Pediatric Critical Care Nutrition



Instruction Manual

Pediatric International Nutrition Survey 2011

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Introduction

Pediatric International Nutrition Survey (PINS 2011)

This project is a period-prevalence survey of nutrition therapies in critically ill children in pediatric intensive care units (PICUs) across the world. This survey will commence on **11 May 2011**, or the nearest date practically possible.

Dietitians (or other healthcare practitioners) at each PICU will record data including site characteristics, patient demographics and nutrition goals, illness severity, length of stay, duration of ventilation, infectious outcomes, and mortality. In addition, daily nutrition practices such as route of nutrition, energy and protein amounts received, feeding interruptions, and related medications will also be recorded from PICU admission to PICU discharge, death, or for a maximum of 10 days (whichever comes first).

It is projected that the results of this survey will identify differences, highlight strengths and weaknesses, and hopefully illuminate opportunities to improve nutrition practices in the United States and throughout the world.

Benchmarked Site Report

For participating in this project, you will be provided with a <u>benchmarked site report</u>. This site report summarizes your site's performance and will allow you to compare your nutrition practices to other PICUs within your own country or region ('Sister Sites') and all the PICUs in the database ('All Sites'). You will also be able to compare your performance to the recommendations of the ASPEN Clinical Guidelines for Nutrition Support of the Critically III Child.

Instruction Manual

This Instruction Manual functions as a resource for successful completion of the electronic case report forms (eCRFs) for PINS 2011.

The manual is formatted to provide instruction for each eCRF data page. An image of the actual data page will follow the written instructions.

eCRFs are the exclusive mode of data capture used in PINS 2011. The dietitian (or other healthcare practitioner) should enter data online to the eCRFs as soon as it becomes available.

NOTE: If you choose to create paper worksheets, please keep ALL documents until you receive your benchmarked performance report. This will provide you with an opportunity to check your site report with the raw data and ensure that it is accurate.

Please check with your hospital for local requirements regarding storage of data collection forms as this may differ by hospital site.

Please contact the Project Leader for any questions or clarification about PINS 2011.

General Guidelines

Ethics

We have received ethics approval from Children's Hospital Boston to conduct this survey and to publish the results. You must contact your local ethics committee to obtain local approval or a waiver for this requirement. For more information, please contact the Project Leader.

Accessing the Website

Approval or waiver from your local IRB/ethics committee at your site is required before you can register for access to the data entry tool. Please forward a copy of the approval documentation to the Project Leader. We will provide a username and password **only** to individuals who have registered to participate in PINS 2011, and for those designated by these registrants. To register, go to the login page at https://ceru.hpcvl.queensu.ca/CCN_P and click on the 'Create new login account' link. Complete the form (including choosing your own password) and click Save. You will then get a message instructing you to contact our IT specialist. Please provide him with the email used in the registration process, the name of the hospital and if you are the primary investigator. You will then receive a unique username from him, allowing you to access the web-based tool with the password you specified.

The web based tool for PINS 2011 can be accessed by following the link to this website https://ceru.hpcvl.queensu.ca/CCN_P or through the Children's Hospital, Boston website https://www.childrenshospital.org/PCCN

- All users must log onto the website using their own username and password prior to data entry.
- When you log in, you will be taken to the appropriate page based on the PICU(s) that you have access to. If you are registered for more than one PICU, you will be taken to the 'My ICUs' page. If you are registered for a single PICU, you will be taken to the appropriate ICU status page.
- Your user profile and password can be changed at any time by clicking the appropriate links on the Pediatric International Nutrition Survey home page.

Completion of eCRFs

- All data collection activities will be completed in the web based tool.
- Only patients meeting the inclusion criteria should be entered on the web (see Screening, page 15).
- Enter all times using the 24-hour period format i.e. 22:37. To ensure a proper time format the web system will automatically enter a colon for you or you can manually enter a colon or semi-colon.
- To access eCRFs single click the appropriate link using the left side of your mouse.
- Most data fields only support numerical data and will not recognize a unit suffix (e.g. Kg, Kcal, mmol). Enter all data without units. All units are displayed next to the appropriate data field. Please enter the data with the units as labeled in the data tool. All kilocalorie and protein data is entered in total per day, NOT per kg.
- To expand a menu or taxonomy click on '+' next to the title of the menu/taxonomy. To collapse the menu or taxonomy click on '-'.
- The RESET form button will take you back to the last saved version.
- The EXIT form button will take you back to the ICU or Patient Status page.

 Please follow the order in which the forms appear. This will reduce the 'outstanding issues'.

All data fields MUST be completed. The web based data entry system has been programmed with various range checks to simplify the query process. In the event that you leave a data field blank or the values that you have entered are beyond web ranges, you will receive an input warning either directly on the form or under 'Outstanding Issues' on the Patient Status page. Please follow the instructions on the screen to "view/edit" the data and resolve the query.

Editing data entered in the web-based tool

- To edit previously saved information, access the appropriate eCRF, change the appropriate field(s), and re-save the form. All entries are tracked and logged by the computer program.
- You cannot delete patients.
- Please contact the Project Leader if you have any questions about editing or deleting data.

Duration of Data Collection

Study Day 1 is from PICU admission to the end of your PICU's 24 hr flowsheet. Study Day 2 and subsequent days start at the time the PICU chart starts until it ends 24 hours later (e.g. from 07:59 on 10 May 11 until 08:00 on 12 May 11).

- All daily nutrition data is recorded from PICU admission (Study day 1) and each day following until day 10 unless PICU discharge (actual) or death occurs before day 10.
- If a patient is re-admitted to your PICU within 48 hrs of discharge, consider this to be a continuation of the previous stay. If a patient is re-admitted to your PICU after 48 hours of discharge, this is not considered to be a continuation of the previous stay and patient cannot be included in the survey again.
- The eCRFs may be completed retrospectively but it is recommended for data to be entered as soon as possible after it is collected.

Finalizing Patients and Data Completion

The web based data tool has been programmed to recognize when the patient is eligible for finalization (i.e. no outstanding issues and a minimum of three days data entered). At this point, you will be able to access and complete the Patient Outcome page. Once the Patient Outcome page is completed, the patient's status will change to 'Finalized'.

