Author's response to reviews

Title: Japanese trends in breastfeeding rate in baby-friendly hospitals between 2007 and 2010: A retrospective hospital-based surveillance study

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Author's response to reviews: see over
May 21, 2013

Emily Crow
Executive Editor, *BMC Pregnancy and Childbirth*

Dear Ms. Crow and reviewers:


This is the second time we have submitted the manuscript.

Thank you for your detailed suggestions. We believe that we have correctly addressed your advice and revised our manuscripts accordingly. We attach the list of replies to reviewers. Revised manuscript includes 1 figure and 5 tables. Revised parts are underlined.

We look forward to your response at your earliest convenience.

Sincerely,

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Please note that all uses of the term "coverage" was replaced to "rate" following the minor compulsory revision by reviewer 2 including the title.

We also added a section on Japan's own perinatal care system including post natal care for reference so as for world readers to easily understand and imagine Japan's system.

In addition, we added limitation section between discussion section and conclusion section.

Reviewer's report

Title: Japanese trends in breastfeeding coverage in baby-friendly hospitals between 2007 and 2010: a retrospective hospital based surveillance study
Version: 7
Date: 10 December 2012
Reviewer: Eivind Ystrom
Reviewer's report:

Major concerns
1. The authors conclude that implementing BFH activities can increase breastfeeding coverage in Japan. The results presented do not support this conclusion.
   We have changed this conclusion at the end of introduction section as follows:
   “We conclude that wider implementation of BFH activities to delivery facilities would be a useful strategy for achieving the national target of 60% breastfeeding rate at one month of age.”

2. It is not clear how the 61 BFH hospitals were sampled. It appears that participation was not random, something which very likely would create sampling bias. Furthermore, if the most motivated hospitals were included into the study, there is a risk for reverse confounding. That is, motivated hospitals participate, but their breastfeeding coverage would go up regardless of participation.

   We have added the inclusion criteria as follows in method section.
   “We enrolled all Japanese BFHs that were recognized as compliant to the Baby Friendly Hospital Initiative standards [13] and registered with the JBA.”

For supplementary objective, we added the role of JBA with reference in the 2nd paragraph of Introduction as follows:
“Since then, the Japan Breastfeeding Association (JBA) has received a mandate from WHO/UNICEF to certify BFHs in Japan [5]. In Japan, BFHs can only be certified by the JBA.”

We also added the reason for exclusion of babies from the Table 1 criteria at the end of 1st paragraph of methods section as follows

“We excluded the babies from the Table 1 criteria, because problems including preterm, low birth weight, cleft palate are likely to be sent to a hospital with a Neonatal Intensive Care Unit or Neonatal Care Unit, which would not be registered as a BFH.”

In addition, we have added our limitation arguments in the 3rd paragraph of limitation section as follows:

“Second, we should consider the reliability of national data as a reference. While BFH data is retrieved yearly as an enumeration survey, the most recent national data was acquired in 2005 as a sampling survey and only its estimation was reported. In addition, in the national survey, the questionnaire simply asks whether mothers breastfed, provided formula milk or whether they were mixed feeding. This three-way classification (breast feeding, formula milk feeding and mixed feeding) corresponds to the classifications of the MCH handbook. Furthermore, national data may include babies that are excluded from the BFH data. The application of this kind of data as a reference is not strictly appropriate. We have adopted this data for comparison due to a lack of appropriate national data, even from research papers. The data was adopted on the basis of strategies of the "Healthy and Happy Family 2001" survey. However, our BFH data were gathered by enumeration surveillance. Since BFHs are considered to be motivated to promote breastfeeding, the results could have a reverse confounding effect. Notwithstanding these limitations, we believe that the data that were utilized are suitable for drawing our conclusions as our BFH data are sufficiently reliable.”

3. The authors present almost no details on the data on nationwide coverage of breastfeeding in Japan. Since this is in effect the control group, the basis for these data should be described in detail.

We have added an explanation of the nationwide data to Introduction:

“…which is a sampling survey conducted by MHLW every 10 years. The procedure of the survey is as follows: 3000 households with infants are randomly sampled by cluster sampling, surveyors visit each of these households and leave self-administered questionnaires which are completed by mothers by checking the information recorded in the MCH handbook. The surveys are collected later. The data collected are then merged and analyzed by the MHLW. The most recent survey was conducted in 2005 and it has been reported that more than half of pregnant women wish to give breast milk to their babies [11].”
4. Moreover, children which are a part of the control group (i.e. the whole nation) should not be excluded from the data (table 1). If the two groups do not sample children in the same way, they cannot be compared. The BFH hospitals should be compared with the normal population using relative risks with 95% confidence intervals. This can easily be done in Excel or in STATA using “tables for epidemiologists”.

