1 and 4 (except for friction and shear that is scored between 1 and 3), and the total score is the risk classification. Another scale for pressure ulcer risk assessment is the Jackson and Cubbin scale that was developed to assess the risk of pressure ulcers in

patients in intensive care. When using this scale, risk is assessed once a day. The scale is divided into 12 items. Risk assessment is based on a nurse's assessment. When recording the risk of pressure ulcers, it is important to include the used scale and the risk score.

Medication

- Items related to the use of medications and to medication management.

This component includes nursing diagnoses implemented to record needs that arise from the medication management of a patient. An entry might describe the effect of a drug, instruction given to a patient regarding medication, or when it is necessary to describe a deviation from the normal method of administration (pills are crushed, for example) or involuntary administration of medications. Medications not tolerated by the patient, adverse reactions and pharmacodynamic interactions are included in this component. Needs assistance in the management of medications is an important main category and can be used when problems in taking medications or in the distribution of medications have been detected.

Some needs related to medication management may include medicinal products subject to additional monitoring. According to the Fimea guidelines: Persons authorised to prescribe or dispense the medication are asked to report adverse reactions electronically (recommended) or using the Fimea form Nr. 720 'Report of a suspected adverse drug reaction'. In such cases, nursing interventions are entered under the category: Medication subject to additional monitoring.

Fluid balance

- Items related to hydration.

This component includes nursing diagnoses implemented to record the risk of fluid imbalance, dehydration and increased volume of fluids (swelling, for example). New categories in this version include the need to limit fluid intake, increased volume of fluids and electrolyte imbalance.

Mental capacity

- Items related to mental capacity.

This component includes nursing diagnoses related to mental capacity. The scope of the component now covers not only mental equilibrium but also functional ability and the related needs. New main categories in this version of the classification include various affective disorders and diseases.

Activities of daily living and independence

- Items related to independence and physical capability.

The scope of the component now covers independence also. This component includes nursing diagnoses relating to activities of daily living identified with the patient. The component includes needs from the previous version, and conceptual changes have been implemented in some of the main categories and subcategories to clarify their use.

Nutrition

- Items related to securing adequate nutrition.

New categories added to this component include the risk of malnutrition, for example. It can be used to record the identified malnutrition risks. Changes have been implemented in the hierarchy with some subcategories transferred to the main category level. Eating difficulties and the need for nutritional supplements, for example, are now main categories.

Coping

- The ability of an individual or a family to cope with problems related to or caused by a health condition, changes in health, everyday routines, work and social interaction.

Two new categories have been added into this component: Marginalisation risk and Health hazards related to the living environment. The latter includes radiation hazards. The text in the categories of the coping component have been altered to clarify the categories and to make them more readily understood. Any needs related to the deteriorated coping of close relatives or family caregivers are recorded on a separate document, unless they are directly linked to the care of the patient in question. In such cases, use the category Needs support to cope when entering patient data.

Health behaviour

- Items related to health promotion.

This component includes eight new categories describing addictions: Alcohol and drug addiction, Exercise addiction, Codependency, Internet addiction disorder, Compulsive buying disorder, Gambling/gaming addiction, Sex addiction and Prescription drug addiction. Alcohol and drug addiction includes nicotine addiction also.

Safety

- Safety hazards caused by the patient's right to self-determination, disease or caring environment.

This component includes a clarification note under Carrier of an infectious disease: it includes exposure and being an asymptomatic carrier which are observed in care.

Circulation

- Items related to blood circulation in various organs.

This component includes one new category: Peripheral circulation disorder. All of the other categories are the same as in the older classification. In this new version, swelling is a main category and it is now possible to enter swelling caused by poor circulation under this category.

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6 The Finnish Classification of Nursing Interventions (FiCNI) 4.0

For each component, the key concepts and those with possible interpretational obscurity, in particular, are described and explained in detail. The definitions of concepts are based on the publications and research articles listed under "References". However, these have not been separately referenced in context.

Each component is followed by examples of how the Classification of Nursing Interventions has been applied in the care planning phase to define planned interventions, or how the main categories and subcategories of the classification have been applied in the description of implemented interventions.

A subcategory is added to supplement the main category, or a nursing intervention entry is supplemented with free-form text, if necessary. In addition to free-form text, structured data elements can be saved to the main category using a Yes/No option (depending on the situation) or by entering a measured outcome (e.g. weight = 42 kg).

Metabolic

- Items related to metabolism and the immune system.

This component includes nursing interventions describing the follow-up, monitoring and treatment of a patient's metabolism, hormonal disorders and changes in the immune system. Monitoring and treatment of blood sugar levels as well as monitoring icterus in newborn and adult patients are entered into the nursing records. Various isolation interventions are also included in this component.

Identification of fracture risk includes the application of FRAX - a fracture risk assessment tool by WHO.

Sensory and neurological functions

- Items related to sensory functions and neurological functions.

This component includes nursing interventions noting changes and disorders in hearing, vision, balance and sense of touch, smell and taste, and measures promoting the function of the senses. Monitoring the level of consciousness and neurological symptoms are included in this component.

Monitoring sensory functions includes hearing, vision, smell and taste. Monitoring tremor includes tic disorders. The level of consciousness can be assessed using the Glasgow Coma Scale (GCS).

Life cycle

- Items related to the different stages in life.

This component includes nursing interventions that are used in the health-related situations of the patient's or customer's life. These include nursing interventions related to reproduction and giving advice on the use of contraceptives, and to pregnancy and labour. The Life cycle component includes monitoring normal growth and development and any implemented care, including physical examinations at the child health clinic and later by the school nurse. Terminal care at the other end of a patient's life cycle is recorded under this component also together with the implementation of palliative care.

Nursing interventions implemented in caring for a dying patient are used when recording data after the patient's death. Nursing interventions to support family members and others who were close to the patient are under "Coping".

Elimination

- Items related to digestion, urinary tract function, haemorrhage and other eliminations.

This component includes nursing interventions that are implemented to support and assist the patient in care needs related to digestion and intestinal and urinary tract function. This component includes also care and instruction related to nausea and vomiting, implementation and instruction related to dialysis treatment, and observations on other special interventions.

After insertion of an indwelling catheter, make an entry of the date, time, type and size of the catheter into the nursing records. Drainage refers to discharge from any kind of drainage tube or tissue suction device. Treatment of an intestinal stoma includes all the relevant nursing interventions. The insertion of a nasogastric tube includes the insertion of both feeding tubes and PEG tubes. The objective is that the data system automatically ensures that numeric entries made into nursing records (e.g. amount of urine) are transferred into the nursing table also.

Stools are defined using the Bristol Stool Scale developed by Dr. K. Hering at the University of Bristol.

- Type 1: Separate, hard lumps that are hard to pass.
- Type 2: Lumpy, solid and sausage like.
- Type 3: A sausage shape with cracks in the surface.
- Type 4: Like a smooth, soft sausage or snake.
- Type 5: Soft blobs with clear-cut edges.
- Type 6: Mushy consistency with ragged edges.
- Type 7: Liquid consistency with no solid pieces.

Respiratory

- Items related to pulmonary function and breathing.

This component includes nursing interventions implemented to monitor breathing, the volume and quality of respiratory discharge and respiratory function, and to promote and maintain breathing and pulmonary function.

The objective is to transfer respiratory quality, rate and rhythm entered into the nursing records automatically to the nursing table using a subcategory.

Mucus production and cough are included in monitoring respiratory discharge. Blowing into a bottle refers to positive expiratory pressure.

Coordination of care and follow-up care

- Coordination and instruction regarding multi-professional care and follow-up care and the patient's personal care and care need(s).

This component includes nursing interventions implemented when planning, giving instructions on, coordinating or implementing health care or specialist services during an appointment or a care period, or afterwards.

