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DC: 0–3 IN PEDIATRIC LIAISON WORK WITH EARLY EATING BEHAVIOR DISORDERS

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ABSTRACT: This article highlights the use of the DC: 0–3 (Diagnostic Classification, Zero-to-Three, 1994) with respect to the special conditions of a hospital pediatric liaison service. The DC: 0–3 system itself has had a positive influence on the structure and quality of diagnostic assessment and the setup of treatment plans in this setting. We describe our experiences with DC: 0–3 in a special group of referred infants with severe eating behavior problems that involved approximately 80% of all liaison referrals and 60% of all outpatient referrals to our pediatric hospital. Most referrals involved requests for weaning infants from long term nasogastric-(NG) and percutaneous endoscopic gastrostomy-(PEG) tubes. Four clinical vignettes demonstrate the practical use of DC: 0–3 and its multiple axes in clinical situations.

RESUMEN: Este ensayo hace resaltar el uso de DC: 0-3 (la clasificación de diagnóstico Cero-Tres, 1994) con relación a las condiciones especiales de un servicio de conexión pediátrica en el hospital. El mismo sistema DC: 0-3 ha tenido una influencia positiva sobre la estructura y calidad de la evaluación de diagnóstico y el arreglo de los planes de tratamiento en este contexto. Describimos nuestras experiencias con el sistema DC: 0-3 dentro de un grupo especial de infantes enviados a especialistas. Dichos infantes presentaban casos crónicos de trastornos de alimentación que involucraban aproximadamente el 80% de todas las consultas de referencia y 60% de las consultas de pacientes externos a nuestro hospital pediátrico. La mayoría de los infantes referidos estaban siendo separados de tubos nasogástricos (NG) o tubos intradérmicos de endoscopia para la alimentación que habían usado por un largo período de tiempo. Cuatro vistas clínicas demuestran el uso práctico del DC: 0-3 y sus múltiples categorías en situaciones clínicas.

RÉSUMÉ: Cet article met l’accent sur l’utilisation de la classification DC: 0-3 (Classification Diagnostique Zéro à Trois, 1994) par rapport aux conditions spéciales d’un service hospitalier de liaison pédiatrique. Le système DC: 0-3 lui-même a eu une influence positive sur la structure et la qualité de l’évaluation diagnostique et sur l’établissement de plans de traitement dans ce cadre. Nous décrivons nos expériences avec DC: 0-3 chez un groupe spécial de bébés qui nous ont été recommandés, ayant de problèmes de comportement alimentaire qui incluaient à peu près 80% de toutes les recommandations de liaison et 60% de toutes les recommandations externes à notre hôpital pédiatrique. La plupart des recommandations incluaient des demandes pour sevrer les bébés de tubes nasogastrique long terme et de tubes de gas-
Early Eating Behavior Disorders


An important first step for English-speaking countries was taken in promoting standardized diagnostic assessments in infancy when the DC: 0–3 (1994) was created. After translating the Zero-to-Three, DC: 0–3 into German (Diagnostische Klassifikation: 0–3, Seelische Gesundheit und entwicklungsbedingte Störungen bei Säuglingen und Kleinkindern, 1999, ISBN: 3-211-83175-4, New York: Springer) we promoted it within German-speaking countries and the GAIMH (German-speaking Association for Infant Mental Health). A computerized version was produced in cooperation with the Vienna Institute of Artificial Intelligence (presentation: Zero-to-Three Meeting, Pisa, October 2001). However, the use of DC: 0–3 within German-speaking countries remains limited. Throughout Austria, ICD 10 (1994) is applied in most clinics, and critics of psychiatric diagnosis in infants question the stability of diagnosis, the labeling effect, the influence of the psychosocial environment on psychiatric disturbances in infancy, and the impacts of comorbidity.

The challenge of liaison work in a pediatric hospital lies in responding to the balance between the situational demands of the demanding institution and the practical needs of professionals. The diagnostic scheme has to be comprehensible for the nonpsychologically trained pediatrician, and at the same time has to be specific enough for the behavioral pediatrician. Doctors asking for liaison service demand a competent and quick response with a specific diagnostic impression and preferably also a therapeutic proposal. Thus, the situation requires ready documentation and diagnosis, even in short-term encounters with patients and their families. In this respect we find that the DC: 0–3 is an excellent tool. Clinical findings are assessed and documented in five lines, and therapeutic recommendations can also be made which provide information for a later reevaluation. Using DC: 0–3 we found that the acceptance and under-
standing for behavioral symptoms and interactional problems of infants — in contact with other pediatric institutions, like the NICU, the child surgery ICU, or the Department for Cardiology — could be improved substantially. The DC: 0–3 seems to simplify communication, teaching, and understanding. Using it regularly when defining and explaining diagnostic issues allowed for a more differentiated level of intercollegial exchange, and was useful in composing letters of discharge.