We asked the MHLW, but 95% CI was not available because the data is not disclosed for research purposes. However, we have added 95% confidence interval for breastfeeding rate in Table 2.

5. If participation in BFH has an effect on breastfeeding coverage there should be an increase year by year after participation. The authors should present breastfeeding coverage by year of participation in BFH.

We made figure for this trend analysis following your advice. The result is explained in the 4th paragraph of Results as follows:

“When the trends of data were subcategorized data by year of registration (34 BFHs registered before 2005, 3 BFHs registered in 2006, 5 in 2007, 10 in 2008, 7 in 2009 and 3 in 2010), the breastfeeding rate at discharge was a little higher than that during hospital stay in each year. For each of the years, a slight decrease in the breastfeeding rate was observed in the period from discharge to the age of one month (Table 5, Fig.1)”

In addition, we added text in the 4th paragraph of Discussion.

“Considering the data trend, BFH registration may not always motivate BFHs to maintain a high breastfeeding rate because the breastfeeding rates in each group showed a mild decrease after registration. Thus, the promotion of greater adherence to Baby Friendly Hospital Initiative guidelines is something that should be considered.”

Level of interest:
An article whose findings are important to those with closely related research interests
Quality of written English:
Acceptable
Statistical review:
Yes, and I have assessed the statistics in my report.
Declaration of competing interests:
I declare that I have no competing interests
Major Compulsory Revisions

1. In the paper there are no breastfeeding definitions consistent with the WHO definitions. Lack of clear and consistent definitions renders data collected on breastfeeding rates difficult to interpret. Precise and consistent definitions of breastfeeding are essential for breastfeeding research (to ensure appropriate conclusions are reached by policy makers about breastfeeding practice) and for breastfeeding monitoring (to ensure data is meaningful and useful for informing program implementation).

The WHO set of definitions includes ‘breastmilk’, whether expressed or from a wet nurse, and classifies breastfeeding in the following categories:
- Exclusive breastfeeding (EBF)
- Predominant breastfeeding (PBF)
- Complementary breastfeeding (CBF)
- Non-breastfeeding (NBF).

Exclusive and predominant breastfeeding together constitute full breastfeeding, see Cattaneo A, Davanzo R & Ronfani L 2000:89 (adapted from WHO 1991)

These data are collected throughout the hospital stay. The WHO definitions are conceptually appropriate, particularly in Baby Friendly Hospitals (BFHs). Practices relating to early breastfeeding or breastfeeding initiation within hospital or other health facilities are also a substantial part of the infant feeding policies as the Global Strategy for Infant and Young Child Feeding - World Health Organization, UNICEF, 2002.

We added the following text to the 2nd paragraph of Methods:

“In the synthesis stage of questionnaire, we followed the definition of "full" breastfeeding as defined by WHO/UNICEF [14, 15], which includes both exclusive breastfeeding and predominant breastfeeding. The number of breastfed children during hospital stay includes the number of fully breastfed children. The number of breastfed children at discharge includes the number of fully breastfed children within 24 hours before discharge. The number of breastfed children at the age of 1 month was determined by interviews carried out by staff at the respective BFHs, who asked mothers whether or not they were breastfeeding.”
2. **Methods**

   You should describe more in details the questionnaire and the type of statistical methods used to analyze data.

   We added the explanation to the 1st and 2nd paragraphs of Methods

   “A structured questionnaire, which was organized by the JBA, was sent to each registered hospital and information about healthy newborns who stayed with their mothers during the delivery period (defined in Table 1), was collected. We excluded the babies from the Table 1 criteria, because problems including preterm, low birth weight, cleft palate are likely to be sent to a hospital with a Neonatal Intensive Care Unit or Neonatal Care Unit, which would not be registered as a BFH.”

