APPENDIX 4.0

PREPARATION, HANDLING AND STORAGE OF POWDERED INFANT FORMULA IN UK DAY NURSERIES.

Cover Letter
Day Nursery Nurse Questionnaire
Day Nursery Manager Questionnaire
2nd Mailing reminder letter
3rd Mailing reminder letter
Cover letter

Mrs xxx xxxx,
Manager,
Toadhall Nursery,
Etc Cardiff,
CF14 567

Xx, xxxxx, 2009

Dear …xxxxxxx………….


Procedures used to prepare, handle and store powdered infant formula fed to young infants in the home and in day nurseries are of considerable importance. The Food Research and Consultancy Unit in Cardiff has recently been commissioned to explore attitudes, practices and information sources of Day Nursery Managers and Day Nursery Nurses in the UK related to preparation and storage of powdered infant formula milk. This study is being funded by the UK Food Standards Agency and findings will provide a valuable contribution to the development of guidelines that address powdered infant formula feeding and use in Day Nurseries the UK.

Your name and address has been randomly selected to participate in this important and highly influential study from the ‘http://www.daynurseries.co.uk’ website; 10% of all Day Nurseries who are registered to care for infants aged less than 6months in the UK will be contacted concerning this study.

I have enclosed two questionnaires (each with prepaid return envelopes) for you / your staff to complete. One questionnaire is for Day Nursery Managers and the other questionnaire is for Day Nursery Nurses working with young infants (particularly aged less than 6months), fed using powdered infant formula in your Nursery. I would be extremely grateful if you could complete the ‘Day Nursery Manager questionnaire’ and ask one of your Day Nursery Nurses to complete the other questionnaires. Please can both of the questionnaires be returned to me in the attached prepaid envelopes before xxxxxxx, 2009. Your co-operation in this study will be very beneficial for informed strategy development in the future.

This project has been reviewed by, and received ethics approval by the University of Wales Institute Cardiff (UWIC) School of Health Sciences Research Ethics Committee (Date 21st March, 2009). Please be assured that all questionnaire responses will be ANONYMOUS and all data collected during the course of the study will be treated with COMPLETE CONFIDENTIALITY. If you have any queries regarding the questionnaire, please do not hesitate to contact me on Cardiff (029) 20416452.

Yours Sincerely,

Elizabeth Redmond

Dr. Elizabeth Redmond
Researcher

Email: eredmond@uwic.ac.uk
Day Nursery Nurse Questionnaire

SECTION 1: BACKGROUND INFORMATION

1.1 What ages of infants do you care for in your nursery? (As many as applicable)
- 0-3 months
- 4-6 months
- 7-12 months
- 12 months and over

1.2 How many infants aged 6 months or less do you have in your nursery at the moment? (state number)

1.3 How long during the day do infants aged 6 months or less usually stay in nursery? (As many as applicable)
- Up to 2 hours per day
- 3 - 6 hours per day
- 7-10 hours per day
- More than 10 hours per day

1.4 What is the usual ratio of staff caring for infants aged less than 6 months? (e.g. 1 member of staff for 4 infants)

1.5 Do you have a kitchen / kitchen type area in your day nursery for preparing, handling or storing powdered infant formula feeds? (One only)
- No
- Yes
- Don’t Know

If Yes go to Q1.6: If No or Don’t Know, go to Section 2.0

1.6 Which of the following do you think best describes the size of your kitchen in the day nursery where powdered infant formula feeds are prepared, handled or stored? (One only)
- Extremely small – very small work surface space
- Small – limited work surface space
- Medium – enough work surface space
- Large – more than enough work surface space

1.7 What is the kitchen used for? (As many as applicable)
- Preparing powdered infant formula feeds
- Cleaning used feeding bottles / teats etc
- Sterilising used feeding bottles / teats etc
- Storing powdered infant formula feeds
- Preparing infant foods
- Preparing staff food / coffees
- As a storage area
- Laundry
- Other (please state)

1.8 Which of the following are in your nursery kitchen / area (where infant feeds are prepared, handled or stored)? (As many as applicable)
- Microwave
- Kettle
- Sink / draining board
- Dishwasher
- Steam steriliser
- Cold water sterilising unit
- Microwave steriliser
- Fridge (if < go to Q1.9; otherwise go to Section 2.0)

1.9 How often is the temperature of the fridge in your nursery checked? (One only)
- 2 or more times a day
- At least once a day
- Once or twice a week
- Once a week or more
- Once a month or more
- Less than monthly
- Never
- Don’t know

Other (please state)