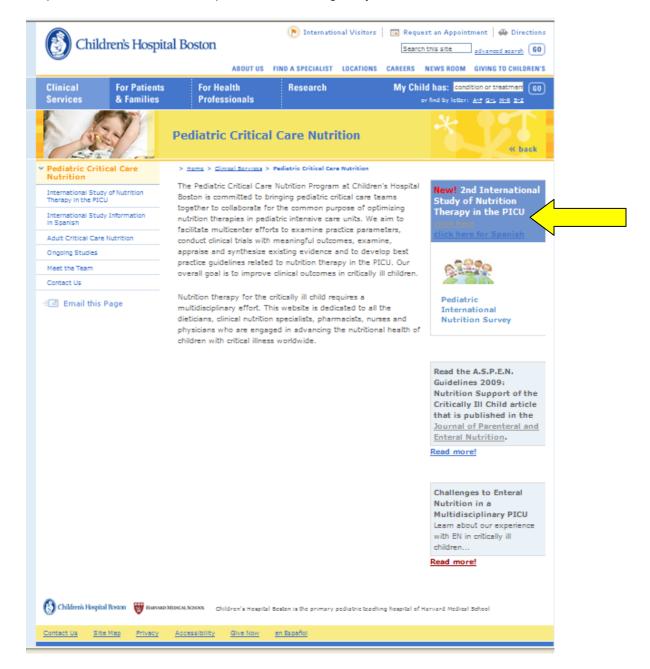
When at least 15 patients (or more, depending on your recruitment rate) have been finalized, navigate back to the ICU Status page and check the box that asks 'Is data entry finalized at your PICU?'

Please collect data on at least 15 but no more than 40 patients.

Pediatric Critical Care Nutrition Website

The Pediatric Critical Care Nutrition website will be the gateway for accessing the web application's login page. Go to our website at http://www.childrenshospital.org/PCCN and click on '2nd International Study of Nutrition Therapy in the PICU', or access the login site directly at https://ceru.hpcvl.queensu.ca/CCN P/.

Updates and useful information regarding the Pediatric International Nutrition Survey will also be posted on this website so please check it regularly.



Survey Login Page and Registration

Site Registration

Prior to entering data for your PICU, you will first need to create a site/user account. This only needs to be completed once. Although several individuals can have access and enter data for your PICU site, the individual coordinating the survey at your PICU site should take responsibility for this initial registration process.

User Registration

To register, go to the login page and click on the 'Create new login account' link. Complete the form (including choosing your own password) and hit save. The password is case sensitive and must be at least 6 characters long. Do not type spaces between characters and do not use repeating characters. You will then get a message instructing you to contact our IT specialist. Please provide him with the email used in the registration process, the name of your hospital, and if you are the primary investigator. You will then receive a unique username from him, allowing you to access the web-based tool with the password you specified. Please be aware that your username will be sent to you by e-mail shortly after you register (or after you are granted permissions). Since the source of the e-mail may not be recognized by your provider, please check your junk mail folder in the event that the survey e-mail is diverted there.

PICU Registration

- Go to the survey login page and enter your username and password.
- You will be asked to complete questions about your hospital and PICU.
- Click on 'Save ICU'.
- You will be directed to the ICU status page and can begin to enter patient data.
- If you wish to register more than one PICU, on the ICU status page, click on 'Register New ICU'.
- You can edit your user profile and hospital/PICU details or change your password at any time by following the appropriate links.

Grant Permission to Other Users

• If you wish to grant permission for other users, on the ICU status page, click on 'grant permissions for this ICU to other users', enter their e-mail addresses and click on 'grant permissions'. This will generate an e-mail to new users with a username and temporary password to access the survey.

- Consent to participate: Checking this box tells us that you have read the information about the study and understand its purpose. It will allow us to compute benchmarked site reports comparing your performance with other PICUs in the dataset. All data will be aggregated, so that individual patients will not be identifiable and other sites will not be able to identify your PICU. Consenting to participate also allows us to correctly acknowledge your participation on the website and in other publications.
- Forget your Password?: If you forget your password, click on the 'forget your password?' tab on the login page. Enter your e-mail address and complete the human user verification. You will be sent an e-mail with your username and a temporary password. Please change your password when you next login to the survey.
- Human User Verification: You must type the letters or numbers you see in the box to confirm that a
 person is trying to access the survey and not an automated program. This helps to prevent automated
 programs from misusing the survey.
- **PICU Registration:** Although you may be aware of the answers to these questions, please confirm the type of PICU and case mix details with the medical or nursing director of your PICU.
- Multiple PICUs: If your hospital has multiple PICUs, please enter YES when prompted, and enter your PICU name. Make sure that you select a name for your PICU that is distinct from the other PICUs in your hospital (e.g. medical, surgical, cardiac)
- Type of Hospital: A teaching hospital is a hospital that provides training to medical students and residents. If your hospital only has occasional medical students/residents, record your hospital as a nonteaching hospital.
- PICU Structure: Open ICUs are sites where patients are under the care of an attending physician (e.g. internist, family physician, surgeon) with intensivists (i.e. physician with training in critical care) consulted as necessary. Closed ICUs are sites in which patients are under the care of an intensivist, or care is shared between the intensivist and another attending physician.
- Full Time Equivalent (FTE) Dietitian: This is a measure of the amount of time the dietitian is dedicated to the PICU relative to a full-time position e.g. a FTE of 1.0 means that the dietitian works in the PICU full-time and a FTE of 0.5 means that the dietitian is in the PICU half-time, or two and a half days a week.

Login Page



Home Page

My ICUs

- This will be your 'home' page if you are registered for more than one PICU.
- This page will display a list of PICUs for which you have been granted permission to enter data. The list will include the name of the PICU, the number of patients registered, and the number of patients finalized.
- Clicking on a specific PICU will take you to the 'ICU Status' page for that PICU.
- You can enter the 'My ICUs' page at any time by clicking on the appropriate links on the menu.

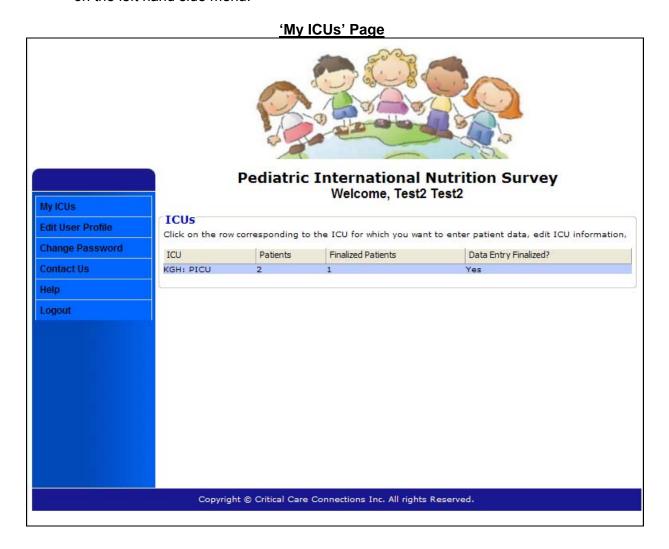
ICU Status Page

- This will be your 'home' page if you are registered for a single PICU.
- This page displays a list of all the patients registered at your PICU. The list includes the patient number, basic demographic data, and the patient's status. The statuses are:
 - In progress: The patient has less than three days of data entered, and/or there are outstanding queries. The patient is therefore not eligible for finalization.
 - Eligible for finalization: The patient has no outstanding queries and has a minimum of three days of data entered, and is therefore eligible for finalization.
 - Finalized: Data entry, including outcomes, is complete, with no outstanding queries.
 - Click on the line containing details about a specific patient to navigate to the Patient Status page for that patient.