Preparing for an intervention includes instruction given to the patient, collection of samples and any preparations related to an examination. Here, implementing an intervention refers to an intervention, sample collection or examination. The objective is that it is possible to take advantage of the codes of the Finnish Classification of Nursing Interventions as nursing record content in the data system in a more exact classification.

Arranging assistive products includes mattresses, sleeping mats, chair cushions and mattress covers to prevent the development of pressure ulcers, and other special equipment. The objective is to be able to use the assistive product nomenclature in data systems (ISO 9999 classification of assistive products). Securing patient rights includes also offering information about the rights of patients.

Pain Management

- Items related to pain and the management of pain.

In addition to various nursing interventions, this component includes monitoring the experienced pain also. The location and intensity of pain is assessed when the patient is at rest and when the patient is mobile.

The intensity of pain is assessed using scales such as VAS, NRS or VDS. A subclassification to assess the type and timeliness of pain is available in order to ensure the consistency of documentation. Assessing the duration of pain refers to pain that has lasted for several hours, for example. Timeliness refers to continuous pain or pain that is only experienced in a specific situation.

Non-pharmacological pain management interventions are included as subcategories such as hydrotherapy given to provide relief in labour pains. Relaxation techniques include music, for example. Meditation training refers to mindfulness training, for example.

Skin integrity

- Items related to the mucous membrane, cornea, skin and subcutaneous layers including the skin graft donor site, skin graft and cutaneous flap.

This component includes nursing interventions describing how the condition of the patient's skin and mucous membranes is monitored, how skin is monitored and cared for, and the treatment of dermatitis. Additionally, this component includes nursing interventions related to oral hygiene and eye care, wound care and monitoring wounds.

On the main category level, nursing interventions related to all different kinds of wounds are recorded (including burns, frostbite, pressure ulcers and leg ulcers). On the subcategory level, the aim is to clarify and streamline the documentation of wound care. Monitoring wound exudate includes monitoring exudate from a wound, skin graft donor site and skin flap. Pressure ulcer risk assessment includes saving the risk assessment tool score also.

Medication

- Items related to the use of medications and to medication management.

This component includes nursing interventions implemented when recording planned interventions to achieve treatment goals related to the patient's medication, and to describe medication management. Medications and administration times are entered in the medications section of the patient record. Medications administered as needed (e.g. pain relief) are recorded into the administered medications section in the patient record. However, make sure to include in the nursing records the reason for administering the medication and to evaluate its effect post-administration.

An entry might describe the effect of a drug, instruction given to a patient regarding medication, or when it is necessary to describe a deviation from the normal method of administration (pills are crushed, for example) or involuntary administration of medications.

Monitoring the effect of medication includes medicinal products subject to additional monitoring found in the FiCND (black inverted triangle in the package insert).

Fluid balance

- Items related to hydration.

This component includes nursing interventions implemented to monitor the patient's fluid balance and to treat any changes detected in it.

Insertion and removal of an IV cannula and ensuring the proper operation of cannulas are included in this component, because these nursing interventions are a prerequisite for intravenous administration of liquids and blood products. The insertion date and time, the size of the cannula and its location are entered into the nursing records.

Administration of blood products may always be used when blood products are administered or are scheduled to be administered to correct abnormal blood volumes. Determination of fluid balance refers to an activity performed by a nurse (e.g. calculating fluid balance based on information in a fluid intake and output sheet).

Mental capacity

- Items related to mental capacity.

This component includes nursing interventions implemented to monitor a patient's mental capacity and mood, to recognise certain behavioural disorders and impairment of perception, and to generate and maintain a treatment relationship via therapeutic methods, for example.

Additionally, this component includes nursing interventions aimed at regaining mental capacity including the implementation of therapeutic methods and enhancing the patient's sense of reality.

Implementation of seclusion includes monitoring the patient during seclusion, and the termination of seclusion includes everything following seclusion.

Discussion with a primary nurse is included in the implementation of therapeutic methods.

Activities of daily living and independence

- Items related to independence and physical capability.

This component includes nursing interventions implemented to ensure, support and assist the patient in coping independently in activities of daily living, including bathing/showering, feeding, mobility, toileting and other routine activities. Additionally, this component includes interventions to restrict activity and to record the patient's sleep and waking states. Assessment of physical capability includes measuring physical capability (e.g. the Barthel index). Oral hygiene includes cleaning dentures.

Assistance in everyday routines includes non-therapeutic interventions such as carrying fire wood or helping with shopping for groceries.

Nutrition

- Items related to securing adequate nutrition.

This component includes nursing interventions implemented to monitor, secure and ensure the proper nutrition of a patient. A nurse may go over the need for nutritional supplements together with the patient and a dietitian, and implement tube feeding. Weight, height, waist circumference and other data entered into the nursing records are automatically transferred to the nursing table. Risk assessment tools such as NRS 2002, MNA and MUST are used in the assessment of the patient's risk of malnutrition. When a patient is on a special diet and this is entered into the data system, the system can classify this data according to the classification of special diets by the Finnish Institute for Health and Welfare.

Implementation of enhanced nutritional therapy includes supplementary nutrition products, intravenous alimentation, offering favourite foods and food supplements. The insertion and removal of a feeding tube includes nasogastric tubes and PEG tubes.

Coping

- The ability of an individual or a family to cope with problems related to or caused by a health condition, changes in health, everyday routines, work and social interaction.

This component includes nursing interventions implemented to support the patient and/or the family in coping with changes caused by situations in life or health condition and with problems related to social interaction. Nursing interventions are implemented to enhance the patient's strengths and to help the patient find new coping strategies.

Support for family and other close people includes all forms of communication such as phone calls and any contact using other communication devices to discuss the situation or to offer emotional support to those closest to the patient. Discussions related to the Let's Talk About Children intervention method are included in this nursing intervention.

Supporting social abilities includes interaction and providing emotional support by being empathetic and friendly, saying comforting words and giving warm handshakes. Supporting communication includes identification of thought and speech disorders and using interpretation services to which all patients are entitled to.

Health behaviour

- Items related to health promotion.

This component includes nursing interventions implemented to monitor lifestyle habits, detect addictions, promote adherence and to promote health.

The nursing intervention of promoting adherence can also be used when making a treatment agreement and participating in the planning and implementation of care.

Determining exercise habits includes testing for exercise addiction also. The AUDIT-C, AUDIT and Fagerström scores are entered under Testing for the use of alcohol and drugs. AUDIT-C is the primary tool used first when assessing alcohol and drug use. If the result suggests completing AUDIT with the 10 questions, it can be performed in addition to AUDIT-C.

Safety

- Safety hazards caused by the patient's right to self-determination, disease or caring environment.

This component includes nursing interventions implemented to improve and secure patient safety by making the caring environment safe for the patient and by anticipating identified risks (falls, for example). Sometimes patient safety and the goals of care might necessitate restricting the patient's mobility and communication or controlling the patient's threatening behaviour by using restraints, for example, to calm down the patient. In such cases it is important to follow the legislation on the use of restraints and to record the implemented interventions in the patient record. According to the legislation regulating the use of restraints, the data system must support saving the date and time into the nursing records.

Necessary involuntary care includes involuntary treatment which is defined in legislation. Use of restraints includes using restraints to bind the patient, using a safety blanket or using other equipment or clothing to limit the free movement of the patient. Therapeutic holding includes skin contact.

Fall risk assessment includes the FROP-Com and FRAT tools (short and extended), the TUG test and the fall risk assessment test of the UKK Institute. When recording an accident, use the available subcategories to

indicate whether or not the accident caused the patient trauma. For more information on fall risk assessment tools and the prevention of falls, please visit the web site of the Finnish Institute for Health and Welfare (in Finnish, only).

