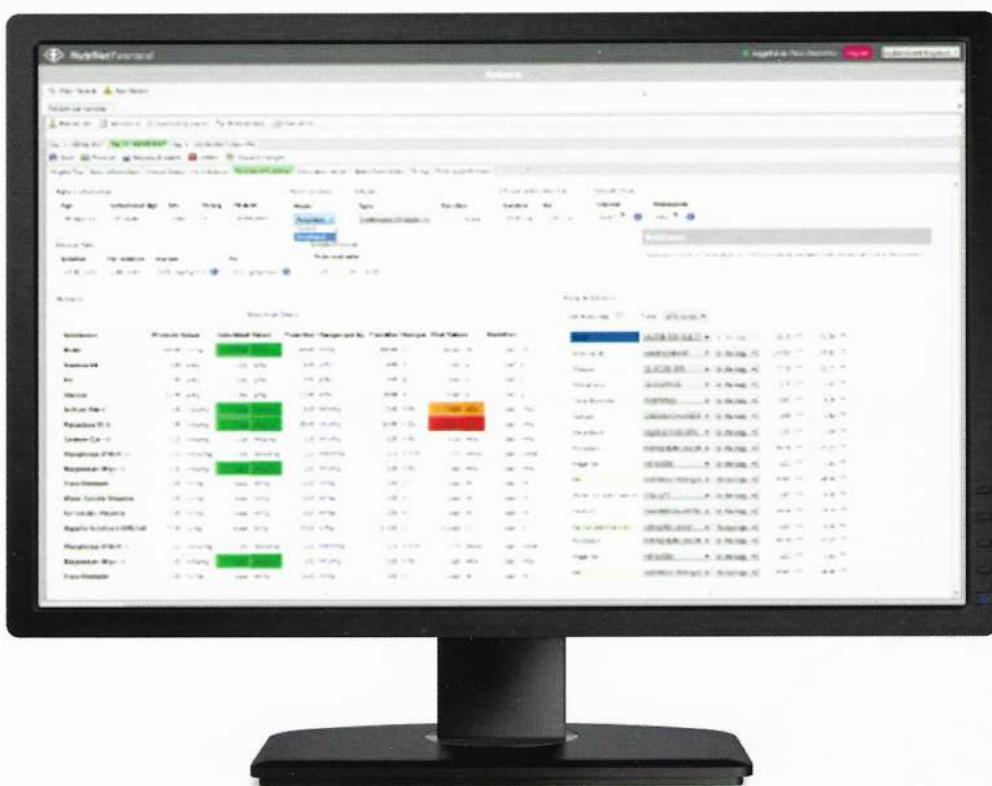




NutriNet Parenteral



CibusMed

ADVANCED HEALTH & NUTRITION SOLUTIONS

CPOE system with a robust scientific basis¹⁻¹⁹

Management of PN from Prescription to Production

Novel approach to prescribing

The screenshot shows a software interface for managing nutritional protocols. On the left, a grid displays various nutrients (e.g., Fluids, Carbohydrates, Proteins) across days (1-5). On the right, a 'Patient Category Properties' window is open, showing settings for age categories, ranges, and active status.

Unique tools

Therapeutic Nutritional Protocols

- Enhances Safety
- Serves as a framework for development of facility's policies and procedures
- Secures Individualization

Ability to adapt changes in PN based on Clinical Conditions of Patients

This screenshot shows a list of clinical conditions and their impact on nutritional protocol values. A note indicates that for $BW < 1500\text{g}$, fluids should be increased by 12 ml/kg/d , and for $BW > 1500\text{g}$, fluids should be increased by 25 ml/kg/d .

| Condition | Impact on Protocol Values |
|--|------------------------------|
| Open incubator | Increases fluid requirements |
| Severely ill or sepsis | Increases fluid requirements |
| Phototherapy | Increases fluid requirements |
| MV or CPAP or NIMV | Increases fluid requirements |
| Kidney dysfunction | Decreases fluid requirements |
| Heart failure | Decreases fluid requirements |
| Persistent hyperglycemia ($> 200 \text{ mg/dL}$) | Decreases fluid requirements |
| Metabolic Alkalosis (max Cl ⁻) | Decreases fluid requirements |
| Metabolic Acidosis (max Ad ⁻) | Decreases fluid requirements |

This screenshot shows a dropdown menu for selecting an enteral feeding solution. Options include ALMIRON PEPTI MCT, ALMIRON PREMATURE, ENSURE PLUS HN, FRISOLAC AC, FRISOLAC AR, FRISOLAC COMFORT, FRISOLAC HA, INFATRIN, and several brands of maternal milk (MONOGEN, NEOCATE LCP, NOVALAC ALLERNOVA, NOVALAC AR Digest, NOVALAC PREMA, NOVALAC PREMIUM 1).