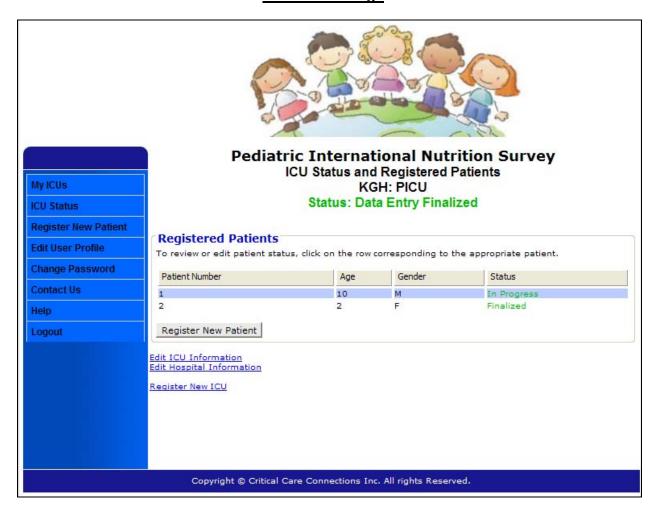
Menu Tabs

- **My ICUs.** To view a summary of all your registered PICUs and the number of patients registered and finalized in each one, click on the 'My ICUs' left hand menu.
- **ICU Status.** To view a summary of the number of patients registered at a single PICU and the number of patients finalized click on the 'ICU Status' left hand menu.
- Register New Patient. To register a new patient, click on 'register new patient' on the left hand side menu.
- Edit User Profile. To change your personal information click on 'edit user profile' on the left hand side menu
- Change password. To change password, click on 'change password' on the left hand side menu. You will be asked to enter your old password, select and confirm a new password.
- Contact Us. On the left hand side of the menu click on 'contact us' to view the contact details for the Project Leader and Technical Support.
- **Help.** To access information related to the study and Pediatric Critical Care Nutrition, click on 'help' on the left hand side menu.

• Log Out. To log out of the web system and return to the login page click on "Log out' on the left hand side menu.



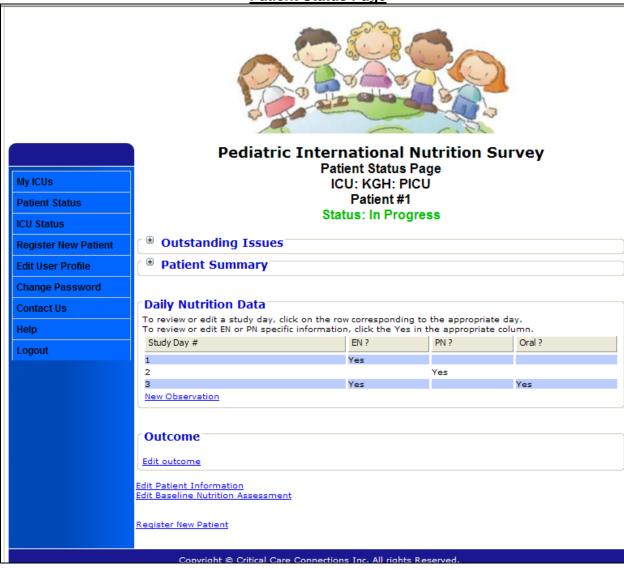
'ICU Status' Page



Patient Status Page

- After clicking on a specific patient on the ICU Status Page you will be directed to the Patient Status page.
- From this page you can view, enter data, or edit information on all Pediatric International Nutrition Survey eCRFs.
- If you 'save' any eCRF, you will be directed back to this page.
- To enter, review or edit daily nutrition data, click on the row corresponding to the study day, or click on "new observation" to add a new study day.
- To enter, review or edit Enteral Nutrition (EN) or Parenteral Nutrition (PN) data, click on 'Yes' in the respective column(s).
- When all PICU study days have been entered (minimum 3 days), select 'Finalize Patient'. You will be directed to the Patient Outcome page.

Patient Status Page



Screening

Please begin to identify study patients on 11 May 2011 (or nearest possible date thereafter).

• The Screening Log is **not** part of the online data collection process, but has been developed as a tool to help you to identify which patients in the PICU meet the inclusion criteria. We will not ask you to enter any information from this form online.

Eliqibility Criteria

Inclusion:

- Critically ill patients that are mechanically ventilated <u>and have</u> an anticipated stay of <u>></u>
 48 hours in the PICU.
- Children ages 1 month to 18 years.

Exclusion:

- Patients who were not ventilated within the first 48 hours of admission.
- Patients on mask ventilation.
- Patients on compassionate care towards end-of-life.
- Patients enrolled in any other nutritional interventional trial.

<u>Duration</u> of Ventilation does not matter. Patients that were ventilated <u>within</u> the first 48 hours of admission to the PICU, and then came off the ventilator and stay in the PICU > 3 days, still meet the eligibility criteria. If the patient is ventilated prior to admission to the PICU they meet the eligibility criteria.

To identify your eligible study patients using the Screening Log, complete the following steps:

- Record the initials of ALL patients that are currently in your PICU in Column 1
- In Column 2, record only those patients from Column 1 that were intubated and ventilated within the first 48 hrs of admission to PICU or prior to PICU admission.
- In Column 3, list only those patients from Column 2 that were in PICU ≥ 3 days.
- In Column 4, number the patients from Column 3 consecutively and these are your eligible study patients.
- In Column 5, enter the identification number the patient was allocated by the web-based tool.
- Continue to screen until you reach a minimum of 15, maximum of 40 consecutive patients.
- For patients that are just admitted and are ventilated, please follow them up for 72 hours to see if they stay in the ICU ≥ 3 days, as they will also be included.
- Please keep the Screening Log to help track down which patient corresponds to which patient number in case we have data queries at a later date.

This log is for your own reference and will not be entered online.