Circulation

- Items related to blood circulation in various organs.

This component includes nursing interventions implemented to monitor or promote blood circulation in various organs. These interventions include monitoring the patient's blood pressure, heart rate, cardiac rhythm, skin colour and temperature and using postural therapy to maintain adequate blood circulation. Temperature, blood pressure, heart rate and cardiac rhythm entered into the nursing records are automatically transferred to the nursing table, when subcategories are used.

Maintaining body temperature includes increasing, decreasing and maintaining the temperature. The nursing intervention to monitor the cardiac rhythm is used to document ECG recordings also.

Swelling prevention interventions include medical stockings, raised position, multi-layered bandages, elastic bandages and intermittent pneumatic compression.Resuscitation includes basic life support and advanced cardiac life support.

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7 Documentation examples

The following examples demonstrate how to enter structured nursing data according to the FinCC 4.0. In some of the examples, emphasis is on entries on the subcategory level of the Finnish Classification of Nursing Interventions (FiCNI) facilitating and streamlining their use when implementing the nursing process, or nursing interventions. In these examples, the streamlined and easy recording of nursing interventions is with a 0 symbol meaning that the user selects either the option "Yes" or "No". The examples may also include other entries for implementing nursing interventions during the same day. However, these examples focus on illustrating the topic depicted in the example (Tables 7.1 - 7.5).

Table 7.1 Example: Documenting an appointment with a nurse. FinCC 4.0. FinCC expert group on 2 December 2019.

Patient diagnosed with respiratory insufficiency, suspected asthma.Reason for seeking medical attention: Arrives at the pulmonary diseases outpatient clinic for an appointment with a nurse to learn how to take a PEF measurement.				
PHASES OF THE NURSING PROCESS				
CARE PLANNING			**IMPLEMENTATION OF INTERVENTIONS**	**NURSING OUTCOME/EVALUATION**
Nursing Diagnosis	**Goal of care**	**Planned interventions**	**Nursing Interventions**	**Evaluation of Nursing Outcomes**
HEALTH CARE SERVICE USE/ Knowledge deficit regarding examination/intervention PEF measurement instruction, nurse's appointment	**HEALTH CARE SERVICE USE/ Knowledge deficit regarding examination/intervention** How to use a PEF meter, becoming motivated for self-care	**RESPIRATORY/Instruction regarding breathing** Taught how the meter is used and encouraged to perform monitoring independently **RESPIRATORY/Performing breathing exercises**	**RESPIRATORY/Instruction regarding breathing** Covered with the patient the basic operating principles of the PEF meter, maintenance and assembling of the meter. **RESPIRATORY/Performing breathing exercises** Breathing exercises performed under guidance.	**HEALTH CARE SERVICE USE** Knows how to assemble and service the meter. Knows how to fill in the form and knows that the measurements must be performed daily. **RESPIRATORY** Poor blowing technique, blows from cheeks despite instruction to do otherwise. **Status of nursing outcome** PA Improved

Table 7.2 Example: Documenting the care of a malnourished patient. FinCC 4.0. FinCC expert group on 2 December 2019.

Patient has a lack of appetite and risk of malnutrition. Status at arrival: Ongoing active cancer treatment. Risk of malnutrition determined. Admitted to an inpatient ward to map the nutritional state and to improve nutrition.				
PHASES OF THE NURSING PROCESS				
IMPLEMENTATION OF INTERVENTIONS			**NURSING OUTCOME/ EVALUATION**	
Nursing Diagnosis	**Goal of care**	**Planned interventions**	**Nursing Interventions**	**Evaluation of Nursing Outcomes**
NUTRITION/Risk of malnutrition 1 October NRS-2002 score 4 points: Moderate risk of malnutrition. Ongoing active cancer treatment. **NUTRITION/Nutritional intake disorder/*Lack of appetite*** Lack of appetite, patient does not want to eat anything. Patient is losing weight. **ELIMINATION/Nausea** Nausea. **NUTRITION/ Needs to follow a special diet** High-energy diet rich in protein.	**NUTRITION** Appetite restored, nutritional status improved and no more weight loss. **ELIMINATION/Nausea** Nausea relieved.	**NUTRITION/Mapping nutrition** Malnutrition risk screening performed once a week, next time on 8 October. **NUTRITION/Monitoring feeding** Independent feeding and taking meals is monitored. Clinical nutrition products offered. Ensure the patient is in a good feeding position. **ELIMINATION/Prevention and treatment of nausea and vomiting** Favourite foods offered. Small, refrigerated portions of food offered every 2 to 3 hours. An antiemetic given 30 minutes before meals. **NUTRITION/Following a special diet** High-energy diet rich in protein. **NUTRITION/Monitoring weight** Weighed on Mon, Thu.	**NUTRITION/Mapping nutrition** 8 October NRS2002 score 3 points. **NUTRITION/Monitoring weight** 73 kg, stand-on weighing scale. **COORDINATION OF CARE AND FOLLOW-UP CARE/Coordination of specialist services** Phone call to dietician to discuss nutritional plan. Researches the patient's situation and then calls back. **ELIMINATION/Prevention and treatment of nausea and vomiting** Small portion of cooled puréed soup provided for dinner at the patient's request. Took an antiemetic before the meal as planned. **COORDINATION OF CARE AND FOLLOW-UP CARE/Instruction regarding eliminations** Instructed and	**NUTRITION** Appetite better after nausea relieved. Manages to intake small amounts of favourite foods and takes a nutritional supplement drink twice a day. Weight-loss halted, weight stabilised Decreased risk of malnutrition. Enhanced nutritional therapy continued. Dietician participates in the care of the patient. Patient still needs antiemetics. **Status of nursing outcome** PA Improved

		COORDINATION OF CARE AND FOLLOW-UP CARE/Instruction on nutrition Instruction in nutrition for cancer patients. A guidebook given to the patient.	encouraged to move about the ward to promote bowel movement. **COORDINATION OF CARE AND FOLLOW-UP CARE/Instruction on nutrition** Nutrition for cancer patients discussed. Patient guide on nutrition for cancer patients handed to the patient. **COORDINATION OF CARE AND FOLLOW-UP CARE/Instruction in oral hygiene** Instructed and encouraged to take good care of oral hygiene. Moisturizing lozenges given to relieve dry mouth.	

Table 7.3 Example: Documenting pain management. FinCC 4.0. FinCC expert group on 2 December 2019.

Pain management, knee operation Status at arrival: Patient with advanced osteoarthritis of the knee, arrives for elective knee replacement surgery.				
PHASES OF THE NURSING PROCESS				
CARE PLANNING			**IMPLEMENTATION OF INTERVENTIONS**	**NURSING OUTCOME/EVALUATION**
Nursing Diagnosis	**Goal of care**	**Planned interventions**	**Nursing Interventions**	**Evaluation of Nursing Outcomes**
PAIN MANAGEMENT/Acute pain Prosthetic treatment of right knee, 1 day after surgery	**PAIN MANAGEMENT/Acute pain** Minor pain at incision site, VAS 1 to 3.	**PAIN MANAGEMENT/Assessment of the duration of pain** Duration of pain monitored and assessed **PAIN MANAGEMENT/Assessment of the type of pain** PCEA infusion 2 to 6 ml/h according to experienced pain and response to infusion Monitoring blood pressure and pulse **PAIN MANAGEMENT/Assessment of the type of pain** **PAIN MANAGEMENT/Assessment of the intensity of pain at rest** The intensity of pain is assessed using the VAS scale. **PAIN MANAGEMENT/Assessment of the intensity of pain when mobile** The intensity of pain is assessed using the VAS scale. **PAIN MANAGEMENT/Non-**	**PAIN MANAGEMENT/Assessment of the duration of pain** Intermittent pain, mainly when the leg is moved. **PAIN MANAGEMENT/Assessment of the timeliness of pain/*Intermittent pain*** 0 Yes at 8:00 am 0 Yes at 12:00 pm 0 Yes at 6:00 pm **PAIN MANAGEMENT/Assessment of the type of pain *Piercing pain*** 0 Yes at 8:00 am 0 Yes at 12:00 pm 0 Yes at 6:00 pm **PAIN MANAGEMENT/Assessment of the intensity of pain at rest** VAS 4 at 11:00 am VAS 3 at 1:00 pm VAS 2 at 6:00 pm **PAIN MANAGEMENT/Assessment of the intensity of pain when mobile** VAS 7 at 10:00 am	**PAIN MANAGEMENT** Intermittent piercing pain, mainly when the leg is moved or when mobile. VAS score between 2 and 7. PCEA infusion 6 to 4 ml/h depending on pain intensity. Good response to infusion. Blood pressure good in the morning and in the evening, syst. 120 to 145, diast. 62 to 83, normal pulse. Cold compression applied for a while on the knee during postural therapy and finds it helpful and the support pads also. **Status of nursing outcome** PA Improved

