



An International Practice Analysis of the Lactation Consultant Executive Summary

January, 2015

The purpose of this study was to identify the responsibilities of lactation consultants (LCs) as the first step in the ongoing development of a job-related certification examination. The International Board of Lactation Consultant Examiners® (IBLCE®) requested the services of Applied Measurement Professionals, Inc. (AMP) to complete a study that would provide content-related evidence in support of specifications used for the International Board Certified Lactation Consultant® (IBCLC®) certification examination.

The IBLCE appointed an International Practice Analysis Task Force (PATF) to provide oversight for the activities necessary to identify responsibilities of lactation consultants and develop Examination Specifications. The PATF consisted of current and previous IBLCE Board members, all of whom were subject matter experts. Janine Stockdale, PhD, PG CHSE, BSc. Hons, RM, RN, from the United Kingdom, served as the chair of the PATF, providing leadership for the development of the survey used in this study, as well as making contributions to this report. The PATF was reflective of the lactation consultant profession in all relevant respects, for example: geographic, professional area, level of responsibility, educational background, gender, and work setting.

Methodology

To ensure breadth of input from subject matter experts representing areas of LC practice from throughout the world, the PATF determined that Advisory Committees would be selected to participate in focus group discussions. In preparation for the focus groups, the PATF began the process of identifying content by mapping a preliminary list of the core skills and practices, such as education and evaluation, which were thought to capture the role. Breastfeeding textbooks were used to guide this initial step in the process. On completion of the list, the PATF commenced a process of collapsing the topics into a more manageable listing, which was then further synthesized in order to identify the main areas of knowledge and specific lactation skills and practices. With this background, it was decided that four subject matter focus groups would inform the content for a valid, practice-based survey:

- Care of the breastfeeding mother expert group
- Care of the term breastfeeding baby expert group
- Care of the pre-term breastfeeding baby expert group
- Breastfeeding education, audit and strategic planning expert group

To ensure that a representative group of experts was available for each of the identified subject focus groups, it was agreed by the PATF that the following criteria should act as guidance in the identification and selection of a representative SME group:

- Currently certified and practicing lactation consultants
- Diversity in level of practitioner experience (entry level to extensive experience)
- International representation from within IBLCE regions (Americas & Israel; Asia-Pacific & Africa; Europe, the Middle East & North Africa)
- Commitment to participate

A job description that outlined the purpose and responsibilities of volunteers who would serve as a Subject Matter Expert (SME), was developed. In collaboration with the International Lactation Consultant Association® (ILCA®), the job description and a request for expressions of interest were distributed via relevant databases using email to practicing lactation consultants, and interested practitioners returned their expressions of interest to IBLCE. Potential participants were also asked to outline their current area of expertise in relation to one of the four agreed-upon SME sub-groups. The PATF desired to include at least six participants per sub-group, plus the group facilitator.

Expressions of interest were received from lactation consultants from all three regions of IBLCE (Americas & Israel; Asia-Pacific & Africa; Europe, the Middle East & North Africa). To facilitate the selection process, the PATF followed a criterion-based selection process in order to identify the optimal subject matter groupings. Criteria included ensuring international representation, as well as adequate representation from regions within the Americas. Following the initial selection process, the guidance criteria were revisited and the selected participants matched against it, and it was noted that new lactation consultants may have been under-represented. To address this limitation, careful consideration was given to the reallocation of expert participants. As a result, SMEs initially selected for the education, audit and strategic planning group were re-allocated, into three groups to address care of the breastfeeding mother, term baby, and pre-term baby. A series of online meetings began in May 2013, facilitated by an expert lactation consultant with international leadership experience within the profession. Each group was asked to discuss content related to education, audit and future planning in addition to their primary focus on either care of the breastfeeding mother, term baby, and pre-term baby.

To facilitate the SME groups, the following resources were provided to the group facilitators:

1. **The outline of anticipated practice content** that was drafted using recognized lactation specific textbooks by the PATF.
2. **An introductory PowerPoint presentation** developed by the PATF to provide participants with the aim, objectives, process and timeline of the project.
3. **The target audience statement** developed by the PATF and the IBLCE Board:

An IBCLC is a professional member of the healthcare team who has earned and maintains the credential which identifies knowledge and expertise in breastfeeding management and care. An individual who holds the credential has met defined eligibility requirements

(<http://www.iblce.org/upload/downloads/CandidateInformationGuide.pdf>) and passed a rigorous, psychometrically sound exam. Since 1985, the IBCLC credential has provided evidence that as a practitioner, the IBCLC has the required knowledge to:

- Advocate and educate about breastfeeding as a global public health imperative
- Provide leadership for society, from communities to policymakers
- Promote environments that support breastfeeding
- Facilitate an optimal breastfeeding experience for families
- Identify and manage high acuity lactation challenges

An IBCLC works independently and in collaboration to empower mothers, children and families to meet their breastfeeding goals.

March 2013

4. ***A preliminary list of identified major stakeholder groups.***
5. ***An example of survey components.***

In addition, an emphasis was placed on the development of the content that incorporated *tasks, competencies, knowledge and skills*. The information shown in *Table 1* was communicated to the facilitators prior to group discussions.