1.10 As far as you know, what is the maximum temperature that your fridge should operate to ensure food safety?

- Please state temperature
- Don’t know

1.11 How is the temperature of the fridge in your nursery checked? (One only)
- Use of a plastic, traditional fridge thermometer
- Use of a digital fridge thermometer
- Ensure the dial is on the correct number
- Don’t know

Other (please state)

1.12 Is the temperature ever written down and recorded? (One only)
- No
- Yes
- Don’t Know

1.13 How often fridge in the nursery cleaned? (One only)
- Every day
- Once or twice a week
- Once a week or more
- Once a month or more
- Less than monthly
- Don’t know

Other (please state)
### SECTION 2: PREPARATION, STORAGE & FEEDING OF POWDERED FORMULA

#### 2.1 How often do YOU prepare powdered infant formula in your nursery? (\*one only)
- Every day □
- 2-3 days a week □
- 4-5 days a week □
- Once a week or more □
- Once a month or more □
- Never □

#### 2.2 Which of the following best describes how feeding infants in your nursery occurs? (\*as many as applicable)
- Made-up bottles of powdered formula milk are brought from home to the nursery to be used throughout the day (if \*go to Q2.3) □
- Carons of ready-to-use formula and sterilised bottles are brought to the nursery to be used throughout the day (if \*go to Q2.4) □
- Measured amounts of powdered formula and empty sterilised bottles are brought to the nursery for nursery staff to make up (if \*go to Q2.4) □
- Measured amounts of powdered formula and sterilised bottles with quantities of water are brought to the nursery for nursery staff to make up (if \*go to Q2.4) □
- Parents bring in tins of powdered formula to the nursery when necessary (The formula is made up by nursery staff) (if \*go to Q2.4) □
- Powdered formula is provided by the nursery and made up by the nursery staff (if \*go to Q2.4) □
- Feeding bottles are provided and sterilised by the nursery (if \*go to Q2.4) □
- Don’t know (if \*go to Section 3) □

#### 2.3 MADE-UP BOTTLES OF POWDERED FORMULA BROUGHT TO NURSERY

2.3.1 From what you see working in a day nursery, how do parents usually carry the bottles of made-up formula in to your nursery? (\*as many as applicable)
- In insulated bag / part of baby bag to keep bottle warm □
- In a cool bag / part of baby bag with frozen cool packs □
- In a cool bag / part of baby bag (no frozen cool packs) □
- In the bottle holder on a pushchair / pram □
- In a carrier bag / other general bag / handbag / rucksack / general compartment of baby bag □
- Don’t know □
- Other (please state) □

2.3.2 When parents arrive at the nursery with bottles of made-up powdered formula feeds, do the feeds feel... (\*as many as applicable)
- Cold □
- Room temperature □
- Luke warm □
- Very warm □
- Don’t know □

#### 2.4 PREPARATION OF FORMULA IN THE NURSERY

2.4.1 Approximately how many powdered formula feeds are made-up in your nursery during one day? (state number)

2.4.2 Where are powdered formula feeds prepared in your day nursery? (\*as many as applicable)
- In the kitchen □
- In a nursery kitchen □
- Other (please state) □

2.4.3 In your nursery, who is responsible for making powdered formula feeds up? (\*as many as applicable)
- One specific person in the nursery □
- Individual nursery staff make formula up for their assigned "key" infants □
- Other (please state) □

2.4.4 When are powdered formula infant feeds made up? (\*one only)
- All together at the beginning of the day □
- Made-up in batches throughout the day □
- Made-up one up at a time, as required □
- Other (please state) □

2.4.5 When preparing a bottle of powdered infant formula do you usually... (\*as many as applicable)
- ...boil the kettle, cool boiled water in the kettle and then pour into a feeding bottle (if \*go to Q2.4.6) □
- ...boil the kettle and pour hot water into feeding bottle(s) straight away (if \*go to Q2.4.8) □
- ...use water in sterilised bottle prepared by infants parents (if \*go to Q2.4.8) □
- ...use tap water (not boiled) (if \*go to Q2.4.8) □
- ...use boiled water (if \*go to Q2.4.8) □
- Other (please state) □

2.4.6 When you boil the kettle (for making up powdered formula feeds) is it usually closest to... (\*one only)
- Maximum level of water □
- Half full of water □
- Minimum level of water □
- Don’t know □

2.4.7 How long do you usually allow the water to cool in the kettle? (\*one only)
- Less than 15 minutes □
- 16-30 minutes □
- 1-2 hours □
- More than 2 hours □
- Don’t know □