		pharmacological management of pain/*Cryotherapy* A cold compress applied on the knee, if necessary **PAIN MANAGEMENT/Non-pharmacological management of pain/Postural therapy** Supportive pads placed around the knee and leg. **MEDICATION/Monitoring the effect of medication** PCEA infusion according to separate instructions	VAS 6 at 2:00 pm VAS 4 at 5:00 pm **PAIN MANAGEMENT/Non-pharmacological management of pain/*Cryotherapy*** 0 Yes at 8:00 am **PAIN MANAGEMENT/Non-pharmacological management of pain/Postural therapy** 0 Yes at 2:00 pm **MEDICATION/Monitoring the effect of medication** PCEA infusion dose decreased by 4 ml/h in the evening and this dose continued over night. This dose is currently sufficient and pain is managed.	

Table 7.4 Example: Documenting the care of a patient suffering from depression. FinCC 4.0. FinCC expert group on 2 December 2019.

Patient suffering from depression treated in a psychiatric inpatient ward. **Status at arrival: Background information: several periods in specialised care for depression. Patient sought medical attention via occupational health services when felt that could no longer manage the situation and the mood swings were hard to bear.**				
PHASES OF THE NURSING PROCESS				
CARE PLANNING			**IMPLEMENTATION OF INTERVENTIONS**	**NURSING OUTCOME/EVALUATION**
Nursing Diagnosis	**Goal of care**	**Planned interventions**	**Nursing Interventions**	**Evaluation of Nursing Outcomes**
MENTAL EQUILIBRIUM/ Depression Major depressive disorder period, manifested by sleeping problems and anxiety. **PAIN MANAGEMENT/Persistent pain** Persistent, intensive back pains without any apparent reason. Walking makes the symptoms worse.	**MENTAL EQUILIBRIUM/Monitoring the patient's mood** Support given to experience joie de vivre, BDI < 5 **PAIN MANAGEMENT/ Persistent pain** Learns to live with the back pains, VAS 0 to 3	**MENTAL EQUILIBRIUM/Monitoring the patient's mood** **MENTAL EQUILIBRIUM/Assessment of mental capacity** BDI measurement **MEDICATION/Orally administered medications** Temesta 1 mg for anxiety taken according to separate instructions as needed **MEDICATION/Monitoring the effects of medications** **COPING/Assessment of coping abilities** **PAIN MANAGEMENT/Assessment of the type of pain** **PAIN MANAGEMENT/Assessment of the intensity of pain at rest** VAS measurement	**MENTAL EQUILIBRIUM/Monitoring the patient's mood** Woke up refreshed and participated industriously in morning routines. Participated in the morning group and retreated then back into own room. Seemed distressed and restless, withdrew from contact. Requested for a tranquilliser for relief. In a brighter mood in the afternoon. Spent time in the common area chatting happily with others. **MENTAL EQUILIBRIUM/Assessment of mental capacity** BDI 8 at 10:00 am **COPING/Assessment of coping abilities** Feels today has been a busy day with the spinal X-ray and a nurse's appointment related to sleep apnoea. Because of the above, has been	**MENTAL EQUILIBRIUM** Experienced more mood swings today that in the past few days. Asks for medication for relief, if necessary. Anxiety occurs with back pains. **PAIN MANAGEMENT** Intermittent, severe back pains today after moving about and sitting down, in particular. Required pain medication only once. Pain medication was effective. VAS 1 to 7. **Status of nursing outcome** EN Stabilised

		Panacod p.o. 1 x 3 to 6 per day for back pain as needed **COORDINATION OF CARE AND FOLLOW-UP CARE/Performing an intervention** Spinal X-ray today at 9:00 am, goes with nurse	walking around the hospital campus and the back pain has been, therefore, severe since noon. **PAIN MANAGEMENT/Assessment of the type of pain/*Piercing pain*** 0 Yes **PAIN MANAGEMENT/Assessment of the intensity of pain at rest** VAS 7 at 12:00 pm VAS 1 at 3:00 pm **MEDICATION/Medications administered orally** Temesta 1 mg at 11:00 am for anxiety. Panacod 1 at 12:05 pm for back pain. **MEDICATION/Monitoring the effects of medications** Medication provided relief from anxiety. Pain medication relieved back pain. **COORDINATION OF CARE AND FOLLOW-UP CARE/Performing an intervention** X-rays taken. The report on the spinal X-ray becomes available tomorrow morning onwards.	

Table 7.5 Example: Documenting a pressure ulcer. FinCC 4.0. FinCC expert group on 2 December 2019.

Pressure ulcer in lower back. **Status at arrival: an elderly, somewhat forgetful bed-bound patient in long-term care. Pressure ulcer developed in the sacral region. Risk of developing pressure ulcers in body parts subject to pressure.**				
PHASES OF THE NURSING PROCESS				
CARE PLANNING			**IMPLEMENTATION OF INTERVENTIONS**	**NURSING OUTCOME/ EVALUATION**
Nursing Diagnosis	**Goal of care**	**Planned interventions**	**Nursing Interventions**	**Evaluation of Nursing Outcomes**
SKIN INTEGRITY/Pressure ulcer Stage I pressure ulcer (Pressure Ulcer Helper STAGES: I to IV) in the sacral region, a round ulcer with a 5 cm diameter. High risk of developing a pressure ulcer. Score on the Braden Scale 11 points on 1 October 2019. Bed-bound patient. **SKIN INTEGRITY/Changes in skin integrity** Both heels appear flushed. **PAIN MANAGEMENT/ Pain related to**	**SKIN INTEGRITY/Pressure ulcer** The pressure ulcer in the sacral region heals, redness decreases. **SKIN INTEGRITY/Changes in skin integrity** No new pressure ulcers develop and heels become less flushed. The risk of developing pressure ulcers decreases. **PAIN MANAGEMENT/ Pain related to tissue damage** Pain relief using appropriate postural therapy.	**SKIN INTEGRITY/Pressure ulcer risk assessment** Use the Braden Scale at least once a week to asses the risk of developing pressure ulcers. Use the Pressure Ulcer Helper on a daily basis to determine the stage (I to IV) of a pressure ulcer. **SKIN INTEGRITY/Assessment of skin condition/*Flushed skin*** Assess daily the redness of the skin in the sacral region, heels and other body parts subject to pressure in connection with other nursing interventions. **SKIN INTEGRITY/Wound dressing/*Application of a silicone layer dressing*** Changed when necessary. **PAIN MANAGEMENT/Assessment of the timeliness of pain/*Pain occurs in specific situations*** Assess pain in the body parts subjected to pressure in connection with other nursing interventions and position changes.	**SKIN INTEGRITY/Pressure ulcer risk assessment** Braden Scale score: 14 points moderate risk of developing a pressure ulcer, redness remains when pressure applied to the area, stage I pressure ulcer. **SKIN INTEGRITY/Assessment of skin condition/*Dry skin*** 0 Yes **SKIN INTEGRITY/Assessment of skin condition/*Flushed skin*** 0 Yes **SKIN INTEGRITY/Wound dressing/*Application of a silicone layer dressing*** 0 Yes **SKIN INTEGRITY/Treatment of skin and skin lesions** Basic lotion applied after showering in the mornings. Barrier Cream applied on the skin in the pad area.	**SKIN INTEGRITY** Risk of developing pressure ulcers is decreased. Compared to the right heel, the left heel is more flushed, although redness in both heels has decreased. Mild redness in the sacral region, floor of the ulcer clean. **PAIN MANAGEMENT** Pain in the sacral region and left heel when touched. To some extent able to independently change positions and move into a better position in bed. Continued