Table 1. Guidelines for focus group discussions

| | |
|---|---|
| <i>Focus on Content in relation to sub-group classification:</i> | Discuss the target audience statement and the 4 preliminary survey domains |
| | Describe the profession in its current state (including trends within the discipline) |
| | Focus on the work to be accomplished by an LC – competencies, knowledge and statements of function (including those new certificants should possess) |
| <i>Role as Facilitator</i> | Aim for group consensus and record group discussions accurately (a scribe will be provided) |
| | Set ground rules (equality of opportunity), expectation to participate /comment, expression of agreement/disagreement, and suggest compromise if required |
| | When necessary, provide meaningful prompts |
| | <i>Paramount importance</i> – evaluate the group's discussion in relation to the key factors discussed |

The process for synthesizing the content followed the process outlined in *Figure 1*.

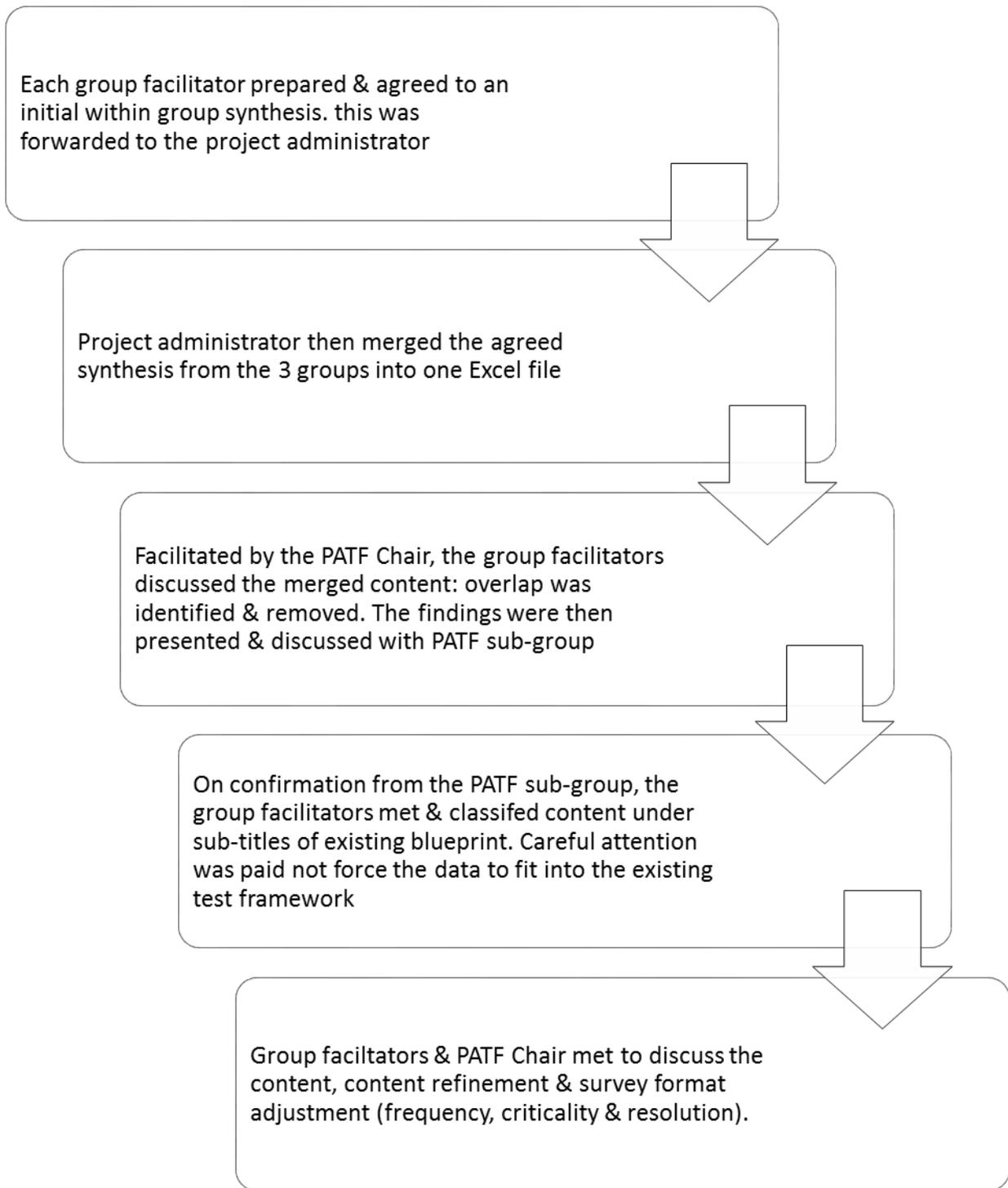


Figure 1. Focus Group Facilitation Process

Based on the results of the focus group discussions, a draft survey was designed, including clinical presentation topics, clinical skill topics, and relevant demographic variables of interest. A group of lactation consultants (n=16) that represented different geographical and practice environments reviewed the survey and provided feedback on the clarity of the instructions, clarity of the questions, practice-based omissions, and time to complete the survey. Feedback was collated and reviewed by the PATF and the three SME group leaders. No major adaptations were required, however, minor adaptations such as increasing the clarity of lactation terms used was carried out. The revised survey was then forwarded for review by AMP psychometric staff. Several suggestions were reviewed by the PATF, and the survey was modified and again independently reviewed by the psychometrics team, members of the PATF, and the SME leaders. Upon final approval of survey content, the survey was reviewed by the Board of Directors and translated into the distribution languages (German, Korean, French, Japanese, and Dutch). The translation process consisted of forward and backward translation by SMEs who were familiar with the examination content.