2.4.8 When you have mixed the powdered formula with the water, which of the following usually describes what you do then? (\*as many as applicable)
- Feed the made-up formula to the infant immediately □
- Cool the made up formula to a suitable temperature and feed to the baby immediately □
- Warm the made up formula to a suitable temperature and feed to the baby immediately □
- Place the made up formula in the fridge and store until required for feeding □
- Leave the made up formula at room temperature until required for feeding □
- Don’t know □
- Other (please state) □

2.4.9 If a made-up feed is too hot to feed an infant straight away, which of the following methods best describes how you usually cool it down? (\*as many as applicable)
- Leave it at room temperature until sufficiently cool □
- Hold it under running tap of cold water □
- Place it in a bowl of cold water □
- Place it in the fridge to cool □
- Don’t know □
- Not applicable □
- Other (please state) □

2.4.10 If you need to heat up the made-up feed before giving it to an infant, which method do you usually use? (\*as many as applicable)
- In a jug/bowl of hot water □
- Running it over a hot tap □
- In an electric bottle warmer □
- In a microwave □
- Leave it at room temperature □
- Don’t know □
- Not applicable □
- Other (please state) □

#### 2.5 HANDLING AND STORAGE OF FEEDS

2.5.1 Where are made-up powdered formula feeds stored before feeding? (\*as many as applicable)
- In the fridge □
- In the refrigerator □
- On a shelf near the back of the fridge □
- In a cupboard / infants box □
- Don’t know □
- Other (please state) □

2.5.2 Are made-up formula feeds in your nursery labelled? (\*one only)
- No (if \*go to Q2.5.5) □
- Yes (if \*go to Q2.5.5) □
- Don’t know (if \*go to Q2.5.5) □

2.5.3 Who is responsible for attaching and writing information on the label? (\*as many as applicable)
- Parents □
- Nursery staff □
- Other (please state) □

2.5.4 What information is written on the label? (\*as many as applicable)
- Infants name □
- Date □
- Time feed made-up □
- Brand of formula □
- Other (please state) □

2.5.5 Do you ever keep powdered infant formula that infants have not drunk to show to parents? (\*one only)
- No (if \*go to Section 3) □
- Yes (if \*go to Q2.5.6) □
- Don’t know (if \*go to Section 3) □

2.5.6 Where are bottles of undrunk left over powdered formula feeds stored? (\*as many as applicable)
- In the fridge □
- In a cupboard / infants box □
- Other (please state) □

2.5.7 Do parents ever take the leftover formula milk home when the infant is collected? (\*one only)
- No □
- Yes □
- Don’t know □

2.5.8 Are you happy for parents to take leftover formula home with them when the infant is collected? (\*one only)
- No □
- Yes □
- Don’t know □
## SECTION 3: ATTITUDES

For all of the questions in this section please tick one of the five boxes alongside each question to indicate agreement / disagreement. For example, if you agree with the statement below, then tick the box in the 'agree' column (as shown in the example below).

### EG: The media always report scientific information accurately.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree or disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t Know</th>
</tr>
</thead>
</table>

- I know all of the precautions necessary for safe preparation and storage of powdered formula milk.
- It is easy to implement all of the recommended safety practices for safe preparation of powdered infant formula.
- There is plenty of space in the baby nursery kitchen for preparation and storage of powdered infant formula feeds.
- It is acceptable to make up bottles of powdered formula milk in advance of use.
- In the nursery where I work powdered infant formula is prepared / fed to infants according to parent instructions.
- Making up one feed at a time is difficult to do for every infant, all of the time in a day nursery.
- Part of my role as a nursery nurse is to give parents advice about safe preparation and storage of powdered infant formula.
- Recommendations about preparation and storage of powdered formula milk are consistent from different sources (e.g. NHS, FSA, NCT, supermarkets, formula manufacturers etc).
- Making up powdered formula feeds with cold or warm water is acceptable practice before feeding.
- I do not have time to search for information about infant feeding.
- Following preparation and storage instructions on tins of powdered formula is not necessary.
- The time between arrival of feed at the nursery and placement in the refrigerator is not timed.

If NO bottles / made-up feeds ever brought to nursery ✓

- It is difficult to judge the actual temperature of water when it is added to the formula powder.
- There is no association between Salmonella and powdered formula.
- Recommendations for safe preparation and storage of powdered infant formula have changed in recent years.
- I am not concerned about infants experiencing stomach infections resulting from powdered infant formula fed in the nursery where I work.
- Making up one feed at a time (fresh) for immediate feeding is essential to reduce the chance of illness from powdered infant formula.