The use of DC: 0–3 in liaison work involving eating behavior disorders allows one to break down the diagnosis and the complexity of the feeding procedure into various levels. These levels involved underlying behavioral, interactional, and functional aspects as well as complex medical matters — all of which had relevance for possible interventions.

THE USE OF DC: 0–3 FOR FEEDING PROBLEMS

Feeding disorders in infancy are one of the most frequent reasons for referral to liaison intervention. Diagnostic assessment and planning the specific treatment for such infants, however, remains a challenge. Some of the challenge may be related to the absence of a clear-cut and differentiated diagnostic nomenclature (Chatoor, Conley, & Dickson, 1988; Chatoor, et al., 1997; Morris, 1982; Ramsay, 1995, 1999). Another aspect of the challenge may be related to the difficult interaction patterns that accompany the symptoms and involve the family and hospital staff. Anxious and tense care-giving relationships as well as ambivalent attachment patterns may be prominent. Emergency rooms and regular pediatric wards are becoming increasingly aware of these interaction patterns and often call for liaison services to introduce an early helpful intervention. It is known that without competent intervention feeding problems can develop into a growing source of trouble. Eating disorders, nonorganic failure to thrive and withdrawal, or an active opposition to all oral feeding attempts can follow. Some infants may then be offered tube feeding as a “last” initiative to increase food intake and reduce oral distress.

The majority of referrals to our center are infants who have been tube fed since the neonatal period. This can be due to extreme prematurity or neonatal surgery and an ensuing phase of post-surgery intensive care. Reports concerning the weaning of infants from gastro-nasal or percutaneous gastric - tube feeding are few, but emphasize the importance of sensory, developmental and interactive factors (Bazyk, 1990; Blackman & Nelson, 1987; Dunitz, et al. 1996; Ramsay & Zelazo, 1987; Wolf & Glass, 1992).

The return to oral feeding mostly happens smoothly and without any difficulty. If tube weaning by common means fails however, the baby as well as its parents and the involved medical team are affected. The child’s caloric and liquid intake becomes the main issue of care taking and the time spent in feeding attempts increases. Feeding may then last up to 14 hours every day. Aside from medical issues and advice about physical well-being, parents often refuse psychological guidance. A striving for continuous weight gain seems to outweigh all relational issues within the family. The severity of failure to thrive (FTT) is often correlated with the duration of the problem. Anxiety about starvation increases stress for the whole family, but especially for the mother. Cumulative stress tends to build with each feeding and additional stressors are acquired. The transition from the nourishment provision of intrauterine life to self-regulated postpartum feeding is facilitated by intuitive parenting behavior (Dunitz, Scheer, Macari, Kaschnitz, Trojovsky, & Chagnaud, 1997; Papousek & Papousek, 1987; Scheer & Dunitz-Scheer, 1998). Although the infant is capable of sucking and swallowing intrauterine, once born, the caregiver needs to understand and react to changing infant signals so as to adapt to the external food supply.
Independent of the underlying cause, similar adaptive challenges and tasks are demanded from both the infant and the parents when converting from tube feeding back to oral food supply. Weaning is often loaded with intense emotions, creating an atmosphere of anxiety. This results from the negative, sometimes even traumatic experience of continuous tube feeding. For those cases of primary and secondary eating disorders resulting in tube feeding, weaning off the tube involves the reorganization of parent–infant interaction. Because infants can be understood within their attachment patterns (Bowlby, 1965; Dunitz, 1996–99; Wilken, Zach, & Dunitz-Scheer, 1998) diagnostic assessment and intervention planning must also consider caregiver interactions and the quality of parenting relationships as guided by Axis II considerations of DC: 0–3.

The interaction quality of each feeding situation during infancy induces difficulties within the parent–child relationship especially at the onset of the disorder. Because feeding is a mutual activity, involving both the feeding caregiver and the fed baby, a variety of cues must be understood and their meanings respected. Some cues indicate the infants readiness and ability for oral activity and should be accepted as autonomous, self-acting, self-initiated, and self-controlled actions. Problems of aversive behaviors can also result in the lack of development of self-regulated feeding and a necessity for long-term tube feeding.