The final practice analysis survey consisted of three parts:

- 1: knowledge areas
- 2: specific clinical skills in providing breastfeeding management and care
- 3: demographic background information

Participants were informed that their responses were confidential and would be used only for the research purposes outlined. It was anticipated that participants would complete the survey in approximately 20 to 30 minutes. Each knowledge area was measured using two rating scales:

1. Frequency: How often do you typically assess, educate about or treat these clinical issues?
 - (1) Do not see
 - (2) Less than once per month
 - (3) Less than weekly but at least once per month
 - (4) Less than daily but at least once per week
 - (5) Daily

2. Importance: To what extent does this clinical presentation impact breastfeeding?
 - (1) Minimally important
 - (2) Important
 - (3) Highly important

Each clinical skill was measured using the following rating scale:

Please rate the following clinical skills with regard to the frequency with which you utilize them.

- (1) Rarely, if at all
- (2) Sometimes
- (3) Usually, if not always

Demographic Results

The survey was accessible via the Internet. *Table 2* shows the number of invitations sent by survey language and if certified by IBLCE. Of the 28,079 e-mail invitations distributed, a total of 7,217 respondents accessed the survey, resulting in a raw response rate of 26%. After reducing the sample size for participants who completed less than 75% of the survey, a total of 6,377 responses were considered to be valid responses, shown in the last column of *Table 2*. The corrected response rate was therefore 23%.

Table 2. Number of Invitations Sent and Valid Responses by Survey Language

| Survey Language | Invitations Sent | | | # of Valid Respondents |
|-----------------|------------------|------------|--------|------------------------|
| | IBCLCs | Non-IBCLCs | Total | |
| Dutch | 590 | 40 | 630 | 162 |
| English | 19,070 | 1,974 | 21,044 | 4,706 |
| French | 1,015 | 167 | 1,182 | 422 |
| German | 2,096 | 235 | 2,331 | 680 |
| Japanese | 732 | 172 | 904 | 285 |
| Korean | 1,606 | 382 | 1,988 | 122 |
| Total | 25,109 | 2,970 | 28,079 | 6,377 |

Summaries of the responses to the demographic questions are shown in figures and tables that follow. Based on discussion with the PATF, the demographic data were generally as expected, and judged to be representative of the profession. In addition to ensuring that the respondent group was representative, it was important to evaluate whether responses were received in appropriate numbers from relevant subgroups. The PATF determined that a sufficient response was received from relevant subgroups for subsequent analyses.