Column 1	Column 2	Column 3	Column 4	Column 5
Initials for ALL patients in the PICU on	Patients intubated and	Patients in the PICU ≥	Screening Number	Patient ID
in the PICU on	ventilated within the first 48	3 days		Number
beginning study day	hrs of admission to PICU	-		
		<u> </u>		

Total number of patients meeting inclusion criteria =_____

Screening Notes:

- If the number of patients meeting inclusion criteria is less than 20, please continue to screen daily until you have a minimum of 15 CONSECUTIVE patients (maximum accrual 40 patients).
- Consecutive: means the very next patient that meets the criteria, instead of picking and choosing patients randomly.
- For those patients just admitted and are ventilated, please follow them up for 72 hours to see if they stay in the PICU (≥ 3 days) as they will also be included into your study cohort.
- Include the patient if he/she is physically in the PICU at time of screening and meets
 the criteria even if they are ready for discharge from the PICU and are waiting for a
 bed on the ward.
- If the patient has had several admissions to the PICU, use the most recent admission.
- If a patient is discharged from the PICU but re-admitted within 48 hours, consider that this patient never left the PICU.
- If data are missing and you are unable to collect the relevant details for this patient, please exclude and include the next eligible consecutive patient.
- The screening number and patient number (generated by the web based data tool) will be the same if you enter the patients in consecutive order.

Patient Information Form

This eCRF is to be filled out **once** for each patient.

Demographics: Enter the gender and age of the patient with the appropriate units (years, months, days).

Admission Information: If mechanical ventilation was initiated prior to PICU admission (e.g. patient transferred from another PICU), check the box that says 'ventilation initiated prior to ICU admission'.

Admission Category: Choose the most suitable admission category. If surgical indicate if this is elective or emergency surgery.

Admission Diagnosis: View the PICU Admission Taxonomy provided (see Appendix 1). This is the diagnosis that resulted in the patient's admission to PICU. If the Admission Diagnosis is not present in the taxonomy, look for the appropriate condition (based on admission category) and choose "Other" and type in the diagnosis in the box below. For example, if Admission Diagnosis is Cystic Fibrosis, choose "Other respiratory disease (#20)" and type in "Cystic Fibrosis".

Presence of Acute Respiratory Distress Syndrome (ARDS): ARDS is an acute lung condition characterized by PaO_2 : $FiO_2 < 200$ in the presence of bilateral alveolar infiltrates on chest x-ray. You are not expected to diagnose ARDS. You only need to review the chart for the first 72 hrs from admission to the PICU for either a confirmed or suspected diagnosis of ARDS. If the chart says "? ARDS", this is suspected ARDS, enter Yes.

Severity of Illness score - Pediatric Risk of Mortality (PRISM) or Pediatric Index of Mortality (PIM): Enter whatever score is calculated by your PICU. If presently unavailable, leave field blank and complete at a later date. Please specify the score used, PRISM 2, PRISM 3, or PIM. This field is required for data finalization.

Patient Information Form

	Padiatric	International Nutrition S	
	Pediatric	ICU: KGH: PICU	urvey
My ICUs		Edit Patient #1	
Patient Status		Help	
ICU Status	Patient Demographics		
Register New Patient	Gender * Male Female	Age* Years	~
Edit User Profile			
Change Password	Admission Information		1
Contact Us		Ventilation initiated prior to ICU admission	
Help	Admission Category	O Medical	
Logout	The state of the s	Surgical: Elective	
		O Surgical: Emergency	
	Admission Diagnosis (Select O		Admission Diagnosis:
	Respiratory		36. Transposition of Great vessels:DORV
	⊞ Cardiac - CHD		VESSES: DURV
	Cardiac - Other		
	Infectious disease		
	Meurology		
	Trauma/Orthopedic/Random	- NOS	
	Renal/Endocrine		
	Hematology/Oncology		
	Symptoms		
	Neonatal miscellaneous		
	miscellaneous		
	Is it evident from reviewing th ARDS within the first 72 hrs o	ne patient's chart that the patient had fadmission?	O yes ⊕ No
	PRISM II Score		
	PRISM III Score		
	PIM Score		
		2 (2 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4 (4	
	Comments: Please enter any oti	her details you would like to specify.	
0		Save Patient Reset Form Exit Form	

Baseline Nutrition Assessment Form

This eCRF is to be filled out **once** for each patient.

- Record height in centimeters and weight in kilograms at time of PICU admission. If unable to obtain "actual" height or weight, use estimated height and weight or that obtained from family members and check the appropriate box to indicate that data was estimated. Use "dry weight" (i.e. weight in the absence of fluid overload) if fluid retention is present.
- For weight used to determine prescribed energy requirements, choose from the drop-down list.

```
1 Actual (ABW)
```

2 IBW based on growth chart

3 Adjusted by 25% (ABW x 0.25 + IBW)

4 Adjusted by 40% (ABW x 0.4 + IBW)

5 Adjusted average (ABW + IBW) x 0.5

6 No weight used in calculation

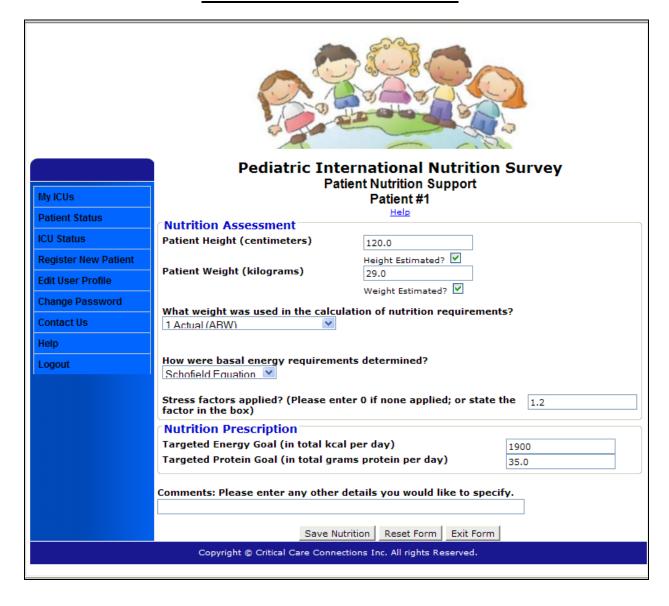
7 No assessment completed

8 Other, please specify

- For determination of basal energy requirements choose from the drop-down list:
 - 1 Harris Benedict equation
 - 2 Schofield equation
 - 3 WHO
 - 4 White
 - 5 Talbot
 - 6 Indirect calorimetry
 - 7 Other, please specify
- Enter stress factor applied to the chosen equation in numeric form (i.e. enter '1.5' for 150% of estimated BEE)
- For **Targeted Energy Goal**, enter the total <u>kilocalories per day</u> to be provided by the <u>goal</u> regimen for EN/PN, according to the dietitian's or physician's assessment.
- For **Targeted Protein Goal**, enter the total <u>grams of protein per day</u> to be provided by the <u>goal</u> regimen for EN/PN, according to the dietitian's or physician's assessment.
 - e.g., If the dietitian recommends a starting rate of 5 ml/hr on day 1 with a final rate of 45 ml/hr by day 3, enter the total daily calories and protein that the final rate = 45ml/hr X 24 hrs. will provide, in kilocalories per day and grams of protein per day (*NOT per kg*).