### Table of questions and responses

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree or disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t Know</th>
</tr>
</thead>
</table>

- I always comply with parent requests about how formula is to be prepared and fed to an infant.
- The cleanliness of the kitchen area in the day nursery should be tested to ensure there are no harmful germs / bacteria present.
- It is the responsibility of my Manager to obtain and inform me of changes to powdered infant formula preparation and storage recommendations.
- Before opening a tin of powdered formula milk, the powdered milk is a sterile product (i.e. is free from all germs and bacteria).
- I have no concerns about the safety of powdered infant formula feeds prepared in my nursery.
- I am confident that I know all of the up-to-date guidelines about minimising microbial risks associated with feeding with powdered formula milk.
- It is acceptable to keep made-up powdered formula at room temperature for more than 2 hours.
- Parents often ask me about issues associated with safe preparation and storage of powdered infant formula.
- I have read the Food Standards Agency guidelines for safe preparation, handling and storage of powdered infant formula.
- Parents sometimes bring made-up feeds / bottles, ready for feeding, to the day nursery that I consider to be unclean.
- If NO bottles / made-up feeds ever brought to nursery ✓
- I sometimes have to feed infants using bottles that parents bring from home that I consider to be unclean.
- If NO bottles / made-up feeds ever brought to nursery ✓
- I do not have time to read information about infant feeding.
- My knowledge of powdered infant formula preparation, handling, storage and feeding is mainly from personal experience of having children.
- If NO experience of having own children ✓ here ✓
- It is acceptable to store made-up powdered formula in the fridge all day.
- I think that unique policies and standards for individual day nurseries are better than national standards.
- I would like to receive up-to-date information about powdered infant formula preparation and storage guidelines
- Enterobacter sakazakii can be found in powdered infant formula.
- The nursery where I work has a policy and systems for safe preparation, handling and storage of powdered infant formula.
- It is not my responsibility to find information about updated powdered infant formula guidelines.
**SECTION 4: PERCEPTIONS OF RISK, CONTROL & RESPONSIBILITY**

4.1 Circle a number on each line below to show how much control you think each caregiver has when preparing powdered formula feeds. Using a scale of 1 – 10, where 1 is no control at all and 10 is full control, how much control do you think....

<table>
<thead>
<tr>
<th>No control at all</th>
<th>Full control</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

...you have over hygiene and safety when preparing your baby’s feeds

...other nursery nurses have over hygiene and safety when preparing their baby’s feeds

...parents have over hygiene and safety when preparing the feeds of babies in their care

...hospital staff have over hygiene & safety when preparing the feeds of babies in their care

4.2 Circle a number on each line below to show the risk (or likelihood) of illness that you think may exist when different caregivers prepare powdered formula feeds. Using a scale of 1 – 10, where 1 is very high risk and 10 is very low risk what do you consider the risk (or likelihood) of illness to a baby/other babies from drinking made up powdered infant formula.....

<table>
<thead>
<tr>
<th>Very high risk</th>
<th>Very low risk</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

...that you have prepared

...that other nursery nurses have prepared

...that has been prepared by parents

...that has been prepared by hospital staff

4.3 Circle a number on each line below to show how conscious of hygiene you think each caregiver is when preparing powdered formula feeds. Using a scale of 1 – 10, where 1 is not at all conscious and 10 is very conscious how conscious of hygiene do you think.....

<table>
<thead>
<tr>
<th>Not at all conscious</th>
<th>Very conscious</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

...you are when preparing your baby’s feeds

...other nursery nurses are when preparing their baby’s feeds

...parents are when preparing the feeds of babies in their care

...hospital staff are when preparing the feeds of babies in their care

**SECTION 5: PREPARATION PRACTICES, POLICY & TRAINING**

4.4 Circle a number on each line below to show how much responsibility you think each caregiver has when preparing powdered formula feeds. Using a scale of 1 – 10, where 1 is no responsibility at all and 10 is total responsibility, how much responsibility do you think....

<table>
<thead>
<tr>
<th>No responsibility</th>
<th>Total responsibility</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

...you have for the safety of your baby’s feeds

...other nursery nurses have for the safety of their baby’s feeds

...parents have for the safety of the feeds of babies in their care

...hospital staff have for the safety of the feeds of babies in their care

5.1 Please indicate (+) how important you think each of the actions listed below are, when preparing bottles or preparing or storing made up powdered formula milk feeds.

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Fairly Important</th>
<th>Neither</th>
<th>Not Important</th>
<th>Not at all Important</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

• Wash and dry hands every time a bottle of powdered formula milk feed is prepared.

• Wash feeding bottles and components with detergent and hot water before sterilising.

• Rinse washed feeding bottles and components with running water before sterilising.

• Sterilise feeding bottles and components before use.

• Use boiled water (fresh from the tap before boiling) to make up powdered infant formula.