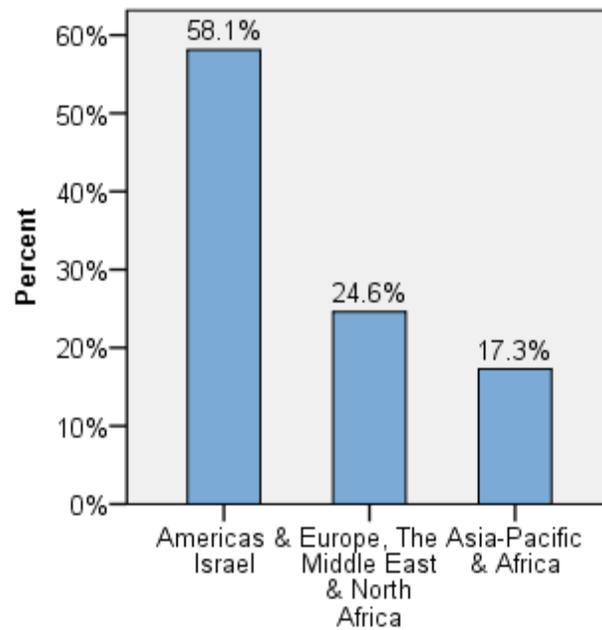


Figure 2. IBLCE Region

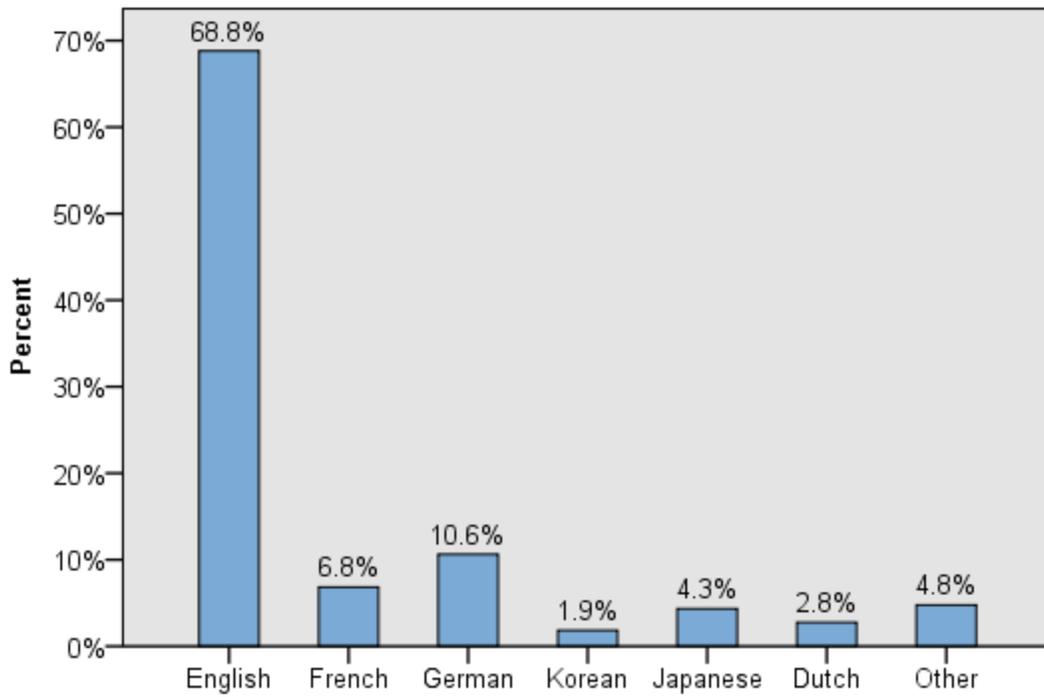


Figure 3. Primary Language

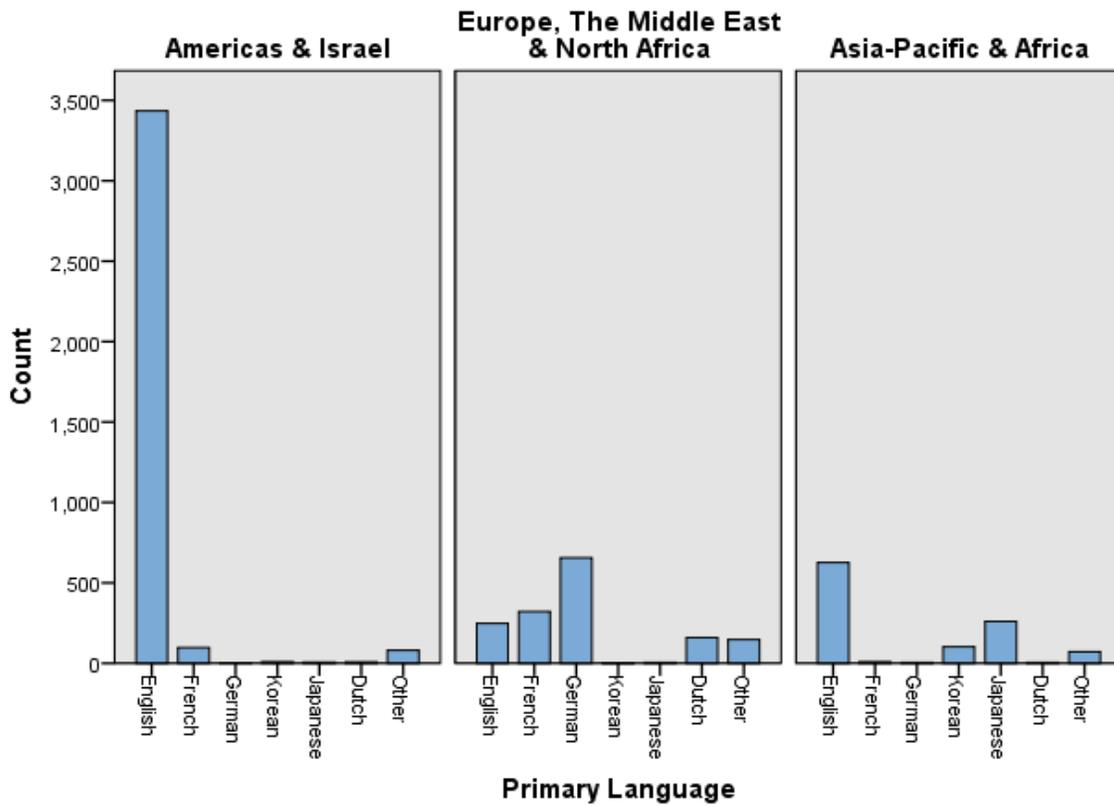


Figure 4. Primary Language by IBLCE Region

Survey respondents were asked how frequently they worked with each of the client age groups, using the following scale:

- (1) Not at all
- (2) Less than once per month
- (3) Less than weekly but at least once per month
- (4) Less than daily but at least once per week
- (5) Daily

Results shown in *Table 3* indicate respondents most frequently (less than daily but at least once per week) worked with clients at 0-14 days of age. The group they worked with least frequently is maternal preconception at less than once per month. *Table 4* shows the percent of client ages respondents worked with. Results show a similar trend as the frequency question responses in *Table 3*.

Table 3. How frequently do you work with the following client groups?

| | Mean |
|--------------------------------------|------|
| Preconception - maternal | 1.7 |
| Prenatal - maternal | 3.0 |
| Labor - maternal / birth - perinatal | 3.1 |
| Prematurity | 3.4 |
| 0 - 2 days | 4.1 |
| 3 - 14 days | 4.3 |
| 15 - 28 days | 3.6 |
| 1 - 3 months | 3.3 |
| 4 - 6 months | 2.8 |
| 7 - 12 months | 2.6 |
| Beyond 12 months | 2.3 |

Table 4. What percent of mothers of infants/babies do you work with at these ages?

| | Mean | SD |
|--------------------------------------|------|-------|
| Preconception - maternal | 4.0 | 18.8 |
| Prenatal - maternal | 18.5 | 26.4 |
| Labor - maternal / birth - perinatal | 27.7 | 38.6 |
| Prematurity | 19.6 | 42.7 |
| 0 - 2 days | 44.7 | 39.0 |
| 3 - 14 days | 38.9 | 128.2 |
| 15 - 28 days | 21.0 | 46.1 |
| 1 - 3 months | 16.9 | 23.5 |
| 4 - 6 months | 11.3 | 19.1 |
| 7 - 12 months | 8.7 | 21.3 |
| Beyond 12 months | 6.8 | 19.5 |

The figures that follow show responses to other demographic questions, first for the overall respondent group, then broken down by IBLCE region.