tissue damage Pain on body parts subject to pressure.		**PAIN MANAGEMENT/Non-pharmacological management of pain/*Postural therapy*** Position change from one side to the other using a draw sheet, pillows used for support, tilt angle 30 degrees, every two hours or more often. Heels supported so that they do not touch the mattress, a pillow placed under the calves. **ELIMINATION/Treatment of urinary incontinence** Needs to be dried often, heavy wetting. **SKIN INTEGRITY/Treatment of skin and skin lesions** Skin kept clean with adequate basic care. Lotion applied every morning and night to moisturise the skin. **SKIN INTEGRITY/Wound dressing/*Applying a film or cream to protect the skin*** Barrier Cream applied when changing incontinence pads to protect the skin in the pad area from moisture. **COORDINATION OF CARE AND FOLLOW-UP CARE/Arranging assistive products for the customer** 3 October Mattress changed to pressure-relieving mattress. **COORDINATION OF CARE AND FOLLOW-UP CARE/Instruction in mobility** Patient encouraged to change positions in bed provided has sufficient functional ability.	**PAIN MANAGEMENT/Assessment of the timeliness pain/*Pain occurs in specific situations*** 0 Yes **PAIN MANAGEMENT/Non-pharmacological management of pain/*Postural therapy*** 0 Yes 0 Yes 0 Yes **ELIMINATION/Treatment of urinary incontinence** Dried, heavy urine output into pad. **COORDINATION OF CARE AND FOLLOW-UP CARE/Instruction in mobility** Patient encouraged and instructed to move independently in bed and to change the centre of gravity often. **NUTRITION/Monitoring weight** 95 kg, sit-on weighing scale **NUTRITION/Monitoring feeding** Nutridrink Compact Protein supplement offered during lunch, drank with good appetite. **COORDINATION OF CARE AND FOLLOW-UP CARE/Coordination of specialist services** Phone call to dietician to discuss nutritional plan. Researches the patient's situation and then calls	regular implementation of postural therapy. **NUTRITION** Dietician participates in the care of the patient, nutritional plan followed. Appetite occasionally better and manages to eat independently from time to time, needs assistance. Gaining weight. **FLUID BALANCE** Must be reminded to drink. Requires assistance in drinking. **Status of nursing outcome** EN Stabilised

		NUTRITION/Mapping nutrition 2 October NRS2002 score 5 points. Serious risk of malnutrition. Screening performed again after one week or according to dietician's instructions **NUTRITION/Monitoring feeding** Independent feeding and taking meals is monitored. Eating assisted, if necessary. Clinical nutrition products offered. Raised into eating position by raising the end of the bed up. **NUTRITION/Following a special diet** High-energy diet. **NUTRITION/Monitoring weight** Weighed on Mon, Wed, Fri. **FLUID BALANCE/Securing fluid balance** Fluid intake and output sheet, goal: 2,000 ml/day. Intravenous fluid therapy, if necessary.	back. **FLUID BALANCE/Securing fluid balance/*Oral rehydration*** 1,000 ml on the fluid intake and output sheet. Instructed to have an adequate amount to drink.	

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Appendix 1. FiCND 4.0 in readable format

CodeId	Component	CodeId	Main category	CodeID	Subcategory
5216	Metabolic – Items related to endocrinology and the immune system	5217	Hormonal change		
		5218	Change in metabolism		
		5219	Change in blood sugar levels	5462	Low blood sugar
				5463	High blood sugar
		5220	Icterus		
		5221	Changes in the immune system	5222	Impaired resistance to infections
		5401	Hypersensitivity reaction	5464	Precautions required for infection control
		5465	Fracture risk		
		5466	Lymph circulation disorder		
5297	Sensory and neurological functions – Items related to sensory functions and neurological functions	5214	Changes in neurological function	5211	Change in the level of consciousness
				5414	Tremor
				5415	Stiffness

CodeId	Component	CodeId	Main category	CodeID	Subcategory
				5416	Speech disorder
				5417	Loss of sensation
				5418	Dizziness
				5419	Convulsions
				5470	Stroke symptoms
				5471	Flaccidity
				5472	Tic disorder
		5298	Change in sensory functions *(impaired or disordered sensory function)*	5305	Change in hearing
				5306	Change in taste
				5307	Change in smell
				5308	Change in vision
				5309	Change in sense of touch
				5310	Change in balance
				5311	Sensitivity to stimuli
5362	Life cycle – Items related to the different stages in life	5369	Pregnancy		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5377	Labour		
		5381	Growth and development by age		
		5424	Sexual health		
		5426	Reproductive health		
		5431	Growth and development of a newborn		
		5488	Impending death		
		5489	The ability to work and functional ability		
		5490	Parenting needs		
5021	Elimination – Items related to digestion, urinary tract function, haemorrhage and other eliminations	5022	Problem in passing stools	5023	Faecal incontinence
				5024	Constipation
				5025	Diarrhoea
				5028	Difficulty with passing stools
				5029	Flatulence
				5384	Bloody stools
				5438	Soiling

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5031	Problem in urinating	5032	Urinary incontinence
				5033	Residual urine
				5034	Urinary retention
				5035	Urinary frequency
				5037	Decreased excretion of urine
				5039	Increased excretion of urine
				5040	Haematuria
				5385	Wetting
		5043	Haemorrhage		
		5044	Other disturbance related to eliminations	5048	Vomiting
		5055	Drainage		
		5386	Impaired renal function		
		5047	Nausea		
5188	Respiratory – Items related to pulmonary function	5195	Difficulty breathing *(caused by oxygen deprivation or hypoventilation)*	5196	Shortness of breath
				5197	Hyperventilation