   “An annual reply to the above mentioned questionnaire is mandated for each BFH in Japan. Questionnaires are sent to BFHs in January and are required to be returned by April. The contents of questionnaire are as follows: mode of delivery, length of stay and application of labor induction, epidural anesthesia and episiotomy, and the mode of nutrition including supplementation (formula milk or glucose water) during the hospital stay, at discharge and at one month of age. The data are collected without unique identifiers and the cumulative numbers of each information item are summarized.”

   We clarified the software used at the end of method section as follows:

   “The data were processed and analyzed using Microsoft Excel 2007 (Microsoft, Redmond, WA).”

3. **It is important to know if there is a protocol for the supplementation (formula milk or glucose water) during the hospital stay according the WHO indications of Step 6** (Give newborn infants no food or drink other than breast milk unless medically indicated).

   We added this explanation in the 3rd paragraph of discussion section as follows:

   “The standard of application of glucose water is stipulated by the JBA committee of supplementation [20], and its recommendations differ from those of the American Academy of pediatrics [21]. In practice, its application varies among BFHs based on the medical decisions of doctors/midwives in charge. When doctors or nurses find symptoms including a more than 10% body weight decrease from birth weight, development of fever without infection, or insufficient breast milk secretion, supplementation is generally considered.”

4. **Results**

   The authors didn't describe the potential correlation between breastfeeding categories and delivery variables (type of delivery, length of stay and application of
labor induction, epidural anesthesia and episiotomy) in BFHs (and other Japanese maternities if known).

We have summarized the contents of delivery in Table.4 and added the text in the 4th paragraph of Result as follows:

“The breakdown of mode of delivery is shown in Table 4. An increase of cesarean section deliveries was observed while labor induction seen to decrease.”

5. Breastfeeding coverage during admission: it is not clear the meaning of “during admission”.

Thank you for your advice. We have replaced it to “during the hospital stay”.

6. The authors need to explain the increase of the use of glucose water and formula during the observation period (2007-2010) and the decrease of breastfeeding rates at one month (e.g. breastfeeding problems, lack of competent support in the community).

We have added our speculation as follows in the 3rd paragraph of Discussion:

“The increase in the number of cases of supplementation with glucose water and formula milk may have a relationship with the increase in the number of cesarean section deliveries. However, it is not possible to confirm this without analyzing individual data, which were not collected in our surveillance. Detailed analysis using individual data and including logistic regression analysis to identify contributing factors is a topic for further research. For the decrease in breastfeeding rate at one month, we speculate that one of the main contributing factors is mothers' feeling discontent at their level of breast milk secretion [23, 24], as well as child rearing stress and the flood of formula milk information. Here again, detailed analysis to identify contributing factors would be an interesting topic for future study.”

Discretionary Revisions
7. Introduction - last paragraph
   I think it is better to omit the following sentence: “We conclude that implementing BFH activities at non-BFH delivery facilities can play an important role in increasing breastfeeding coverage in Japan's perinatal service system”.

   We have changed this sentence at the end of Introduction as follows:

   “We conclude that wider implementation of BFH activities to delivery facilities would be a useful strategy for achieving the national target of 60% breastfeeding rate at one month of age.”

8. Discussion - Second paragraph
It is difficult to understand your conclusion: BFHs and other Japanese maternities have the same length stay! It is probable the difference between the facilities should based upon the difference in knowledge and competencies of the health workers about breastfeeding practices.

We have added a short explanation at the end of the 2nd paragraph of Discussion as follows:

“This allowance also makes all the obstetric hospitals perform congenital metabolic disorder screening test (4-5 days after delivery) before discharge, thus freeing hospitals/clinics of the burden of babies returning to receive the test.”

9. Discussion - Third paragraph
Reference n. 12, you should consider to citeate Breastfeeding and the use of human milk Pediatrics, 2012

We have added the reference that you recommended in the Ref No. 21.

10. Discussion - Last paragraph
You should implement a tool to verify the adherence of BHIs to Ten steps as a self-assessment questionnaire.

Thank you for your thorough and helpful advice. We would like to consider future implementation of verification of adherence of BFHIs.

Minor Essential Revisions
11. The term "coverage" should be replaced by "rate", the ten-step guidelines by "the Ten Steps to Successful Breastfeeding" and then "Ten Steps".

We have replaced almost all of the term “coverage” to the term “rate”

Level of interest:
An article whose findings are important to those with closely related research interests
Quality of written English:
Needs some language corrections before being published
Statistical review:
Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:
I declare that I have no competing interests.