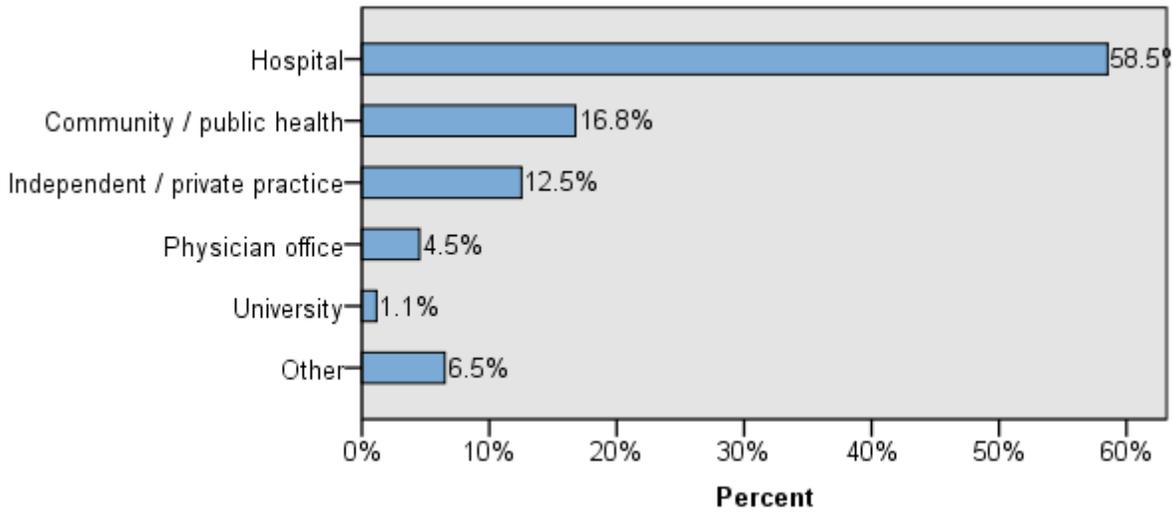


Figure 5. Primary Professional Setting

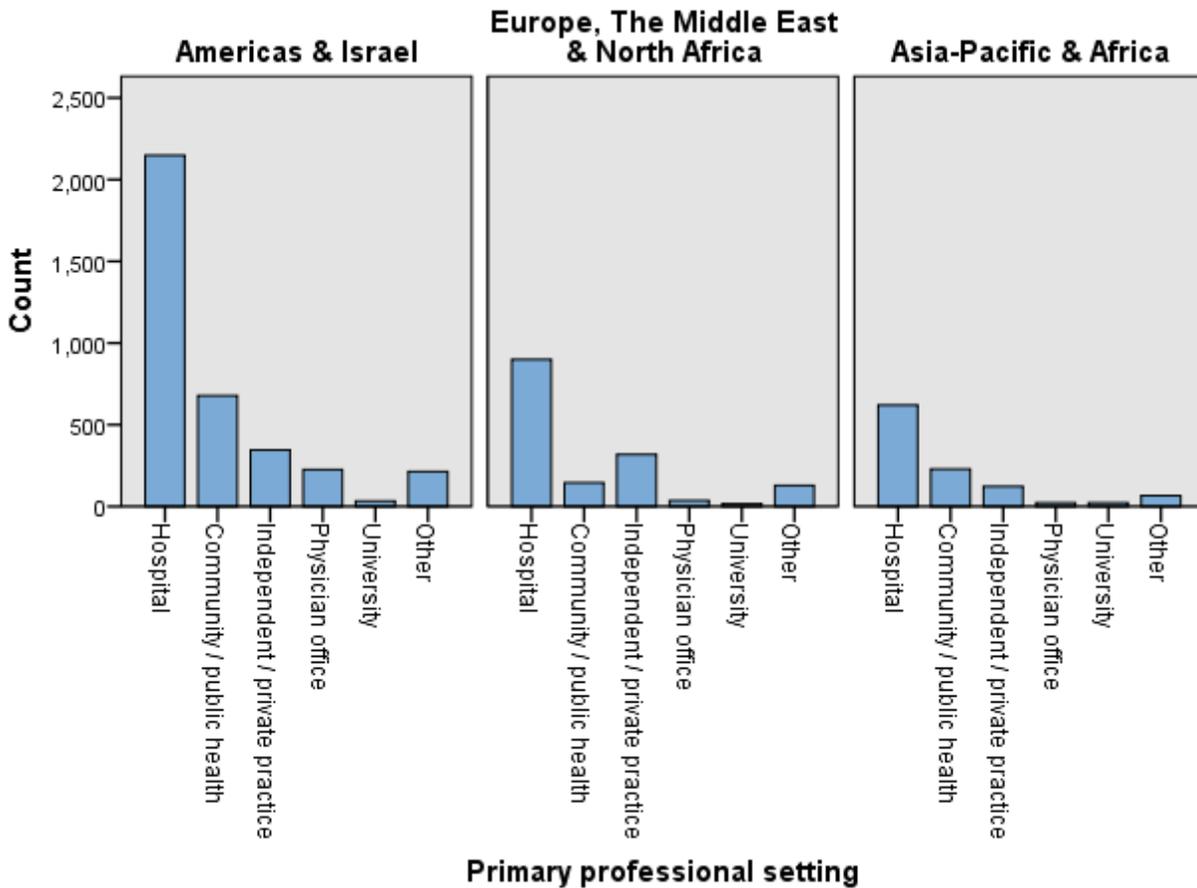


Figure 6. Primary Professional Setting by IBLCE Region

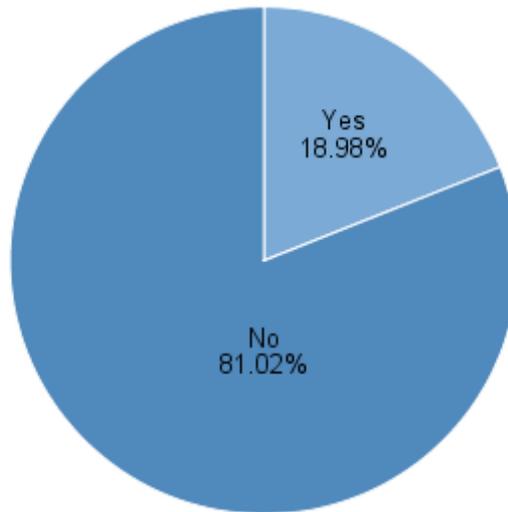


Figure 7. Are you self-employed?