CodeId	Component	CodeId	Main category	CodeID	Subcategory
				5453	Hypoventilation
				5454	Decreased respiration rate
				5455	Increased respiration rate
				5456	Abnormal breath sounds
				5457	Fluctuations in respiratory rhythm *(including interruptions of breathing, for example)*
		5198	Irritative cough		
		5201	Aspiration risk		
		5202	Mucus production		
		5458	Respiratory depression		
		5459	Airway obstruction		
		5460	Oxygen deprivation		
5437	Coordination of care and follow-up care – Coordination of multi-professional care and follow-up care, examinations and interventions	5121	Need for specialist services *(care related treatment organised in co-operation between health care professionals and other professionals)*		
		5124	Need regarding patient rights		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5356	Need for follow-up care		
		5383	Knowledge deficit regarding sleep disorders		
		5387	Knowledge deficit regarding eliminations		
		5399	Knowledge deficit regarding health behaviour		
		5144	Knowledge deficit regarding medication management *(insufficient information on medication and implementation of medication management)*		
		5172	Knowledge deficit regarding nutrition		
		5203	Knowledge deficit regarding respiratory function		
		5215	Knowledge deficit regarding circulation		
		5402	Knowledge deficit regarding metabolism		
		5404	Knowledge deficit regarding safety		
		5407	Knowledge deficit regarding support in independence		
		5312	Knowledge deficit regarding sensory functions		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5413	Knowledge deficit regarding pain		
		5353	Knowledge deficit regarding skin integrity		
		5420	Knowledge deficit regarding neurological changes		
		5425	Knowledge deficit regarding sexual health		
		5427	Knowledge deficit regarding reproductive health		
		5428	Knowledge deficit regarding pregnancy		
		5429	Knowledge deficit regarding labour		
		5430	Knowledge deficit regarding breastfeeding		
		5432	Knowledge deficit regarding the growth and development of a newborn		
		5433	Knowledge deficit regarding growth and development by age		
		5436	Knowledge deficit regarding interventions *(includes examinations and sample collection, for example)*		
		5492	Knowledge deficit regarding fluid balance		
		5493	Knowledge deficit regarding ageing		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5495	Knowledge deficit regarding mobility		
5473	Pain Management	5474	Abdominal pain		
		5475	Ear pain		
		5476	Back pain		
		5477	Labour pain		
		5313	Acute pain		
		5314	Chest pain		
		5315	Headache		
		5316	Inflammatory pain		
		5317	Pain related to an intervention		
		5318	Traumatic pain		
		5319	Persistent pain		
		5320	Pain related to tissue damage		
		5321	Neuropathic pain		
		5322	Idiopathic pain		
		5323	Cancer pain		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
5324	Skin integrity – Items related to the condition of the mucous membrane, cornea, skin and subcutaneous layers	5326	Broken skin		
		5327	Risk of breaking the skin		
		5332	Dermatitis		
		5342	Surgical wound		
		5345	Skin graft		
		5346	Skin graft donor site		
		5348	Diabetic foot ulcer		
		5349	Leg ulcer		
		5350	Pressure ulcer		
		5351	Infected wound		
		5333	Change in the integrity of the mucous membrane *(impairment of the mucous layer)*		
		5344	Burn		
		5423	Frostbite		
		5478	Skin inflammation caused by a foreign object		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5479	Intertrigo		
		5480	Muscle flap		
		5481	Contusion		
		5482	Cut		
		5483	Puncture wound		
		5484	Contused wound		
		5485	Gunshot wound		
		5486	Bite wound		
		5487	Skin inflammation		
5127	Medication – Items related to the use of medications and implementation of medication management	5130	Medication not tolerated by the patient		
		5134	Risk of intoxication		
		5135	Drug allergy		
		5136	Negative attitude towards medications		
		5137	Adverse reactions to medicinal products		
		5138	Pharmacodynamic interactions		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5139	Needs assistance in the management of medications		
		5142	Medication subject to additional monitoring		
5080	Fluid balance – Items related to hydration	5084	Risk of fluid balance disorder		
		5085	Dehydration		
		5441	Need to restrict fluid intake *(including polydipsia, for example)*		
		5442	Increased volume of fluids		
		5443	Electrolyte imbalance		
5269	Mental capacity – Items related to achieving mental equilibrium	5279	Change in self-image *(difficulties in accepting oneself and in self-perception)*	5153	Eating disorder
				5280	Change in body image
				5281	Self-esteem disorder
				5282	Anxiety *(vague, unexplained negative feeling)*
		5284	Mood swing *(fluctuation between high and low spirits)*	5285	Euphoria
				5286	Manic state

CodeId	Component	CodeId	Main category	CodeID	Subcategory
				5287	Apathy
				5288	Depression
				5467	Fatigue
				5468	Panic disorder
		5290	Change in behaviour *(behaviour disrupting oneself and/or others)*	5291	Aggressiveness
				5293	Self-destructiveness
				5294	Repeated compulsive actions
				5295	Restlessness
		5408	Impairment of reality function	5409	Hallucinations
				5410	Delusions
				5411	Disconnectedness
				5412	Confusion
		5469	Phobia		
5256	Activities of daily living and independence – Items related to independence	5001	Change in activity	5004	Lack of mental stimulation
				5006	Hyperactivity

CodeId	Component	CodeId	Main category	CodeID	Subcategory
				5008	Fatigue
				5009	Poor tolerance of stress
				5010	Limited mobility
				5011	Poor muscle condition
		5002	Deterioration of activity		
		5012	Sleeping disorder (changes in the amount and quality of sleep)	5016	Change in circadian rhythm
		5268	Need for assistive products *(use of assistive products to compensate for deteriorated functional abilities)*		
		5263	Needs assistance in bathing and personal hygiene		
		5264	Needs assistance in getting dressed		
		5265	Needs assistance in eating/feeding		
		5266	Needs assistance in mobility		
		5267	Needs assistance in toileting		
		5406	Needs assistance in other activities		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
5145	Nutrition – Items related to securing adequate nutrition	5146	Disorder in food intake	5046	Heartburn
				5148	Lack of appetite
				5152	Difficulty swallowing
				5154	Malabsorption
				5156	Eating difficulties
				5168	Difficulty with breastfeeding
				5169	Difficulty with sucking
		5161	Needs to follow a special diet *(individual nutritional needs)*		
		5162	Needs nutritional supplements		
		5170	Increased need for food intake		
		5171	Decreased need for food intake		
		5163	Need to limit food intake		
		5164	Food allergy		
		5452	Risk of malnutrition		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
5059	Coping – The ability of an individual or a family to cope with problems related to or caused by a health condition, changes in health and social interaction	5060	Deteriorated coping abilities (*a change in cognitive function)*	5064	Inability to concentrate
				5065	Lack of initiative
				5066	Learning disability
				5067	Inability to adapt
				5068	Forgetfulness
				5440	Marginalisation risk
		5074	Needs support to cope	5077	Sorrow
				5078	Needs emotional support
				5079	Feelings of guilt
		5225	Communication problem		
		5390	Change in social interaction - Change in social abilities	5231	Needs company
				5232	Needs solitude
				5233	Social isolation
				5388	Difficulty acting in a group

CodeId	Component	CodeId	Main category	CodeID	Subcategory
				5389	Difficulty being alone
		5395	Health hazards related to the living environment *(including radiation hazard, for example)*		
5090	Health behaviour – Items related to health promotion	5123	Non-adherence	5398	Refuses care
		5444	Alcohol and drug addiction		
		5445	Exercise addiction		
		5446	Codependency		
		5447	Internet addiction disorder		
		5448	Compulsive buying disorder		
		5449	Gambling/gaming addiction		
		5450	Sex addiction		
		5451	Prescription drug addiction		
5236	Safety – Safety hazards caused by disease or present in the caring environment	5248	Risk of injury		
		5251	Fall risk		
		5252	Risk of elopement		

CodeId	Component	CodeId	Main category	CodeID	Subcategory
		5253	Insecurity		
		5254	Carrier of an infectious disease *(includes exposure or being an asymptomatic carrier which is observed in care)*		
		5255	Risk of endangering others		
		5403	Risk of endangering self		
5204	Circulation – Items related to blood circulation in various organs	5088	Swelling		
		5205	Circulatory disorder	5206	Change in blood pressure
				5207	Change in cardiac rhythm
				5461	Peripheral circulation disorder
		5208	Change in body temperature	5209	Hypothermia
				5210	Fever

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Appendix 2. FiCNI 4.0 luettavassa format