• Ensure the temperature of boiled water has cooled, but is higher than 70°C when mixed with the milk powder.

• Mix milk powder with boiled water that has cooled for less than 30 minutes.

• Feed the made-up powdered formula immediately after preparation (once at a suitable temperature).

• Prepare (i.e. add powder and water together) one feed at a time.

5.2 Have you received training about the microbiological risks (e.g. bacteria) associated with powdered infant formula.......

<table>
<thead>
<tr>
<th>(tick one only)</th>
<th>ever?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>(tick one only)</td>
<td>in the past 3 years?</td>
<td>Yes</td>
<td>No</td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

5.3 As a Nursery Nurse, please - previous training (+as many as applicable)

In-nursery training from nursery staff

Basic Food Hygiene Certificate

Intermediate or Advanced Food Hygiene Certificate

Previous Nursery experience

Please state your professional qualification(s) below (including year)

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Thank you for completing this questionnaire
Day Nursery Manager Questionnaire

SECTION 1: BACKGROUND

1.1 What ages of infants do you care for in your nursery? (as many as applicable)
- 0-3 months
- 4-6 months
- 7-12 months
- Over 12 months

1.2 How many infants aged 6 months or less do you have in your nursery at the moment?
(state number) .....................................................................................

1.3 How long during the day do infants aged 6 months or less usually stay in nursery? (as many as applicable)
- Up to 2 hours per day
- 3 - 6 hours per day
- 7 - 10 hours per day
- More than 10 hours per day

1.4 Which of the following best describes how feeding infants in your nursery occurs? (as many as applicable)
- Made-up bottles of powdered formula milk are brought from home to the nursery to be used throughout the day
- Cartons of ready-to-use formula and sterilised bottles are brought to the nursery to be used throughout the day
- Measured amounts of powdered formula and empty sterilised bottles are brought to the nursery for nursery staff to make up
- Measured amounts of powdered formula and sterilised bottles with quantities of water are brought to the nursery for nursery staff to make up
- Parents provide tins of powdered formula to the nursery and replace when necessary. The formula is made up by the nursery staff
- Powdered formula is provided by the nursery and made up by the nursery staff
- Feeding bottles are provided and sterilised by the nursery
- Don't know

SECTION 2: NURSERY POLICIES AND PROCEDURES

2.1 Does your day nursery have a policy with procedures that covers preparation, handling and storage of powdered infant formula? (one only)
- No □
- Yes □
- Don't know □

If 'Yes', proceed to question 2.2. If 'No' or 'Don't know', proceed to 2.6

2.2 Is your nursery powdered infant formula policy any of the following? (as many as applicable)
- Unique to your nursery only
- Devised for your chain of nurseries
- A national policy
- Don't know
- Other (please state): ...............................................................................

2.3 Who was responsible for devising the powdered infant formula preparation, handling and storage policy / procedures for your nursery? (one only)
- Manager of the nursery
- Don't know
- Other (please state): .............................................................................
### SECTION 3: ATTITUDES

For all of the questions in this section please tick one of the five boxes alongside each question to indicate agreement / disagreement. For example, if you agree with the statement below, then tick the box in the 'Agree' column (as shown in the example below).

- I know all of the precautions necessary for safe preparation and storage of powdered formula milk.
- It is easy to implement all of the recommended safety practices for safe preparation of powdered infant formula.
- There is plenty of space in the day nursery kitchen for preparation and storage of powdered infant formula feeds.
- It is acceptable to make up bottles of powdered formula milk in advance of use.
- In the nursery where I work powdered infant formula is prepared / fed to infants according to parent instructions.
- Making up one feed at a time is difficult to do for every infant, all of the time in a day nursery.
- Part of my role as a Nursery Manager is to give parents advice about safe preparation and storage of powdered infant formula.
- Recommendations about preparation and storage of powdered formula milk are consistent from different sources (e.g. NHS, FDA, NCT, supermarkets, formula manufacturers etc).
- Making up powdered formula feeds with cold or warm water is acceptable practice before feeding.
- I do not have time to search for information about infant feeding.
- Following preparation and storage instructions on tins of powdered formula is not necessary.
- The time between arrival of feed at the nursery and placement in the refrigerator is not timed.
- If NO bottles / made-up feeds ever brought to nursery
- It is difficult to judge the actual temperature of water when it is added to the formula powder.
- There is no association between *Salmonella* and powdered formula.
- Recommendations for safe preparation and storage of powdered infant formula have changed in recent years.
- I am not concerned about infants experiencing stomach infections resulting from powdered infant formula fed in the nursery where I work.
- Making up one feed at a time (fresh) for immediate feeding is essential to reduce the chance of illness from powdered infant formula.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree or Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
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### 2.4 How often are policies and procedures for safe use of powdered infant formula reviewed? (*one only*)