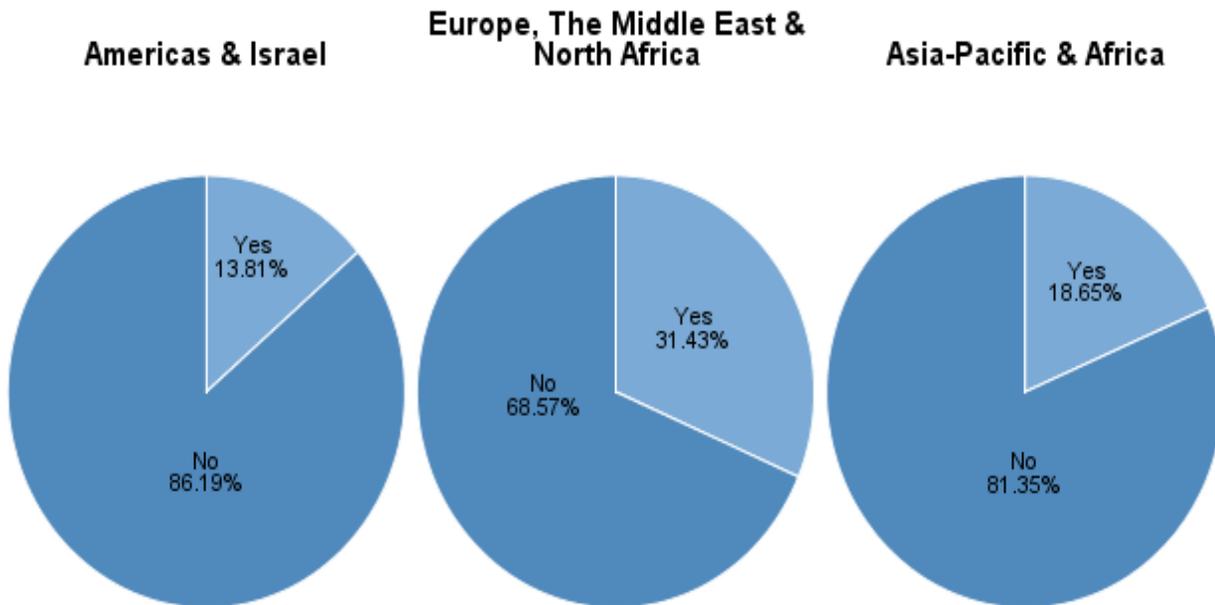


Figure 8. Are you self-employed by IBLCE Region

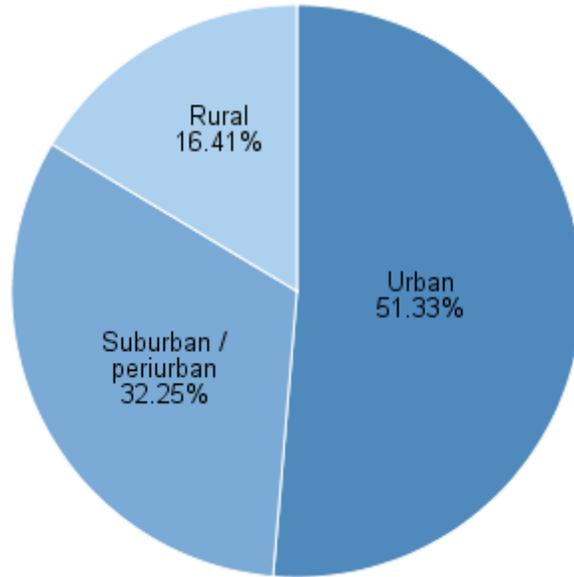


Figure 9. Location of Work

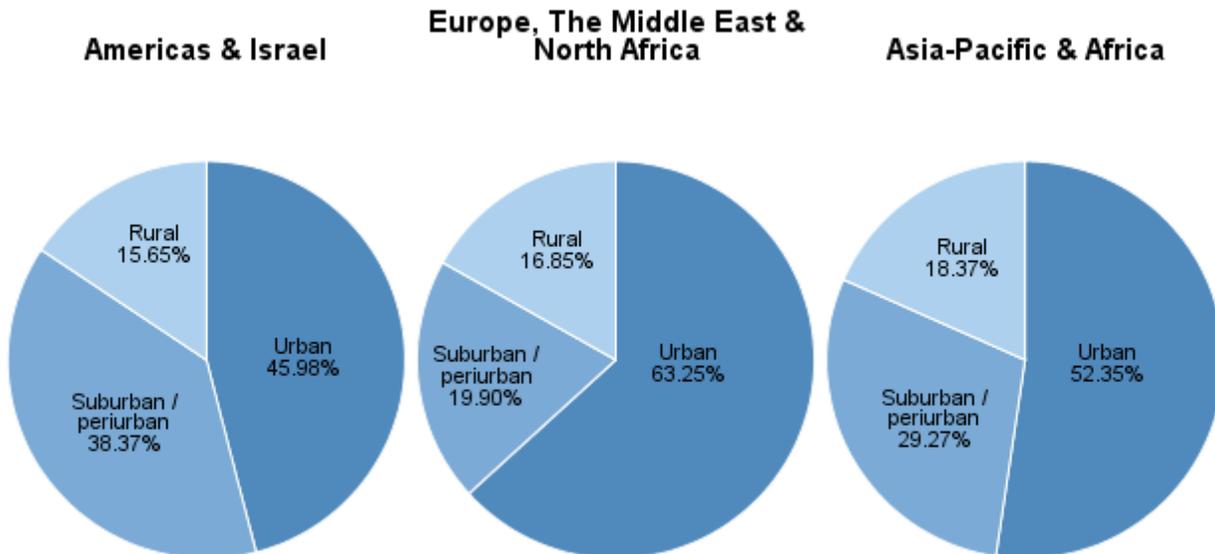


Figure 10. Location of Work by IBLCE Region

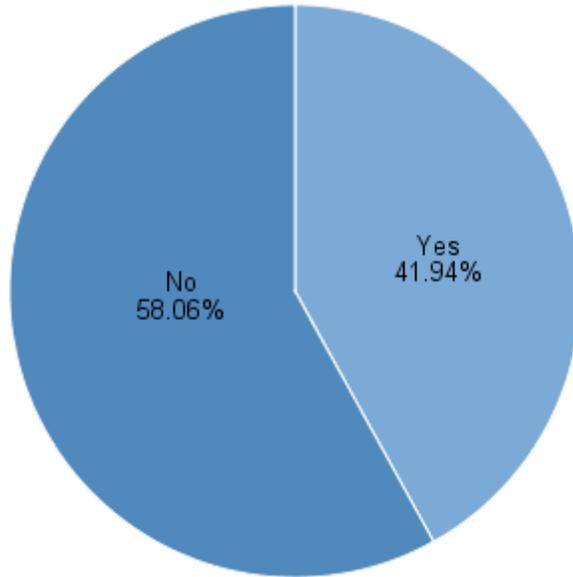