 For those receiving both EN and PN, please record the total kilocalories and grams of protein per day to be provided from the combined prescription of EN and PN.

Baseline Nutrition Assessment Form



Daily Nutrition Data

This eCRF is to be filled out for each patient daily. The study day will automatically appear on the screen.

Study Day 1 is from ICU admission time to the end of your 24 hr flowsheet.

Study Day 2 and subsequent days start at the time the ICU chart starts until it ends 24 hours later. (e.g. from 08:00 on 11 May 11 until 07:59 on the 12 May 11)

- For each study day, indicate "Yes" or "No" to indicate all types of nutrition patient received.
- If patient is on both EN and PN on the same day, click the 'yes' response in both places ("Enteral nutrition" and "Parenteral nutrition").
- Click on 'save' to save the form and return to the patient status page.
- EN and PN pages are accessed from the patient status page. If you have selected EN or PN in the daily nutrition data, "Yes" will appear in the EN or PN column for that study day. Click on "Yes" in the appropriate column to be directed to the EN or PN page corresponding with that study day.
- If you accidentally enter an extra or incorrect study day, please contact
 Technical Support stating your username, the patient number and the patient day that you wish to delete.

Daily Nutrition Data Page



Enteral Nutrition Data

- Complete this eCRF for each patient daily. The study day will automatically appear.
- **EN Formula:** Using the taxonomy provided (see Appendix 2), please record the enteral formula(s) received.
 - You may select up to 3 formulas per day. In the event that the patient receives more than 3 formulas, select the 3 that provided the largest volumes.
 - On subsequent days, answer yes or no to the question "Has the EN formula(s) changed since previous day?". If you click "Yes" the taxonomy will appear and you can select new formulas.
- Route for Enteral Nutrition Delivery: Pick one of the gastric or post-pyloric options from the drop down box to indicate the location of the feeding tube.
 - If the location of the feeding tube changes within the day, please choose the location that was used for the majority of the day. If gastric was used for half the day and post-pyloric for the other half, choose post-pyloric.
- Kilocalories Received: The total enteral calories received each day (NOT per kg) should be entered. Include calories from protein, supplements, and modular components. Do not include calories from IV solutions.
- Protein Received: The total enteral protein grams received each day (NOT per kg) should be entered. Include protein from additional enteral supplements or modular components. Do not include protein from PN.
- If patient is on a combination of EN and PN, please calculate the calories and protein received from each separately and record on the respective EN Data and PN data pages, without duplication.
- Feeding Interruptions: Indicate Yes or No if enteral nutrition was ever interrupted today. If yes, enter the total duration of feed interruption (i.e. if the EN feeds were stopped from 10:00 to 10:45 and then again 13:15 to 20:20 enter 8hrs, 50mins as '08:50'). Select the reason that EN feeds were interrupted from the list below. If more than one reason, hold the ctrl key and click to select multiple reasons.

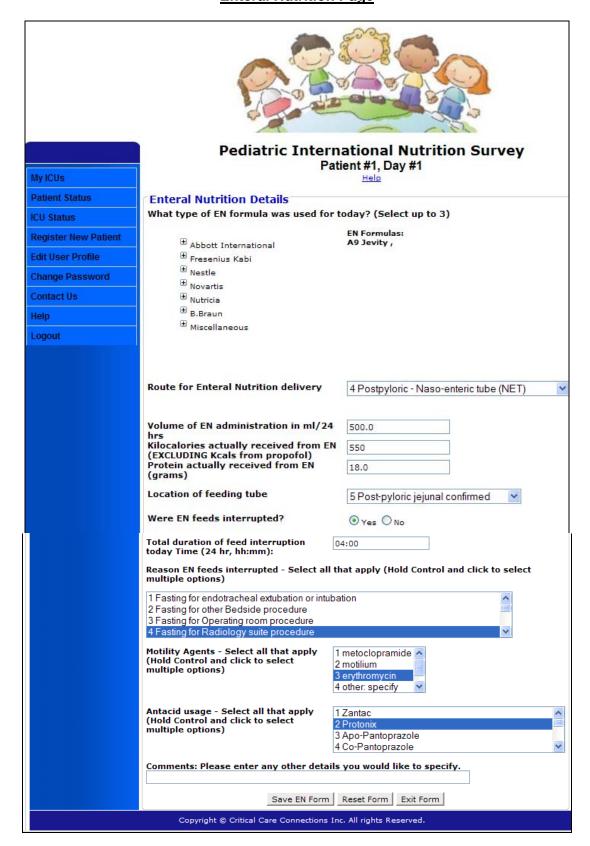
Code	Reason
1	Fasting for endotracheal extubation or intubation
2	Fasting for other bedside procedure
3	Fasting for operating room procedure
4	Fasting for radiology suite procedure
5	Intolerance to enteral feeding – high gastric residuals
6	Intolerance to enteral feeding – increased abdominal girth or abdominal distension
7	Intolerance to enteral feeding – vomiting / emesis or diarrhea
8	Intolerance to enteral feeding –subjective discomfort
9	No enteral access available / enteral access lost, displaced or malfunctioning
10	Inotropes, vasopressor requirement
11	Subject deemed too sick to continue enteral feeding
12	Enteral feeding formula not available
13	Reason for EN interruption not known

Motility Agents: Select the prescribed motility agents from the options below. You do
not need to record the route of administration or the dose. If the patient has been
prescribed combination therapy, please select all motility agents prescribed (hold ctrl
key and click to select multiple options).

Code	Reason
1	Metoclopramide
2	Motilium
3	Erythromycin
4	Other: Specify
5	None

Antacid usage: Choose from the options listed. You do not need to record the route
of administration or the dose. If the patient has been prescribed combination therapy,
please select all antacids prescribed (hold ctrl key and click to select multiple options).

Enteral Nutrition Page



Parenteral Nutrition Data

- Complete this eCRF for each patient daily. The study day will automatically appear.
- Reason EN not provided: Choose from the list, and if the reason for PN is not listed, select 'other' and specify. On subsequent days, answer yes or no to the question "Has the reason EN not provided changed since the previous day?". If you click "Yes" the list will appear and you can select a new reason.