Enteral Feeding Database

- Accounts for the complete Clinical Presentation
- Adjusts PN accordingly
- Mitigates adverse effects related to overfeeding

Standardizing the route to individualized PN

Incorporated prescriber Guidelines

Quality & Safety

The screenshot shows a patient profile with various nutritional parameters. A modal dialog box is overlaid, stating: "This cannot be saved because there are substances exceeding emergency limits highlighted with red boxes." It lists several substances with their protocol values, calculated values, and prescriber changes. The dialog also includes a "Print" button and a "Close" button.

Compatibility & Stability Checks

Alerts to prevent prescribers from ordering doses and/or medications that exceed recommended limits of compatibility according to institutional policies and procedures
Includes Ca/Phos precipitation graphs

This screenshot shows a different part of the software interface related to compatibility and stability checks. It displays a table of substances and their properties, including Alpha-Ampicillin, Cisplatin, Heparin Solution (50 IU/mL), Nicotinamide, Rifampicin, and Water Soluble Vitamins. Below this is a section titled "Solution properties" with various input fields and notes about calcium-phosphorus ratios and aminoacid concentrations.

Safety Alerts

Soft & Hard Limits

Computerized weight based soft and hard (catastrophic) limits for PN ingredients consistent with the needs of patient populations

Safety Support Tool

Enhances compliance with A.S.P.E.N. and ASHP guidelines



PN Order

The screenshot shows the NutriNet Parenteral software interface. At the top, there's a navigation bar with links like 'Home', 'Tools', 'Settings', and 'Help & Support'. Below the navigation bar, the main window has tabs for 'Patient info', 'Administration', 'Laboratory results', 'Medications', and 'Evaluation'. The 'Patient info' tab is active, showing patient details: Age 44 days old, Gestational Age 35 weeks, Sex Male, PN day 2, PN date 18/01/2017, Route Peripheral, Type Continuous 24 hours, Duration 2000 ml, Infusion rate 120 ml/h, Dextrose 11.5%, and Aminos 2.4%. Below this, there's a 'Solutions' section with a table showing 'Solute', 'Infusion rate', 'Dextrose', and 'Fat'. The table includes rows for Dextrose (1000 ml/h), Aminos (5.4 g/kg), and Fat (100 ml/kg). Further down, there's a 'Nutrients' section with a table for various substances like Water, Aminoacids, Fat, Glucose, Sodium, Potassium, Calcium, Phosphate, Magnesium, Trace Elements, Water Soluble Vitamins, Fat Soluble Vitamins, and Hepatitis Solution (50 ml/h). To the right, there's a 'Pump & Solutions' section with a table for 'Water FOR INJECT' and other ingredients like VAMIN INFANT, GLUCOSE, PHOSPHATE, and MAGNESIUM. At the bottom left, there's a 'Ready Bag Database' section with a dropdown menu for 'Select solution' (showing OICClinomel N4-550) and a 'Quantity' input field.

Intuitive Order Template

Protocol Based Template

- Saves time & decreases the risk of errors
- User friendly interface
- Allows modifications
- Documented Therapeutic Plan and Innervations throughout Hospital stay

Ready Bag Database

Precise calculations of Patient Specific additives in commercially available TPN

PN Ingredient Database

Complete list of solutions used per Hospital formulary allows production in accordance to availability

Smart

- Multilingual Interface
- Automatic Calculations of total volume of ingredients
- Automatic level of PN for multiple ingredient solutions
- Overfill Calculation
- Infusion Rate
- Osmolarity
- Interchange between Metric Units
- Multi – User (Prescriber/Pharmacist Interface)
- HL7 Compatible Module

| | | |
|----------------|----------------------|------------|
| Water | WATER FOR INJECT | In the bag |
| Aminoacids | VAMIN INFANT | In the bag |
| Glucose | GLUCOSE | In the bag |
| Phosphorus | NEPHROTECT | In the bag |
| Trace Elements | AMINOPLASMAL L-10666 | In the bag |
| Sodium | PRIMENE 10% | In the bag |
| Magnesium | DIPEPTIVEN 20% | In the bag |
| Dextrose | MgSO4/H2O 25% | In the bag |