CHARACTERISTICS OF A SAMPLE SEEN IN OUR SERVICE

Between 1997–2001, 93 tube-fed infants were referred to us and treated for assistance in weaning from the tube on an inpatient basis. Diagnostic assessment was performed using DC: 0–3. The assessment team consisted of three pediatricians and two psychologists responsible for collecting all diagnostic data and also data from the other professional disciplines concerned with this group. The infants in our sample ranged in age from three weeks to 38 months, with 58 girls and 35 boys. All mothers and 74 fathers were available for the entire assessment and intervention program, and all infants were videotaped on at least three dates. The duration of exclusive tube feeding before referral had lasted between 20 days and 38 months. Thirty-seven of the 93 (40%) infants had a percutaneous gastrostomy tube (PEG).

The circumstances of referral are relevant. Prior pediatric techniques of terminating tube feeding had failed in all cases. Referral to our specialized weaning program was suggested after a liaison call either directly from the surgery team, the neonatal–pediatric team, the pediatric practice, or the parents. A large number of the sample (61) were originally referred from foreign centres (Germany — 46, Switzerland — three, Israel — three, Croatia — two, France — two, Albania — two, and one each from Ghana, Bosnia, and Russia). In nine cases mother-tongue translation was required for understanding between the parents and the liaison team during diagnostic and therapeutic sessions.

Feeding disorder as a primary DC Axis I-diagnosis was typically found for each child. In a diagnostic subclassification process that is used regularly in our center, we assign a specific subtype of feeding disorder according to the classification of Chatoor and colleagues (1997). This revealed 36 children as suffering from post traumatic feeding disorders, 29 children as showing a primary swallowing and sucking coordination disorder along with primary severe cerebral impairment mostly due to chromosomal anomalies, 11 children belonging to a post-medical food aversion group, 13 children having a primary feeding problem with an attachment disorder, and eight children suffering from feeding problems in combination with a severe conflict between parental control and their striving for individuation.

An additional diagnosis from DC: 0–3 (i.e., comorbidity) was assigned for 26 children.
These cases comprised four anxiety disorders, five reactive attachment disorders, 15 multiple system development disorders, and two regulatory disorders of the impulsive, disorganized-motor type.

CASE EXAMPLES OF HOW WE USE DC: 0–3

The case examples to be described below illustrate the process of clinical formulation using the five axes of DC: 0–3 as outlined in its manual (see also Dunitz-Scheer, Scheer, Kvas, & Macari, 1996a). Relational matters are observed and classified regarding infants and both parents. Several video documentaries are made for each infant, showing feeding efforts as well as playful interactions with parents (Dunitz-Scheer & Scheer, 1997, 1998; Dunitz-Scheer, Scheer, Marcari, Kaschnitz, Trojovsky, & Chagnaud, 1997). Medical matters are integrated on Axis III; psychosocial stress factors on Axis IV are rated in terms of their impact on the decrease of life quality on a severity scale. The diagnostic impression of the functional emotional developmental level of Axis V addresses the infant’s emotional and communicational functioning. Developmental level of attention and affect regulation are also taken into account and consider other aspects of the social surround. Infants suffering from a feeding disorder tend to experience developmental delays in speech and social functioning, so that the assessment of the level of emotional communication is crucial.

Every infant’s diagnostic assessment according to DC: 0–3 is discussed with the parents, the ward staff calling for liaison service and the therapeutic team at the psychosomatic unit. The diagnostic assessment conferences are important, for they have implications for treatment planning as well as for parental education and involvement. More aspects of our diagnostic procedures are available from the authors on request.

CASE EXAMPLES

Vignette I: Pascal, Eight Weeks Old

The pediatrician calls for liaison after admitting a two-month-old male infant to the neonatal ward. Pascal has not been thriving well since birth, and has scarcely regained his birth weight. The sole medical problem seems to be a mild cold, possibly influencing his nasal breathing. His mother is very upset and asks for further medical examinations because common pediatric examinations failed to yield an explanation. The liaison visit is scheduled for the next expected feeding to observe the situation. During the mother’s first attempt to breast feed the boy she spontaneously starts crying and begins to talk about the stillbirth of her first child 18 years ago. Two years after that she gave birth to a healthy girl. The pregnancy with Pascal was a surprise. The father joins in during the feeding session and addresses his very caring thoughts in a gentle and calm way, expressing their worries.