<table>
<thead>
<tr>
<th>More than once a month</th>
<th>Less than once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.5 How often do you, or someone else, check that your staff implement procedures required for safe preparation, handling and storage of powdered infant formula? (*one only*)

<table>
<thead>
<tr>
<th>Every day</th>
<th>Every 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
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</tbody>
</table>

### 2.6 How do you try and ensure that your staff are carrying out procedures required for safe preparation, handling and storage of powdered infant formula in your nursery? (please state)

<table>
<thead>
<tr>
<th>More than once a week</th>
<th>Less than once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.7 What form of training do all nursery staff, NEW to your nursery, caring for infants aged 6 months or less, receive about preparing, handling and storage of powdered infant formula in your nursery? (*as many as applicable*)

- In-nursery demonstration of safe procedures
- Verbal instruction
- Written policy and procedures
- No in-nursery training (go to Q2.10)
- Other (please state)...

### 2.8 Who provides the infant feeding training for new nursery staff? (*as many as applicable*)

- Manager of the whole nursery
- External trainer (please state organisation)
- Other (please state)...

### 2.9 How often are training updates with regards to powdered infant formula preparation, handling and storage provided for nursery staff? (*one only*)

<table>
<thead>
<tr>
<th>More than once a month</th>
<th>Less than once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.10 Have you ever been contacted by an Environmental Health Officer about health & hygiene in your nursery? (*one only*). Yes [ ] No [ ] Don’t know [ ]

### 2.11 How often is the nursery food preparation kitchen visited by an Environmental Health Officer? (*one only*)

<table>
<thead>
<tr>
<th>Every 6 months</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.12 How often is the nursery powdered infant formula preparation kitchen / area visited by an Environmental Health Officer? (*one only*)

<table>
<thead>
<tr>
<th>Every 6 months</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.13 How often are kitchen / formula preparation surfaces tested for the presence of germs / bacteria? (*one only*)

<table>
<thead>
<tr>
<th>More than once a week</th>
<th>Once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.14 How often are policies and procedures for safe use of powdered infant formula reviewed? (*one only*)

<table>
<thead>
<tr>
<th>More than once a month</th>
<th>Less than once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.15 How often do you, or someone else, check that your staff implement procedures required for safe preparation, handling and storage of powdered infant formula? (*one only*)

<table>
<thead>
<tr>
<th>Every day</th>
<th>Every 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.16 How do you try and ensure that your staff are carrying out procedures required for safe preparation, handling and storage of powdered infant formula in your nursery? (please state)

<table>
<thead>
<tr>
<th>More than once a week</th>
<th>Less than once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.17 What form of training do all nursery staff, NEW to your nursery, caring for infants aged 6 months or less, receive about preparing, handling and storage of powdered infant formula in your nursery? (*as many as applicable*)

- In-nursery demonstration of safe procedures
- Verbal instruction
- Written policy and procedures
- No in-nursery training (go to Q2.10)
- Other (please state)...

### 2.18 Who provides the infant feeding training for new nursery staff? (*as many as applicable*)

- Manager of the whole nursery
- External trainer (please state organisation)
- Other (please state)...

### 2.19 How often are training updates with regards to powdered infant formula preparation, handling and storage provided for nursery staff? (*one only*)

<table>
<thead>
<tr>
<th>More than once a month</th>
<th>Less than once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.20 Have you ever been contacted by an Environmental Health Officer about health & hygiene in your nursery? (*one only*). Yes [ ] No [ ] Don’t know [ ]

### 2.21 How often is the nursery food preparation kitchen visited by an Environmental Health Officer? (*one only*)

<table>
<thead>
<tr>
<th>Every 6 months</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.22 How often is the nursery powdered infant formula preparation kitchen / area visited by an Environmental Health Officer? (*one only*)

<table>
<thead>
<tr>
<th>Every 6 months</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### 2.23 How often are kitchen / formula preparation surfaces tested for the presence of germs / bacteria? (*one only*)

<table>
<thead>
<tr>
<th>More than once a week</th>
<th>Once a year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
### SECTION 4: PERCEPTIONS OF RISK, CONTROL & RESPONSIBILITY

#### 4.1 Circle a number on each line below to show how much control you think each caregiver has when preparing powdered formula feeds. Using a scale of 1 – 10, where 1 is no control at all and 10 is full control, how much control do you think....

