strongly believes that e-learning contributes to a solution of this problem. The Foundation founded The Next Page, a complete e-learning system in which we are able to create tailor made courses for all kinds of target groups. The Learning Content Management System (LCMS) is custom made for teaching on CAN and consists of some unique and specific digital pedagogical elements designed for this purpose.

Within a half year after launching the modules more than 40% of the Dutch hospitals are using these e-modules to teach their personnel on CAN! Scientific research showed significant positive effects of the e-learning module on the clinical performance of nurses.

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PAWS FOR THOUGHT - THE INTRODUCTION OF A PAEDIATRIC ADVANCED WARNING SCORE IN A DISTRICT GENERAL HOSPITAL

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Background and aims: Dumfries and Galloway Royal Infirmary is a district general hospital in south west Scotland. The paediatric unit comprises 20 beds and is actively involved in the Scottish Patient Safety Programme.

Many episodes of critical deterioration in children are caused by reversible respiratory (61%) and circulatory (29%) factors (Monaghan, 2005). Early recognition of these problems is enhanced by early warning score observation systems, promoting rapid intervention.

Methods: PAWS is a validated early warning observation chart for the assessment of sick children (Egdell et al, 2008). The charts were designed to be similar to the hospital's adult early warning score charts, promoting a smooth implementation process across the hospital, particularly in the accident and emergency department. Observations are charted and scored according to a colour coded system. High scores identify children at risk of deterioration. These children are promptly reviewed by an appropriate member of the medical team.

Results: PAWS is now used for all paediatric admissions and assessments.

Ongoing audit gathers data on compliance of completion and accuracy of scores.

Conclusion: The charts have been well accepted. We now have a common language to communicate patient information and PAWS has become an essential part of the handover process.

PAWS:

- facilitates rapid recognition of acutely ill children
- Allows staff to prioritise patients for review, treatment and ongoing assessment.
- Empowers inexperienced staff who may be reluctant to ask for senior assistance (Day et al, 2005).

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EFFICACY OF A FEEDING GUIDELINE BASED UPON GASTRIC EMPTYING

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Objective: To determine whether introduction a new feeding guideline based upon individual gastric emptying times provides a higher proportion of enteral feeding.

Methods: A prospective audit in a 20-bed PICU was conducted one year before (March 2007) and after (March 2009) introduction of the new guideline (March 2008). Data were collected over 4 days per patient on 76 patients in 2007 (37 cardiac, 39 general), and 78 patients in 2009 (39 cardiac, 39 general), comprising 9339 PICU hours. In 2009, the feeding interval was based upon individualised gastric emptying time, calculated after a test feed.

Results: The proportion of potential enteral calories given to cardiac patients increased from 39.8% in 2007 to 60.7% in 2009, $p < 0.001$). A smaller increase was seen for general patients (62.1% to 66.6%, $p < 0.001$). The median (interquartile) time from admission to establishing full feeds reduced from 23 (12 - 49) to 13 (8 - 24) hours for cardiac ($p = 0.007$) and from 17 (8 - 32) to 8 (5 - 20) hours ($p = 0.05$) for general patients. The impact of the feeding guideline on time to establish full feeds remained significant ($p < 0.001$) after multivariable adjustment for mortality risk (PIM2), diagnosis,

weight and gender. By 2009, the major reasons for not feeding were largely unavoidable (including nil by mouth peri-procedure, gut pathology).

Conclusions: Introduction of a new feed in guideline appeared to result in earlier and more effective establishment of enteral feeding.

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LACTOBACILLUS REUTERII ACCELERATES GASTRIC EMPTYING AND IMPROVES REGURGITATION IN INFANTS

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Aim: Young infants are frequently affected by uncomplicated regurgitation that may persist despite dietetic and conservative interventions. On this basis, we studied the putative effects of probiotics on the frequency of regurgitation and gastric emptying time in infants with functional gastroesophageal reflux.

Patients and methods: Forty two infants with regurgitation were randomized to assume *Lactobacillus reuteri* DSM 17938 at a dose of 1×10^8 CFU per day and placebo for 30 days. The episodes of regurgitation were recorded by the parents each day. Gastric emptying time was recorded using real-time ultrasound at baseline and at the end of the study. Twenty-one infants without regurgitation were enrolled to compare anthropometric and physiological parameters before the intervention diet.

Results: Thirty-four infants completed the study (19 infants receiving probiotics and 15 placebo). At baseline, the whole group of infants was similar to the control group as regards anthropometric and physiological data. The median fasting antral area was significantly reduced, ($p=0.01$) the delta in gastric emptying rate was significantly increased ($p=0.01$) and the median episodes/day of regurgitation was reduced ($p<0.001$) in the probiotic group compared to the placebo group. In the whole group, the frequency of regurgitation and the basal antral area showed a positive correlation ($r=0.53$, $p=0.004$).

Conclusion: In infants with functional gastroesophageal reflux *L. reuteri* DSM 17938 reduce gastric distension and accelerate gastric emptying. In addition this probiotic strain seems to diminished the frequency of regurgitation.

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DIFFERENTIAL ROLE OF THE LECTIN PATHWAY OF COMPLEMENT ACTIVATION IN SUSCEPTIBILITY TO NEONATAL SEPSIS

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Objective: Newborns are highly susceptible to bacterial sepsis. Mannan-binding lectin (MBL), M-, L- and H-ficolin recognize microorganisms and activate the complement system via MBL-associated serine proteases (MASPs). We investigated lectin pathway cord blood concentrations in infants with neonatal sepsis.

Study design: Case-control study including 47 infants with culture-proven neonatal sepsis and 94 matched controls. MBL, M-, L-, H-ficolin, MASP-2 and MASP-3 were measured in cord blood using EIA/TRIFMA. Multivariate logistic regression was performed.

Results: Infants with gram-positive sepsis had significantly lower H-ficolin cord blood concentrations compared to controls ($p=0.005$), while infants with gram-negative sepsis had lower MBL ($p=0.084$). When excluding patients with postoperative sepsis, multivariate analysis confirmed that low H-ficolin $< 12000 \text{ ng/ml}$ was associated with a significant risk of gram-positive sepsis (OR 3.71, 95%-CI 1.26-10.92, $p=0.017$). Low MBL $< 300 \text{ ng/ml}$ was associated with a significant risk of gram-negative sepsis (OR 4.39, 95%-CI 1.10-17.45, $p=0.036$). M-ficolin cord blood concentrations correlated with absolute phagocyte count ($p<0.001$), and high M-ficolin $> 1000 \text{ ng/ml}$ was predictive of early-onset sepsis (OR 10.92, 95%-CI 2.21-54.02, $p=0.003$). The concentrations of all lectin pathway proteins increased with gestational age ($p<0.01$).

Conclusions: This is the first study assessing the complete lectin pathway of complement activation