Diagnostic considerations according to the DC: 0–3 assessment seem to be the following:

1. an Axis I problem: no classified problem; we might also consider a regulatory disorder, depression, eating behavior disorder or even maltreatment;
2. an Axis II problem: all relationship disorders can be expected: the maternal wish for more intervention and her spontaneous reaction during the first visit suggests a over involved or anxious–tense pattern;
3. an Axis III problem: all kinds of minor anatomical and/or functional causes of FTT: oral, oesophageal, cardiac, pyloric or later gut dysfunction, cardiological, renal, pulmonary, a sensory-motor, a metabolic or cerebral problem, listing the most common ones;
4. Axis IV: the psychosocial situation and possible additional stressors have to be evaluated;
5. Axis V: the baby itself has to be examined as to its functional emotional developmental skills and abilities.

A liaison pediatrician also collects the nursing staffs and the medical colleagues’ clinical impressions so as to obtain more insight to any additional interactive variables influencing the presented problem. This allows multiple points of view and the merging of first diagnostic impressions into a preliminary DC: 0–3 diagnosis. The liaison visit will last anywhere between 15 minutes and one–two hours, after which a summary explaining the diagnostic impression and suggesting immediate actions for further evaluation or treatment is written.

The intervention by the liaison service includes a brief talk with the nursing staff, organization of a specially trained breast-feeding counselling nurse, psychological support of the mother by a psychologist in training during the inpatient stay, and help in organizing sufficient postpartum counseling services. We also arrange for observations of weight gain in weekly intervals for the first two months in our psychosomatic early infancy clinic.

Vignette 2: Kevin, Two Years Old

Liaison is called for by the neonatal surgery head nurse. The call is somewhat irritated and impatient, and demands immediate intervention for a hyperactive two year old who had a hernia repair and needs rest for the first postoperative days. In trying to find out what is causing the specific distress it becomes clear that the mothers insensitive handling of the infant is a primary concern for the nurse, and there have been discussions about keeping her off the ward. A diagnostic impression already forms during this call, which includes an appreciation of a sense of anger and irritation among staff.

This first visit turns out to be a brief but meaningful chat with the ward staff about their expectations and about conflicts that can arise due to responsibilities, differing opinions, and varying styles of care taking. The two-year-old, Kevin, is found playing in the play corner with a visiting mum and her baby. A good impression of his developmental abilities is given. Kevin’s mother is found in an irritated state, due to a feeling of inferiority, invoked by medical staff suggesting she is incapable of raising a child.

Diagnosis: DC: 0–3—I: regulatory disorder, type III, motor disorganized; II: no relationship diagnosis because not yet observed; III: medically healthy child; IV: adolescent mother (16 years at time of birth), father missing; V: age-appropriate emotional functional developmental level.

A second visit included a more thorough assessment, with mother–infant interaction in a play scene. Outpatient coaching then included special information on regulatory disturbances by an early infant mental health interventionist, investigation of further family resources, and suggestions for psychosocial support were suggested. At three years, Kevin was admitted to a regular kindergarten. The hyperactive behavior retreated, he is now considered a pleasantly lively child.
Vignette 3: David, Four Years Old

David, fourth child with three healthy siblings, had a severe thriving problem since birth. All trials to establish a diagnosis and sufficient therapeutic handling had failed. After having given up any alternative feeding method, David had been given a PEG tube at the age of six months and was developing slowly. His intellectual functioning and speech was nearly age appropriate, but his motor development was clearly delayed and evidencing a dystonic neuromotor pattern. The problems increased when the parents asked for the boy to be weaned off the tube. The medical staff involved diagnosed that David would begin to eat at some point in his life, but not before he decided to do so for himself. Their conclusion was that there was no medical indication for weaning. That the long-term artificial feeding was adding to David’s developmental distress was later observed by a specialized Infant Mental Health Center in Israel that referred the family to our unit for treatment. During the first visit—just a weekend—the DC: 0–3 diagnosis was assessed—I: feeding behavior disorder, posttraumatic subtype; II: reactive overinvolved anxious mother–infant relationship, avoidant infantile attachment pattern, PIR GAS 60, no disorder; III: asphyxia after spontaneous pneumothorax, postoperative inguinal Hernia, NFTT, long-term PEG, severe motor developmental delay, mild psychosocial developmental delay, impaired oral motor-sensory development; IV: severe psychosocial stressors by repeated hospitalization and trauma by repeated interventions; V: functional emotional developmental level: not quite age-appropriate, high intellectual functioning.

One month later David was back at our unit and could be weaned successfully in only three weeks. We wish to point out that the DC: 0–3 diagnostic system was responsible for organizing treatment and the insurance coverage for the treatment in this case in a very concrete and immediate way.