Code	Reason
1	No clinical reason
2	Mechanical bowel obstruction
3	Bowel ischemia
4	Small bowel ileus
5	Small bowel fistulae
6	Gastrointestinal perforation
7	Short Gut Syndrome
8	Hemodynamic instability
9	Proximal bowel anastomosis
10	Not tolerating enteral feeding
11	No access to small bowel
12	Pancreatitis
13	Gastrointestinal bleed
14	Gastrointestinal surgery
15	Other: Specify

- Total kilocalories received from PN (INCLUDING dextrose, amino acids, NOT lipids): Parenteral calories received each day (NOT per kg) should be entered. Include calories from dextrose and amino acids. Do NOT include calories from lipids. Do not include calories from other IV solutions or propofol.
- Protein Received from PN: The total parenteral protein grams received each day (NOT per kg) should be entered. Do not include protein from EN. Include protein from glutamine and parenteral supplements, if applicable.
- Lipids received: Select the type of lipid solution(s) received from the list.
 - 1 Soybean oil based (LCTs)
 - 2 MCT/LCT physical mixture
 - 3 MCT/LCT structured form
 - 4 Olive Oil based
 - 5 Fish Oil based
 - 6 Mixture of soy oil, MCTs, and fish oil
 - 7 Mixture of soy oil, MCTs, olive oil, and fish oil
 - 8 Other
- Parenteral lipid kilocalories received (in kcal/day): The total parenteral lipid calories received each day (NOT per kg) should be entered. Do not record the volume administered, just the calorie amount provided from lipids alone.

Parenteral Nutrition Page

My ICUs	Pediatric International Nutrition Survey Patient #1, Day #2
Patient Status ICU Status Register New Patient Edit User Profile Change Password Contact Us Help Logout	Parenteral Nutrition Details If EN not provided, has the reason changed? Total kilocalories received from PN (INCLUDING dextrose, amino acids, NOT lipids) Protein received from PN (in grams per day) Lipids received Parenteral lipid kilocalories received (in kcal/day) Comments: Please enter any other details you would like to specify. Save PN Form Reset Form Exit Form
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Patient Outcome

All outstanding issues must be addressed before you can access this page. Outstanding issues for each patient will appear at the top of their Patient Status Page.

Complete this eCRF <u>once</u> for each patient, after patient is discharged from PICU/hospital or if the patient dies. Some questions will require you to wait until day 60 following PICU admission.

 Enteral/Parenteral Nutrition First Initiated: From the list of selections, indicate when EN and PN were initiated.

Discharge Information

- "Did patient die in hospital/ICU?" Select "Yes" or "No"
 - If "Yes", enter number of days for "length of stay in PICU, in days" and "total length of hospital stay, in days"
 - o If "**No**", enter number of days for "length of stay in PICU, in days" and "total length of hospital stay, in days"
 - o **OR**, as appropriate, click box next to "Check here if patient still in hospital at day 60" and "Check here if patient still in PICU at day 60"
- Total number of ventilator days in the PICU (in days)? Indicate total number of days of mechanical ventilation. If ventilation was discontinued and restarted, count only the total number of days the patient received mechanical ventilation.

If patient is discharged from PICU while still ventilated (for example, transfer to step-down unit or transfer to another hospital), days of ventilation are same as ICU days. In addition, please make a comment in the Comment Box describing the situation.

ICU/hospital discharge, 60 days of hospital stay, OR death marks the end of data collection, whichever comes first. You do not need to follow-up after hospital discharge or transfer to another healthcare facility.

UTI – Urinary tract infection VAP – Ventilator associated pneumonia CRBSI – catheter related blood stream infection

- Presence of VAP/UTI/CRBSI: You are not expected to diagnose these conditions. Review the chart for the <u>PICU length of stay</u> for either a confirmed or suspected diagnosis of any of these conditions. If the chart says "? VAP/UTI/CRBSI", this is suspected diagnosis, enter Yes.
- If infection was culture proven, please indicate day of PICU admission that culture was ordered (if presumed infection, leave blank). Enter the day of PICU admission that the culture was sent, not the day it was discovered positive or treatment began.
- Click 'Finalize Patient' to save the form and be directed back to the patient status page. If there are outstanding queries, the patient's status will be listed as 'in progress'

on the patient status page. If the patient was finalized successfully, the patient's status will be listed as 'finalized' on the patient status page.

Patient Outcome Page

	Pediatr	ic International Nutrition Survey	е у
My ICUs		Patient #1	
Patient Status		Halo	
ICU Status	Initial Information When was EN first initiated?		
Register New Patient	When was EN first initiated?	EN initiated in ICU	~
Edit User Profile	When was PN first initiated?		
Change Password	The way is more measured.	PN initiated in ICU	~
Contact Us			1
Help	Discharge Information		
Logout	following questions: Did the patient die in the ho	nd of 60 days from ICU admission. You may need to wait until day	O Yes No
	Length of stay in PICU in da	yś:	5
	Length of hospital stay in da	ays:	10
	Check here if patient still in Hospital at day 60		
	Check here if patient still in	A WOOD CONTRACTOR OF SALES	
	Was mechanical ventilation	discontinued in the PICU?	⊕ Yes ○ No
	Check here if patient still on ventilator	at day 60	
	Total number of ventilator days in the FICU (in days): 3 Was patient diagnosed with any of the following infections 48 hours after admission to the PICU?		
	Urinary Tract Infection		O yes ⊙ No
	Ventilator associated Pneum	nonia	O Yes @ No
	Catheter Related Blood Street	am Infection	⊕ yes O No
	Organism:		SNA
	Sensitivities:		none
	Site of blood sampling:		evl
		ren, please indicate day of PICU admission that umed infection, leave blank):	3
	Copyright © Critical C	Finalize Patient Reset Form Exit Form Tare Connections Inc. All rights Reserved.	

Finalizing Data Entry

To determine when the data entry has been completed, a data finalization process has been incorporated into the web based data tool.

Make sure that the data you have entered is accurate to the best of your knowledge before you finalize the data.

When you have completed data entry for a minimum of 15, maximum 40 patients, go to the ICU Status Page and check the box 'Is data entry finalized at your ICU?'



THANK YOU for participating in the 2011 Pediatric International Nutrition Survey!

Appendix 1 - PICU Admission Taxonomy

□ Respiratory

- 1. Acute resp. failure
- 2. Acute resp fail newborn
- 3. Acute resp. distress, insufficiency
- 4. Pulm respiratory arrest
- 5. Insuff. following surgery& trauma
- 6. Pleural effusion, unspecified.
- 7. Pleural effusion, malignant
- 8. Pleural effusion, streptococcal, staphylococcal, pneumococcal.
- 9. Asthma, w/o status
- 10. Asthma, with status
- 11 Asthma with acute exacerbation
- 12 RSV Bronchiolitis
- 13. Apnea
- 14. Apnea newborn primary
- 15. Apnea newborn other
- 16. Pneumonia, streptococcus
- 17. Pneumonia, bacterial unspecified
- 18. Pneumonia, unspecified
- 19. Croup
- 20. Tracheostomy complication
- 21. Tracheostomy complication mechanical
- 22. Tracheostomy complication infection
- 23. Stridor
- 24. Upper airway obstruction
- 25. Acute tracheitis, w/o mention of obstruction (Bacterial tracheitis)
- 26. Acute tracheitis, with obstruction
- 27. Tracheostomy status
- 28. Tachypnea