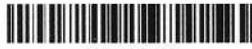
Decision Support Tool

Enhances compliance with A.S.P.E.N. and ASHP guidelines



Fully Integrated with ACD

PARENTERAL NUTRITION SOLUTION



20170519-100

| | |
|---------------------|--------------|
| For use on: | 19/05/2017 |
| Patient Name: | test neonate |
| Prescribing doctor: | -- |
| Admission No: | 951753 |

| Aminoacids | 9.00 g | Solution | ml |
|-----------------------------|-----------|------------------------|--------|
| Calcium (Ca++) | 6.30 mEq | CALCIUM GLUCONATE 10% | 15.23 |
| Glucose | 38.88 g | GLUCOSE 50% | 82.70 |
| Heparin Solution (50 IU/ml) | 210.00 iu | GLYCOPHOS | 3.99 |
| Magnesium (Mg++) | 2.46 mEq | HEPARINE | 4.47 |
| Phosphorus (PHO4--) | 3.75 mmol | MgSO4.7H2O 25% | 1.31 |
| Potassium (K+) | 6.00 mEq | POTASSIUM CHLORIDE 10% | 4.76 |
| Sodium (Na+) | 8.13 mEq | VAMIN INFANT | 146.58 |
| | | WATER FOR INJECTION | 75.97 |

| | |
|----------------------------|---------------------|
| Total Bag Volume | 335.00 ml |
| Infusion type and duration | Continuous 24 hours |
| Osmolarity | 1,028.38 mOsm/l |
| Prepared date | 19/05/2017 |

PN FAT SOLUTION

test neonate

| | |
|---------------------|------------|
| For use on: | 19/05/2017 |
| Prescribing doctor: | -- |
| Admission No: | 951753 |

| | |
|----------------------------|---------------------|
| Syringe volume | 46.00 ml |
| Administration route | Peripheral |
| Infusion type and duration | Continuous 24 hours |
| Infusion Rate | 1.88 ml/h |
| Prepared date | 19/05/2017 |
| Do not use after | 21/05/2017 |
| Solution | ml |
| SMOFatipid 200mg/ml | 46.00 |

Multiple Label functionality

Customized Label

- Includes all elements for proper identifications and administration of PN as per A.S.P.E.N. guidelines
- Generated Barcode for verification and automatic production
- QR code that allows for remote production

PARENTERAL NUTRITION SOLUTION

For use on: 19/05/2017

| | |
|---------------|--------------|
| Patient Name: | test neonate |
| Attendant: | - |
| Admission No: | 951753 |



Direct Communication with ACD

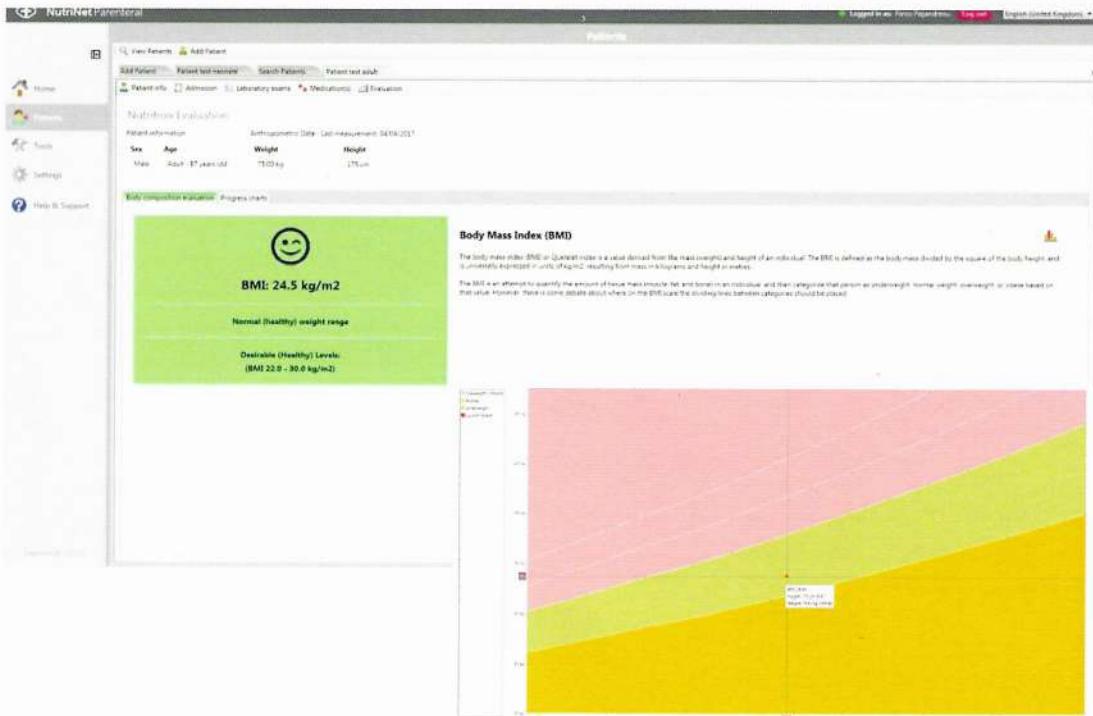
Designed and Clinically
tested to fully integrate
with MediMix^{multi}