Figure 11. Is IBCLC certification required by your employer?

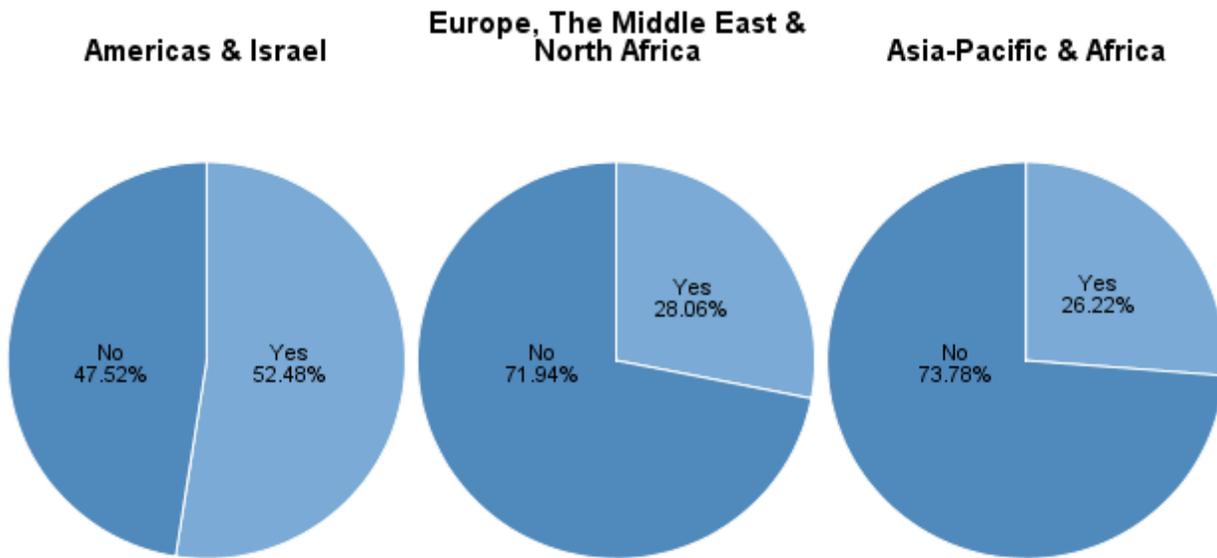


Figure 12. Is IBCLC certification required by your employer by IBLCE Region

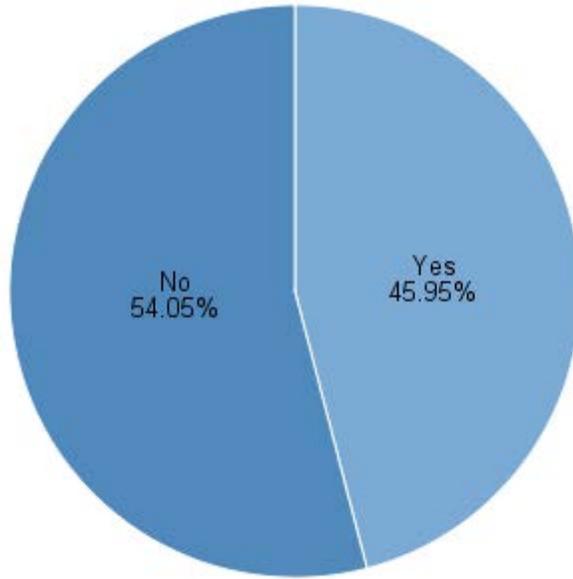


Figure 13. Do you have a mother-to-mother support background?