- 29. Tachypnea newborn
- □ □ Cardiac CHD
 - 30. Coarctation of Aorta
 - 21. Atrial Septal Defect
 - 32. Ventral Septal Defect
 - C 33. TAPVR
 - 4. Tetralogy of fallot
 - 35. Complete Transposition of Great vessels
 - 36. Transposition of Great vessels:DORV
 - 37. hypoplastic left heart syndrome
 - 38. Complete transposition of great vessels
 - 39. Common truncus
 - 40. Double outlet right ventricle
 - 41. Pulmonary Atresia
 - 42. Pulmonary Atresia, congenital
 - 43. Pulmonary stenosis, congenital
 - 44. Ebsteins anomaly
- □ □ Cardiac Other
 - 45. Pulmonary hypertension, primary
 - 46. Cardiac complications
 - 47. Cardiac dysrhythmia, unspecified
 - 48. Paroxysmal Ventricular Tachycardia
 - 49. Tachycardia, Unspecified
 - 50. Neonatal Tachycardia
 - 51. Shock, Unspecified
 - 52. Cardiac arrest

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- 53. Cardiogenic shock
- 54. Acute pericarditis, Unspecified
- 55. Acute and subacute bacterial endocarditis

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- 56. Pericarditis w/effusion, NOS
- 57. Pericardial Effusion
- 58. Cardiomyopathy
- 59. Heart failure, Unspecified
- 60. Congestive heart failure

□ □ Infectious disease

- C 61. Septicemia, Unspecified
- 62. Septicemia, staph aureus
- 63. Septic Shock
- 64. Meningococcal meningitis
- 65. Peritonitis, Unspecified

□ ■ Neurology

- 66. VP shunt infection
- 67. Complex febrile seizure
- 68. Simple febrile seizure
- 69. Status epilepticus
- 70. Other convulsions
- 71. Myoclonic convulsions
- 72. Closed head injury, Unspecified
- 73. Intracranial hemorrhage, w/o open wound
- 74. Intracranial hemorrhage, with open wound
- 75. Intracranial Hemorrhage, Unspecified
- 76. Subdural
- 77. Extradural
- 78. Cerebral edema
- 79. Benign intracranial hypertension
- 80. Hydrocephalus
- 81. Encephalopathy, Unspecified
- 82. Encephalopathy metabolic

- 83. Encephalopathy
- 84. Compression of brain
- E 85. Encephalitis
- 86. Encephalitis toxic
- 87. Encephalitis post infectious
- 88. Encephalitis other
- 89. Intracranial abscess
- 90. Intracranial and intraspinal abscess Extradural or subdural abscess, NOS
- 91. Altered Mental Status
- 92. Mild memory disturbance due to Organic Brain Damage
- 93. Other alteration of consciousness
- 94. ADD- Attention Deficit Disorder of childhood
- 95. ADHD- Attention Deficit Disorder of childhood

□ Frauma/Orthopedic/Random - NOS

- 96. Internal injury, Unspecified w/o open wound
- 97. Internal injury, Unspecified with open wound
- 98. Scoliosis
- 99. GI hemorrhage
- 100. SLE
- 101. Post/op observation
- 102. S/p surgery of eye & adnexa
- 103. S/p surgery cataract (Extraction status)
- 104. S/p posterior fusion (Arthrodesis status)

□ ■ Renal/Endocrine

- 105. HUS
- 106. Acute renal failure
- 107. Chronic renal failure (Unspecified)
- In the stage 1 to 108. Chronic renal failure stage 1
- 109. Chronic renal failure stage 2 (mild)

- 110. Chronic renal failure stage 3 (moderate)
- 111. Chronic renal failure stage 4 (severe)
- 112. Chronic renal failure stage 5
- 113. End stage renal disease
- 114. Renal failure, Unspecified
- In the state of th
- III 116. Acidosis
- In the second of the second of
- 118. hyponatremia/hyposmolality
- 119. hypernatremia/hyperosmolality
- 120. Mixed ascid base disorder
- 121. Volume depletion
- 122. Hypovolemic shock post op
- 123. Hypovolemic shock traumatic
- 124. Volume depletion unspecified
- 125. Dehydration
- 126. Fluid Overload
- 127. Hyperkalemia
- 128. Hypokalemia
- 129. Electrolye and Fluid Disorder NOS
- 130. Poisoning, accident
- 131. Poisoning, suicide
- 132. Diabetes insipidus
- 133. Diabetes w/ketoacidosis
- 134. Hypertension malignant
- 135. Hypotension, orthostatic
- 136. Hypotension, specified
- 137. Hypotension, Unspecified
- 138. Dehydration

□ ■ Hematology/Oncology

- 139. Brain tumor, Unspecified
- 140. Anemia, Unspecified
- 141. ALL w/o remission
- 142. ALL with remission
- Lagrandian 143. AML w/o remission
- I44. AML with remission
- 145. Coagulopathy acquired

□ Symptoms

- 146. Chest pain
- 147. Headache
- 148. Abdominal pain
- 149. Polydipsia
- 🔼 150. Polyuria
- 🚨 151. Fever
- La 152. Hematuria
- 153. Vomiting, alone
- I54. Vomiting with nausea 787.01
- 155. Nausea alone 787.02

□ ■ Neonatal

- 156. Pulmonary hypertension, newborn
- 157. Other apnea of newborn
- 158. Septicemia of newborn
- 159. Bacteremia of newborn
- 160. Cyanotic attacks of newborn
- In the state of th
- 162. Drug withdrawal syndrome, newborn
- 163. Metabolic acidosis of newborn
- 164. Transitory tachypnea of newborn

Appendix 2 – Enteral Formula Taxonomy

Abbott International			
A1 .	A1 AlitraQ		
	A2 Edanec		
	A3 Edanec HN		
	A4 Ensure		
	A5 Ensure HP		
	A6 Ensure Plus		
	A7 Glucerna		
	A8 Glucerna Select		
	A9 Jevity		
	A10 Jevity 1 Cal		
	A11 Jevity 1.2 Cal		
	A12 Jevity 1.5 Cal		
	A13 Jevity Plus 1.5 k/cal		
	A14 Jevity 2 with FOS		
	A15 Jevity with FOS		
	A16 Jevity HiCal		
	A17 Jevity Plus		

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A18 Jevity Promote
A19 Nepro
A20 Osmolite
A21 Osmolite 1 Cal
A22 Osmolite 1.2 Cal
A23 Osmolite 1.5 Cal
A24 Osmolite with Fiber
A25 Osmolite HN
A26 Osmolite HN Plus
A27 Osmolite High Protein
A28 Oxepa
A29 Optimental
A30 Optimental 1.0
A31 Perative
A32 Pivot 1.5 Cal
A33 Promote
A34 Promote with Fiber
A35 Pulmocare
A36 Pulmocare II