<table>
<thead>
<tr>
<th>CART - Total</th>
<th>No control at all</th>
<th>Full control</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing staff have over hygiene and safety when preparing their baby’s feeds</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents have over hygiene and safety when preparing the feeds of babies in their care</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital staff have over hygiene &amp; safety when preparing the feeds of babies in their care</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Possible responses:**
- 1: No control at all
- 2: Very low control
- 3: Low control
- 4: Medium low control
- 5: Medium control
- 6: Medium high control
- 7: High control
- 8: Very high control
- 9: Excellent control
- 10: Total control

#### 4.2 Circle a number on each line below to show the risk (or likelihood) of illness that you think may exist when different caregivers prepare powdered formula feeds. Using a scale of 1 – 10, where 1 is very high risk and 10 is very low risk what do you consider the risk (or likelihood) of illness to a baby/other babies from drinking made up powdered infant formula.....

<table>
<thead>
<tr>
<th>CART - Total</th>
<th>Very high risk</th>
<th>Very low risk</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing staff have prepared</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>that has been prepared by parents</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>that has been prepared by hospital staff</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.3 Circle a number on each line below to show how conscious of hygiene you think each caregiver is when preparing powdered formula feeds. Using a scale of 1 – 10, where 1 is not at all conscious and 10 is very conscious how conscious of hygiene do you think.....

<table>
<thead>
<tr>
<th>CART - Total</th>
<th>Not at all conscious</th>
<th>Very conscious</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing staff are when preparing their baby’s feeds</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents are when preparing the feeds of babies in their care</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital staff are when preparing the feeds of babies in their care</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.4 Circle a number on each line below to show how much responsibility you think each caregiver has when preparing powdered formula feeds. Using a scale of 1 – 10, where 1 is no responsibility at all and 10 is total responsibility, how much responsibility do you think.....

<table>
<thead>
<tr>
<th>CART - Total</th>
<th>No responsibility</th>
<th>Total responsibility</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing staff have for the safety of their baby’s feeds</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents have for the safety of the feeds of babies in their care</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital staff have for the safety of the feeds of babies in their care</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Possible responses:**
- 1: No responsibility at all
- 2: Very low responsibility
- 3: Low responsibility
- 4: Medium low responsibility
- 5: Medium responsibility
- 6: Medium high responsibility
- 7: High responsibility
- 8: Very high responsibility
- 9: Excellent responsibility
- 10: Total responsibility
SECTION 5: PREPARATION PRACTICES

Please indicate (✓) how important you think each of the actions listed below are, when preparing bottles or preparing or storing made up powdered formula milk feeds.

<table>
<thead>
<tr>
<th>Very Important</th>
<th>Fairly Important</th>
<th>Neither</th>
<th>Not Important</th>
<th>Not at all Important</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
- Clean the preparation area every time a bottle of powdered formula milk feed is prepared
- Wash and dry hands every time a bottle of powdered formula milk feed is prepared
- Wash feeding bottles and components with detergent and hot water before sterilising.
- Rinse washed feeding bottles and components with running water before sterilising.
- Sterilise feeding bottles and components before use.
- Use boiled water (fresh from the tap before boiling) to make up powdered infant formula
- Ensure the temperature of boiled water has cooled, but is higher than 70°C when mixed with the milk powder.
- Mix milk powder with boiled water that has cooled for less than 30 minutes.
- Feed the made-up powdered formula immediately after preparation (once at a suitable temperature).
- Prepare (i.e. add powder and water together) one feed at a time.

SECTION 6: INFORMATION ABOUT POWDERED INFANT FORMULA

6.1 How often do you receive information, updates and recommendations about powdered infant formula preparation, handling and storage? (✓ one only)
- Every day □
- At least once a week □
- At least once a month □
- Every 6 months □
- Once a year □
- Less than once a year □
- Never □

6.2 Do you pass information, updates and recommendations about powdered infant formula onto your nursery nurses? (✓ one only)
- Always (if ✓ please go to 6.3, if not, go to 6.4) □
- Sometimes (if ✓ please go to 6.3, if not, go to 6.4) □
- Never (if ✓ please go to 6.4) □

6.3 How is information about powdered infant formula passed on / communicated to your nursery nurses? (✓ as many as applicable)
- Verbally – one to one □
- Verbally – in a group meeting □
- Original information source displayed on a notice board □
- Information is summarised and displayed on a notice board □
- Each nursery nurse is given written information to read & as a reference □
- Other (please state) □

6.4 Have you received training about the microbiological risks (e.g. bacteria) associated with powdered infant formula? (tick one only)
- ....ever? □
- .......in the past 3 years? □