CodeId	Component	CodeId	Main category	CodeId	Subcategory
1379	Metabolic – Items related to endocrinology and the immune system	1381	Monitoring blood sugar levels		
		1382	Monitoring and treatment of icterus		
		1385	Identification of infection risk		
		1386	Implementation of reverse isolation		
		1675	Implementation of protective isolation		
		1778	Treatment of blood sugar levels		
		1779	Implementation of location isolation precautions		
		1780	Implementation of isolation precautions to prevent air-borne infections		
		1781	Implementation of droplet Isolation precautions		
		1782	Implementation of contact isolation precautions		
		1783	Identification of fracture risk		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
1510	Sensory and neurological functions – Items related to sensory functions and neurological functions	1534	Observing sensitivity to stimuli		
		1682	Assessment of the level of consciousness		
		1683	Monitoring the size of pupils		
		1684	Testing motor response/motor function		
		1685	Testing muscle strength		
		1686	Testing for sensory loss		
		1687	Monitoring facial expressions and symmetry		
		1688	Monitoring strength and coordination of extremities		
		1689	Monitoring articulation		
		1690	Assessment of orientation		
		1691	Monitoring scotoma		
		1692	Monitoring dizziness		
		1693	Assessment of muscle rigidity		
		1694	Monitoring epileptic seizures		
		1798	Assessment of cognitive function		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1799	Monitoring spasms		
		1800	Monitoring tremor		
		1801	Monitoring sensory functions		
1645	Life cycle – Items related to the different stages in life	1318	Caring for a dying patient *(interventions implemented over the course of impending death and death)*		
		1650	Genetic counseling		
		1653	Intrapartum care		
		1654	Monitoring pregnancy		
		1658	Treatment in case of a miscarriage		
		1663	Monitoring and treatment of growth and development by age		
		1708	Monitoring and caring for a newborn		
		1709	Palliative care		
		1711	Postpartum monitoring		
		1898	Follow-up care after abortion		
1022	Elimination – Items related to digestion, urinary tract function, haemorrhage and other eliminations	1024	Monitoring the volume and type of stools		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1025	Monitoring bowel sounds		
		1027	Treatment of diarrhoea		
		1028	Treatment of constipation		
		1029	Bowel lavage		
		1036	Long term catheterisation		
		1037	In-and-out catheterisation		
		1038	Irrigation of the urinary tract or bladder		
		1039	Treatment of a urinary stoma		
		1040	Treatment of urinary incontinence		
		1045	Treatment of an intestinal stoma		
		1058	Prevention and treatment of nausea and vomiting		
		1062	Monitoring the volume and type of drainage from a nasogastric tube		
		1063	Monitoring the volume and type of drainage		
		1065	Monitoring and treatment of haemorrhage		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1067	Implementation of dialysis treatment (renal function replacement therapy)		
		1664	Monitoring frequency of micturition		
		1665	Measurement of post-void residual urine volume		
		1666	Bladder training		
		1667	Monitoring the volume and quality of amniotic fluid		
		1714	Monitoring urine quality	1715	Clear urine
				1716	Haematuria
				1717	Cloudy urine
				1718	Melanuria
		1719	Monitoring the volume of urine collected over a 24-hour period		
		1720	Monitoring hourly urinary output		
		1721	Removal of a long term catheter		
		1722	Insertion of a nasogastric tube		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1723	Securing catheter or nasogastric tube function		
		1724	Removal of a nasogastric tube		
1324	Respiratory – Items related to pulmonary function	1340	Monitoring respiration		
		1341	Monitoring respiration quality	1768	Gasping respiration
				1769	Shallow breathing
				1770	Stertorous breathing
				1771	Wheezing respiration
				1772	Loud breathing
		1345	Monitoring respiratory discharge		
		1349	Administration of supplemental oxygen		
		1350	Performing breathing exercises		
		1351	Lung lavage		
		1352	Aspiration of mucus		
		1354	Blowing into a bottle		
		1355	Treatment of tracheostomy		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1672	Intubation		
		1673	Extubation		
		1773	Mechanical ventilation		
1152	Coordination of care and follow-up care – Coordination of multi-professional care and follow-up care, examinations and interventions	1021	Instruction related to sleep and waking states		
		1059	Instruction in the prevention and treatment of nausea		
		1074	Instruction in dialysis treatment		
		1124	Instruction related to fluid balance		
		1145	Instruction promoting health behaviour		
		1153	Coordination of specialist services		
		1175	Securing patient rights		
		1180	Performing an intervention		
		1194	Preparing for an intervention		
		1195	Observation post-intervention		
		1204	Instruction in medication		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1261	Instruction on nutrition		
		1358	Instruction regarding breathing		
		1376	Instruction related to circulation		
		1387	Instruction related to metabolism		
		1430	Instruction related to infections		
		1458	Arranging assistive products for the customer		
		1514	Instruction in hearing		
		1539	Instruction in pain		
		1546	Instruction related to skin care		
		1562	Instruction in oral hygiene		
		1564	Instruction related to eye care		
		1573	Instruction related to wound care		
		1609	Planning and coordination of follow-up care *(preparing a plan for follow-up care or arranging control visits)*		
		1651	Instruction in pregnancy		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1662	Instruction in breastfeeding		
		1676	Request for assistance		
		1706	Instruction in sexual health		
		1707	Instruction in reproductive health		
		1899	Instruction in mobility		
		1900	Instruction regarding eliminations		
		1901	Instruction in safety		
		1902	Instruction related to the neurological state		
		1904	Instruction regarding labour		
		1905	Instruction in cast treatment and supportive treatment		
		1906	Instruction related to the ability to work and functional ability		
		1907	Instruction related to parenting		
1310	Pain Management	1536	Assessment of the intensity of pain at rest		
		1537	Assessment of the intensity of pain when mobile		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1739	Determining the location of pain		
		1740	Assessment of the type of pain	1741	Piercing pain
				1742	Sharp pain
				1743	Dull pain
				1744	Burning pain
				1745	Superficial pain
				1746	Undulant pain
				1747	Aching pain
				1748	Cramping pain
		1749	Assessment of the duration of pain		
		1750	Assessment of the timeliness of pain	1751	Constant pain
				1752	Intermittent pain
				1753	Paroxysmal pain
				1754	Pain occurs in specific situations
		1755	Non-pharmacological management of pain	1756	Massage

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1757	Acupuncture
				1758	Cryotherapy
				1759	Thermotherapy
				1760	Hydrotherapy
				1761	Postural therapy
				1762	Kinesiotherapy
				1763	Relaxation techniques
				1764	Distraction to reduce pain
				1765	Mental imagery
				1766	Mindfulness training
		1767	Assessment of the effects of non-pharmacological management of pain		
1540	Skin integrity – Items related to the condition of the mucous membrane, cornea, skin and subcutaneous layers	1541	Assessment of skin condition *(caring for the skin)*	1805	Intact skin
				1806	Dry skin
				1807	Oily skin

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1808	Intertriginous skin
				1809	Dermatitis
				1810	Vesicle
				1811	Skin redness
				1812	Skin swelling
				1813	Skin warmth
				1814	Smelly skin
		1558	Monitoring mucous membrane health		
		1559	Mucous membrane care		
		1563	Monitoring ocular function		
		1569	Wound dressing	1705	Application of wound adhesive
				1850	Application of polyurethane film
				1851	Application of hydrocolloid
				1852	Application of alginate

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1853	Application of hydrogel
				1854	Application of polyurethane foam
				1855	Application of hydrofiber
				1856	Application of a hydrophobic dressing
				1857	Application of a composite dressing
				1858	Application of a silicone dressing
				1859	Application of a mesh dressing
				1860	Application of a silver dressing
				1861	Application of an activated charcoal dressing
				1862	Application of a honey dressing
				1863	Application of coniferous resin salve