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	A37 Suplena
	A38 Two Cal HN
	A39 Vital
	A40 Vital HN
	A41 Supplement: Juven
	A42 Supplement: Polycose powder
	A43 Supplement: Polycose Liquid
	A44 Supplement: Promod
	A45 Supplement: Prosure
_	
	A46 Other Abbott Product (please specify)
	A46 Other Abbott Product (please specify) A47 Elecare
	A47 Elecare
	A47 Elecare A48 Alimentum
	A47 Elecare A48 Alimentum A49 Similac Advance
	A47 Elecare A48 Alimentum A49 Similac Advance A50 Isomil
	A47 Elecare A48 Alimentum A49 Similac Advance A50 Isomil A51 Similac PM 60/40

Fresenius Kabi B1 1000 complete B2 1200 complete B3 1800 complete B4 Diben B5 Fresubin Original B6 Fresubin Original Fibre □ B7 Fresubin Energy B8 Fresubin Energy Fibre B9 Fresubin HP Energy B10 Fresubin Soya Fibre □ B11 Fresubin HEPA B12 Fresubin Diabetes □ B13 Fresubin □ B14 Intestamin □ B15 Reconvan □ B16 Supportan

B17 Survimed Renal

☐ B18 Survimed OPD

	B19 Other Fresenius Kabi Product		
Ne	Nestle		
	C1 Crucial		
	C2 Peptamen with Prebio 1		
	C3 Peptamen		
	C4 Peptamen 1.5		
	C5 Peptamen VHP		
	C6 Peptamen AF		
	C7 Nutren 1.0		
	C8 Nutren 1.0 Fiber		
	C9 Nutren 1.5		
	C10 Nutren 1.5 Fiber		
	C11 Nutren 2.0		
	C12 Nutren Glytrol		
	C13 Nutren Probalance		
	C14 Nutren Pulmonary		
	C15 Nutren Renal		
	C16 Nutren Replete		
	C17 Nutren Replete Fiber		

	C18 Nutren VHP
	C19 Nutren VHP Fiber
	C20 Nutren Fibre with Prebio 1
	C21 Nutren Fibre 1.5 with Prebio 1
	C22 Nutrihep
	C23 Supplements: Caloreen
	C24 Other Nestle Product
	C25 Good Start
	C26 Good Start Soy
	C27 Boost Kid Essentials
	C28 Boost Kid Essentials 1.5
	C29 Compleat Pediatric
	C30 Nutren Junior
	C31 Peptamen Junior
	C32 Peptamen Junior 1.5
	C33 Vivonex Pediatric
No	vartis
	D1 Compleat
	D2 Diabetisource AC

D3 Fibersource
D4 Fibersource HN
D5 Impact
D6 Impact Glutamine
D7 Impact with Fiber
D8 Impact 1.5
D9 Isocal
D10 Isocal HN
D11 Isosource
D12 Isosource HN
D13 Isosource HN with fibre
D14 Isosource VHN
D15 Isosource 1.5
D16 Novasource Renal
D17 Novasource Pulmonary
D18 Novasource GI Control
D19 Novasource 2.0
D20 Novasource Diabetes
D21 Peptinex

D22 Peptinex AF 1.2
D23 Peptinex HN
D24 Peptinex DT
D25 Peptinex DT with Prebiotics
D26 Resource 2.0
D27 Resource Plus
D28 Resource Standard
D29 Resource Diabetic
D30 Subdue Plus
D31 Tolerex
D32 Trauma-cal
D33 Ultracal
D34 Vivonex TEN
D35 Vivonex Plus
D36 Vivonex RTF
D37 Supplements- Beneprotein Instant Protein Powder
D38 Supplements - Microlipid
D39 Supplements - Benecalorie
D40 Supplements - MCT oil

	D41 Supplements-Resource Glutasolve
	D42 Supplements: Resource Arginaid
	D43 Supplements- Benefiber
	D44 Other Novartis Product
Nu	tricia
	E1 Cubison
	E2 Diason
	E3 Nutrison Standard
	E4 Nutrison Multi Fibre
	E5 Nutrison Protein Plus Multi Fibre
	E6 Nutrison Protein Plus
	E7 Nutrison1000 Complete Multi Fibre
	E8 Nutrison 1200 Complete Multi Fibre
	E9 Nutrison Energy Multi Fibre
	E10 Nutrison Energy
	E11 Nutrison Soya
	E12 Nutrison MCT
	E13 Nutrison Low Sodium
	E14 Nutrison Concentrated

E15 Nutrison Pre
E16 Nutrison Low Energy Multi Fibre
E17 Nutrisorb Low Energy
E18 Nutrisorb Low Energy Soy Multi Fibre
E19 Peptisorb
E20 Supplement: Calogen
E21 Supplement: Protifar
E22 Supplement: Polycal Powder / Fantomalt
E23 Supplement: Polycal Liquid
E24 Supplement: DuoCal
E25 Supplement: Fortimel
E26 Other Nutricia Product
E27 Karicare
E28 Caprilon
E29 Ketocal
E30 Neocate
E31 Neocate Jr.
E32 Neocate 1+
E33 Fortini Multi Fibre

	E34 Infatrini
	E35 Kindergen
	E36 MCT Peptide 1+
	E37 Monogen
	E38 Nutrini
	E39 Tentrini
B.E	Braun
	F1 Nutricomp Standard
	F2 Nutricomp Standard with Fibre
	F3 Nutricomp Standard with Fibre D
	F4 Nutricomp
	F5 Nutricomp Diabetes
	F6 Nutricomp Hepa
	F7 Nutricomp Intensive
	F8 Nutricomp Immun
	F9 Nutricomp MCT
	F10 Nutricomp Peptid
	F11 Nutricomp Energy
	F12 Nutricomp Energy Fibre

	F13 Other B.Braun Product
	F14 Nutricomp Pediatric
Mis	scellaneous
	G1 Baxter: Restore-X
	G2 MEAD JOHNSON: Portagen
	G3 Hormel Health: Immun-Aid
	G4 Hormel Health: Hepatic-Aid
	G5 Hormel Health: Glutasorb
	G6 Hormel Health: Propass
	G7 National Nutrition: Argiment
	G8 National Nutrition: Argitein
	G9 National Nutrition: Prosource liquid
	G10 National Nutrition: Prosource powder
	G11 Global Health: Procel
	G12 Medical Nutrition: Pro-stat
	G13 Victus Inc: Immunex Plus
	G14 Wyeth: Enercal
	G15 Wyeth: Enercal Plus
	G16 Bright Beginnings Soy

G17 Enfamil Lipil
G18 EnfaCare
G19 Enfamil LactoFree
G20 Enfamil A.R.
G21 Gentlease
G22 Nutramigen AA
G23 Prosobee
G24 Pregestimil
G25 Nutramigen
G26 Other