6.5 Have you seen “Guidance for Healthcare Professionals about powdered infant formula preparation, storage and feeding from the UK Food Standards Agency (FSA)? (tick one only)
- No □
- Yes □
- Don’t know □

6.6 Have you seen information about powdered infant formula preparation and storage from the World Health Organisation (WHO)? (tick one only)
- No □
- Yes □
- Don’t know □

6.7 Have you ever communicated with formula manufacturer reps for advice about powdered infant formula? (tick one only)
- If ‘Yes’, proceed to question 6.8. If ‘No’ or ‘Don’t know’, proceed to 6.9
- Yes □
- Don’t know □

6.8 Did the formula rep(s) provide any of the following: (tick as many as applicable)
- Useful information about the effect of consumption of powdered formula upon infants digestive system □
- Promote any of their products to you □
- Provide information about the microbiological safety of powdered formula (bacteria / germs) □
- Encourage you to promote any of their products □
- Give you up-to-date information about powdered infant formula preparation and storage guidelines □
- Other (please state) □

6.9 Are you aware of the change of powdered infant formula preparation, handling and storage recommendations in recent years? (✓ one only)
- Yes □
- No □
- Don’t know □

6.10 Following are a list of organisations and professionals that can provide you with information about safe preparation, handling and storage of powdered infant formula.
- The Food Standards Agency
- Welsh Assembly
- Powdered formula manufacturers
- UNICEF (Baby Friendly)
- Health Visitors
- GP
- NHS
- The National Childcare Trust (NCT)
- The supermarkets
- Baby clinics / other baby groups
- Midwives
- National Day Nurseries Association

Please rank the 3 organisations / professionals who you think provide the MOST CREDIBLE information:
1st... 2nd... 3rd...

Please rank the 3 organisations / professionals who you would MOST LIKE TO GET INFORMATION FROM for the nursery about powdered infant formula preparation, handling and storage:
1st... 2nd... 3rd...

Thank you for completing this questionnaire
2nd Mailing reminder letter

ADDRESS

Xx xxxx, 2009

Dear .................,


Questionnaires to determine attitudes, practices and information sources of Day Nursery Managers and Day Nursery Nurses in the UK related to preparation and storage of powdered infant formula milk were recently sent to you from the Food Research and Consultancy Unit, UWIC in Cardiff. Currently, we have not received a response from you and it is important that we obtain as many responses to the survey as possible.

In case the original questionnaires have been mislaid, I have enclosed duplicate copies of the questionnaires for you to complete. I would be extremely grateful if you could return the completed survey in the enclosed prepaid envelope before xx xxxx, 2009. If you have already completed and returned the original questionnaires then please ignore this letter.

Your co-operation in this study will be very beneficial for informed powdered infant formula strategy development for day nurseries in the future. Please be assured that all questionnaire responses will be treated with anonymity and all data collected during the course of the study will be treated with complete confidentiality. If you have any queries regarding the survey, please do not hesitate to contact me on Cardiff (029) 20416452.

Yours Sincerely,

Elizabeth Redmond
Dr. Elizabeth Redmond
Researcher

Email: eredmond@uwic.ac.uk
3rd Mailing reminder letter

ADDRESS

Xx xxxx, 2009

Dear ...............,

FINAL REMINDER


During the past 6 weeks, 2 letters with questionnaires (with prepaid return envelopes) for the Nursery Manager and Day Nursery Nurses who care for young infants fed using powdered infant formula have been sent to your Nursery from the Food Research and Consultancy Unit, UWIC in Cardiff. The purpose of this survey has been to explore attitudes, practices and information sources of Day Nursery Managers and Day Nursery Nurses in the UK related to preparation and storage of powdered infant formula milk.

The nationwide response to this survey has been good and findings will provide a valuable contribution to the development of guidelines that address powdered infant formula feeding and use in Day Nurseries the UK. However, for an accurate representation of nurseries from all geographical regions of the UK, it is essential that as many Nurseries in all parts of the country to have responded. Currently, we have not received your completed questionnaire(s) and this is your final opportunity to ensure that your day Nursery is represented in this important Food Standards Agency study. If you did not receive the original surveys, or they have since been mislaid, please do not hesitate to contact me and I will post copies of the questionnaire to you immediately (with prepaid return envelopes).

Your co-operation in this study will be very beneficial in the development of future powdered infant formula strategies. Please be assured that all data collected during the course of the study will be anonymous and treated with complete confidentiality. If you have any queries regarding the survey, please do not hesitate to contact me on Cardiff (029) 20416452 or via email (see below).

Yours Sincerely,

Elizabeth Redmond
Dr. Elizabeth Redmond
Research Fellow

Email: eredmond@uwic.ac.uk