Vignette 4: Tom, Seven Months Old

Tom was referred for tube weaning from a German pediatric hospital. He had three operations postpartum because of a large omphalocele and subsequently was in neonatal intensive care for eight weeks. He was discharged with a nasogastric tube and the mother instructed in tube feeding. At home he seemed to be in constant distress, a state that the parents had become somewhat used to and the surgeons interpreted as “colic.” At the age of five months the parents used the internet to find out more about tube weaning and were referred to our program. After a first interdisciplinary diagnostic meeting a preliminary DC: 0–3 assessment was made. Diagnosis: DC: 0–3—I: eating behavior disorder: posttraumatic/postmedical disorder type; II: balanced parent–child relationship pattern, sensitive interactions; III: chronic asphyxia and dyspnea after postpartum surgery of omphalocele, suspected severe gastroesophageal reflux, suspected gut passage problem, suspected malrotation; IV: no additional psychosocial stressors except intensive aversive interactions with various hospital services; V: very impaired emotional functional developmental level.

Medical work-up was administered immediately after this assessment, presenting a severe distal esophageal stenosis and a sinusoidal shaped prestenotic dilatation of the esophagus with chronic inflammation and nearly constant repeated aspirations of saliva into the lung. Tom was operated again, the extended esophagus was reinserted straight into his stomach; weaning off the oxygen was not easy, but succeeded after three days. A PEG tube was inserted to allow painless alimentation during the first weeks after the surgical intervention, and Tom could be transferred to our ward after 10 days for further treatment. Two weeks later Tom had turned into a healthy and playful baby learning to eat eagerly and with fun; the PEG could be removed with no further complications six weeks after the operation.
DISCUSSION

We chose to present some aspects of liaison work using DC: 0 – 3 with a group of infants with eating behavior disorders for a variety of reasons. The most important is the practical usefulness of this tool. Most often, the complexity of a multiaxial diagnosis and the complexity of differential diagnosis cannot be shared in full detail in the liaison situation. Still, the usual motive for calling a liaison intervention is a need to reduce insecurity and offer formulations that can guide interventions. In using the multiaxial system of DC: 0 – 3 in this sample we noted a tendency for a hierarchy within the assessment process. In this, Axis III pathology tended to predict the severity of Axis II relational disturbances, which in turn, was associated with the occurrence of an Axis I pathology. Patients were referred to our service after experiencing aversive experiences in other medical settings. Their problems had not been defined by the referring hospitals, and referral seemed to take place when they had exhausted therapeutic efforts. Not surprisingly, communication difficulties within the affected teams and involving the families seemed to abound. The DC: 0 – 3 system was not used prior to our unit. We found that the DC: 0 – 3 diagnostic assessment directed professionals towards important matters in a clinical formulation that often had been neglected. Parents coming to us not only were frustrated but also seemed exhausted. Additionally, there seemed to be excessive external pressure with regard to the weaning itself.

The case reports on David and Tom demonstrate the additional efficiency gained through the DC: 0 – 3 assessment concerning a well-known conflict in hospitals about whether there is identifiable “organic” aetiology or not. In many European pediatric hospitals there is a clear precedence for organic diagnostic work up before any psychological, interactional, or developmental issues are even discussed. This can have deleterious effects on infants, parents, and the further course of illness, and thus the DC: 0 – 3 tool provided a safeguard against this happening by virtue of its multiaxial foci.

The DC: 0 – 3 is a diagnostic tool that can be used in pediatric, surgical, intensive care, psychiatric, obstetrical, welfare, and other psychosocial environments. Its nature avoids the problem being either exclusively psychological or medical. Its scheme directs attention not only to medical and psychological aspects of the infant, but also to the vital context within which the infant develops. It therefore precludes a problem being thought of exclusively either in psychological or in medical terms.

CONCLUSION

We have found that the DC: 0 – 3 is a practical tool for assessment and documentation of mental and developmental disorders of infancy, It can be administered in all phases of liaison work. An atmosphere of trust, in the sense of an acceptance of communications among doctors, therapists, and parents, is important when establishing a basis for a therapeutic process. This standardized diagnostic tool also offers a good base for research in the field of therapeutic measures. DC: 0 – 3 has been useful in a number of ways. In the course of assessment, many parents experienced a sense of respect in that they were considered as experts for describing their child’s needs, and many left the hospital feeling more secure in handling important aspects of feeding and caregiving. DC: 0 – 3 also directed attention to the influence of psychosocial stress factors on infant development as well as the influence of problematic relationships that may hinder both competent parenting and the infant’s self-regulatory development. It is our hope that this article will stimulate others to share similar experiences with DC: 0 – 3 so as to accumulate more clinical data and foster research.