Medimix Multi® is a registered trademark
of Impromediform GmbH



Flawless Production
Clinically Proven and Tested

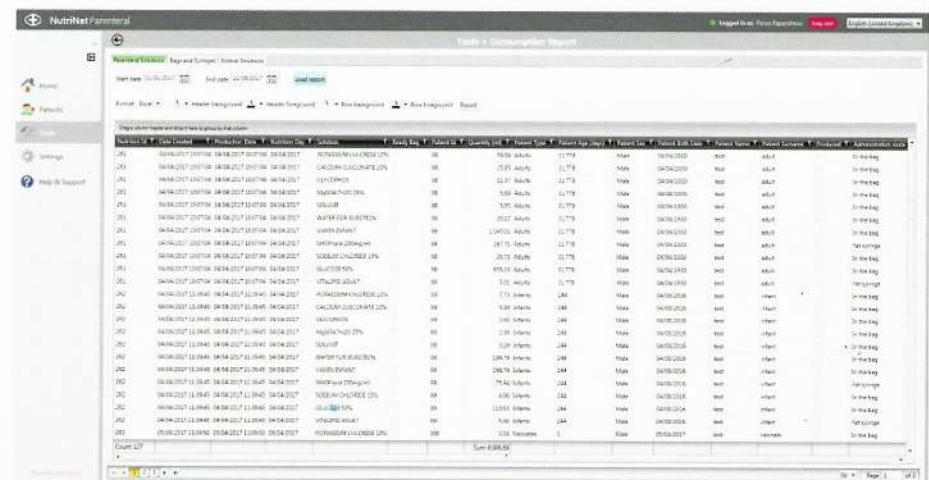
Additional Features



Patient Monitoring

Growth Evaluation

- User friendly interface
 - CDC and WHO Growth Curves
 - Follow the true impact of PN on a Patient



Analytical Reports

- Patient Nutrition Report
 - Consumption Analysis
 - PN Log traces all activities per user

Enforces Maximized Safety

The big picture with one click

Service

Customized installation

Fully customization of databases and features of the system based on facility's needs

International Experience

A team with extensive professional and academic career in major international Companies and Universities

List of Abbreviations

| | |
|-------|--|
| CPOE: | Computerized Prescriber Order Entry System |
| PN: | Parenteral Nutrition |
| ACD: | Automated Compounding Device |
| GMP: | Good Manufacturing Practices |

Support

Dedicated professional team of Doctors, Pharmacists, Nutritionist and Software Engineers is always there to support each individual need

Training

Our team will take control of all level training – from Nursing and Medical staff to Administration with a single scope to enhance quality and compliance to the institution's policies on Total Quality Management of PN and GMP

CibusMed

Advanced Health & Nutrition Solutions

CibusMed is a company based on the consolidated experience and knowledge of a group of highly skilled healthcare professionals

Head of Science is Prof. Dr. Maria Skouroliakou leader and pioneer in the field of PN; CibusMed, capitalizing on her 30 year experience has developed NutriNet PN

This is the 3rd generation of Nutrinet PN, bringing together the latest guidelines and the best of practices

CibusMed apart from software development offers the full range of services on PN management and production, servicing the major Hospitals in Greece

Personalized Service

Uncompromised expectations



NutriNet Parenteral

Published research by our medical team

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