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1864	Application of surgical tape
				1865	Application of bandages
				1866	Application of a gauze swab
				1867	Application of an absorbent dressing pad
				1868	Application of a film or cream to protect the skin
				1869	Application of a gel therapy plate
				1870	Application of a silicone plate
				1871	Application of silicone gel
				1873	Application of zinc oxide tape
				1874	Application of scar salve
				1876	Application of compression fabric

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1877	Application of some other wound dressing
		1571	Monitoring a skin graft		
		1572	Monitoring the skin graft donor site		
		1703	Implementation of negative pressure wound therapy		
		1802	Eye care		
		1803	Monitoring ear function		
		1804	Ear care		
		1815	Pressure ulcer risk assessment		
		1816	Treatment of skin and skin lesions		
		1817	Monitoring the vital reaction of a flap		
		1818	Monitoring the colour of a flap		
		1819	Monitoring the temperature of a flap		
		1820	Monitoring the swelling of a flap		
		1821	Monitoring an open wound		
		1822	Monitoring wound exudate	1823	Scant wound exudate

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1824	Moderate wound exudate
				1825	Heavy wound exudate
		1826	Assessment of the quality of wound exudate	1827	Wound exudate clear
				1828	Wound exudate bloody
				1829	Wound exudate cloudy
		1830	Monitoring wound inflammation	1831	Black necrotic tissue
				1832	Yellow fibrinous tissue
				1833	Red granulation tissue
				1834	Pink epithelialised tissue
		1835	Wound cleansing	1551	Therapeutic bath
				1553	Chemical debridement
				1836	Wound cleansing using tap water
				1837	Wound cleansing using saline solution
				1838	Wound cleansing using wound irrigation solution

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1839	Wound cleansing using a wound cleanser
				1840	Wound cleansing using a therapeutic bath
				1841	Chemical wound debridement
				1842	Mechanical wound debridement
				1843	Wound cleansing using a collagenase product
				1844	Biological wound debridement
				1845	Wound cleansing, other
		1846	Measuring the length of a wound		
		1847	Measuring the width of a wound		
		1848	Measuring the depth of a wound		
		1849	Assessment of wound dimensions		
		1878	Removal of wound closure materials	1570	Removal of sutures

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1880	Partial removal of sutures
				1881	Removal of wound staples
				1882	Partial removal of wound staples
				1883	Retention suture removal
				1884	Partial removal of retention sutures
		1885	Wound closure	1886	Wound closure with sutures
				1887	Wound closure with staples
				1888	Wound closure with surgical tape
				1889	Wound closure with tissue adhesive
		1890	Cast and supportive treatment	1891	Application of a plaster splint
				1892	Closed-plaster treatment

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1893	Positioning of a prefabricated orthosis
				1894	Supportive taping
				1895	Traction therapy
				1896	Positioning of an orthosis
		1897	Scar care		
1201	Medication – Items related to the use of medications and implementation of medication management	1202	Monitoring the effect of medication		
		1211	Deviation from medication management		
		1236	Involuntary administration of medications		
		1237	Responsibility for dispensing pharmaceuticals		
		1239	Immunisation		
		1216	Oral administration of medication		
		1217	Administration of medication by injection		
		1218	Rectal administration of medication		
		1219	Inhalation administration		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1220	Application of a transdermal patch		
		1221	Intravaginal administration of medication		
		1222	Administration of drug infusion		
		1223	Administration of medication directly into the stomach		
		1224	Application of creams		
		1225	Administration of drops		
		1226	Administration of sprays		
		1227	Topical anaesthetic		
		1240	Administration of medication using a pump or automated infusion		
		1671	Epidural administration of medication		
		1238	Implementing chemotherapy		
		1908	Other route of administration		
1108	Fluid balance – Items related to hydration	1117	Determining fluid balance	1118	Monitoring swellings
				1726	Securing fluid balance
				1121	Intravenous fluid therapy

CodeId	Component	CodeId	Main category	CodeId	Subcategory
				1123	Transfusion of blood products
				1125	Limiting fluid intake
				1727	Enhanced hydration
				1728	Oral rehydration
				1729	Rehydration using other routes
		1730	Securing cannula function		
1464	Mental capacity – Items related to mental capacity	1465	Monitoring of mental state	1484	Monitoring the patient's mood
		1467	Identification of thought disorders		
		1469	Development of a therapeutic relationship		
		1472	Group treatment/therapy		
		1476	Individual treatment/therapy		
		1490	Implementation of seclusion		
		1498	Supporting mental capacity		
		1679	Creative methods and therapies		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1680	Interaction and monitoring the patient's mood during seclusion		
		1681	Termination of seclusion		
		1774	Assessment of mental capacity		
		1775	Seclusion prevention		
1442	Activities of daily living and independence – Items related to independence and physical capability	1004	Organising play and cognitively stimulating activities		
		1006	Responsibility for exercises		
		1009	Restricting activity		
		1012	Monitoring sleep and waking states		
		1444	Assisting in bathing/showering		
		1445	Assisting in getting dressed		
		1585	Implementation of postural therapy		
		1677	Encouraging independency	1446	Assisting in oral hygiene
		1678	Providing support in everyday routines		
		1796	Implementation of passive exercise		
		1797	Assessment of physical capability		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
1242	Nutrition – Items related to securing adequate nutrition	1244	Mapping nutrition		
		1245	Monitoring weight		
		1246	Monitoring height		
		1247	Calculating BMI		
		1249	Monitoring feeding		
		1250	Following a special diet		
		1259	Implementation of fasting		
		1737	Insertion of a feeding tube		
		1738	Removal of a feeding tube		
1076	Coping – The ability of an individual or a family to handle problems or adjust to them and to take care of their responsibilities and tasks	1077	Assessment of coping abilities		
		1078	Providing support for coping		
		1092	Providing emotional or spiritual support		
		1392	Supporting communication *(enabling communication)*		
		1396	Supporting social abilities		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1725	Assessment of social abilities		
1127	Health behaviour – Items related to health promotion	1139	Determining dietary habits		
		1140	Monitoring exercise habits		
		1141	Testing for the use of alcohol and drugs		
		1146	Promoting adherence		
		1712	Determining living conditions		
		1731	Testing for codependency		
		1732	Testing for internet addiction disorder		
		1733	Testing for compulsive buying disorder		
		1734	Testing for gambling/gaming addiction		
		1735	Testing for sex addiction		
		1736	Treatment of addiction		
1402	Safety – Safety hazards caused by disease or present in the caring environment	1409	Securing a safe environment		
		1410	Rooming-in		
		1411	Confiscating belongings		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1413	Restricting freedom of movement		
		1414	Restricting communication		
		1419	Use of restraints		
		1420	Physical intervention		
		1489	Calming		
		1492	Enhancing a sense of security		
		1493	Presence		
		1494	Therapeutic holding		
		1784	Confiscating substances and items		
		1785	Body search		
		1786	Intimate body search		
		1787	Short-term removal from the company of others		
		1788	Necessary involuntary care		
		1789	Monitored movement		
		1790	Exit prevention		

CodeId	Component	CodeId	Main category	CodeId	Subcategory
		1791	Searching belongings or deliveries		
		1792	Fall risk assessment		
		1793	Injury detected	1794	Fall without injury
				1795	Fall resulting in injury
1359	Circulation – Items related to blood circulation in various organs	1342	Monitoring oxygen saturation		
		1361	Blood pressure monitoring		
		1362	Heart rate monitoring		
		1363	Monitoring cardiac rhythm		
		1369	Maintaining body temperature	1370	Monitoring body temperature
		1377	Resuscitation		
		1378	Resuscitation of a newborn infant		
		1674	Monitoring peripheral circulation		
		1777	Swelling prevention interventions		

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Appendix 3. FiCNO 1.0 in readable format

Abbreviation	Name
EN	Stabilised
HUO	Deteriorated
PA	Improved