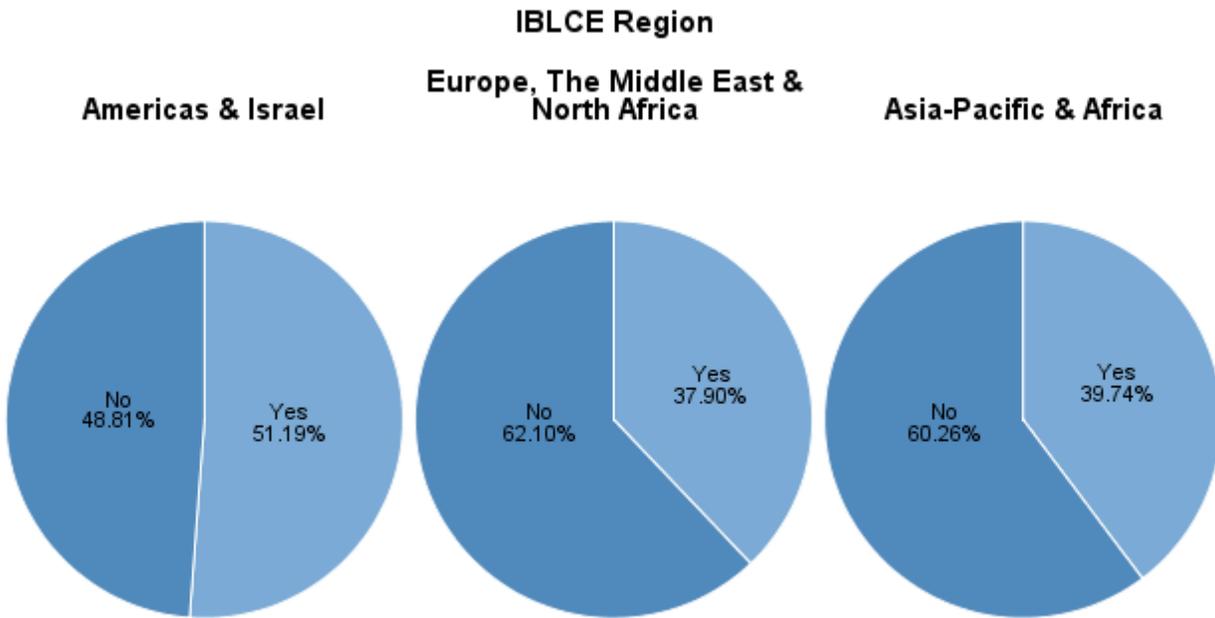


Figure 14. Do you have a mother-to-mother support background by IBLCE Region

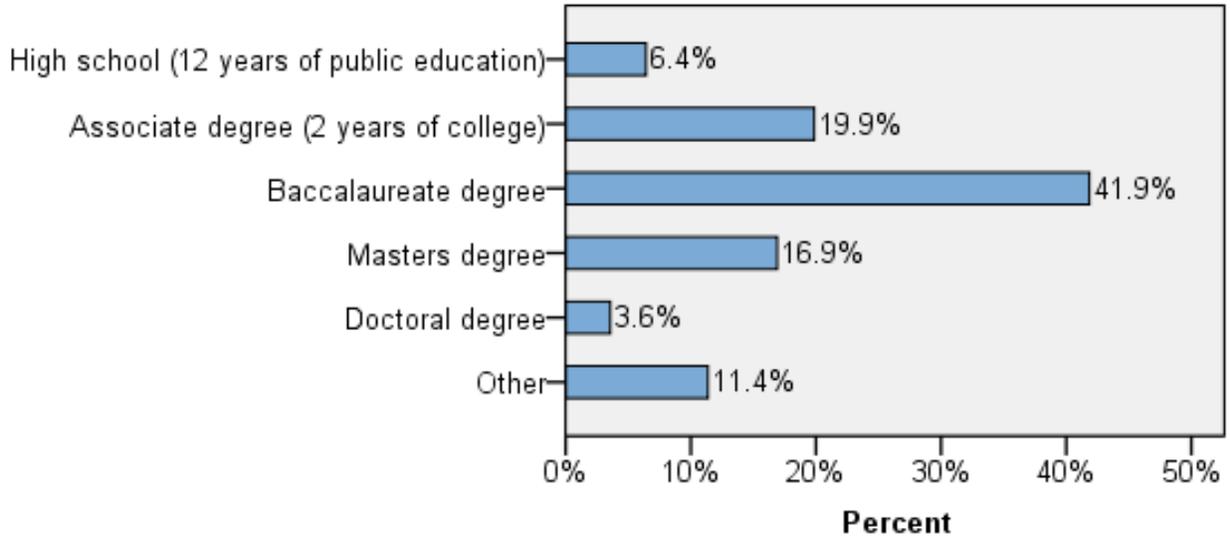


Figure 15. Highest Level of Education (U.S. or equivalent)

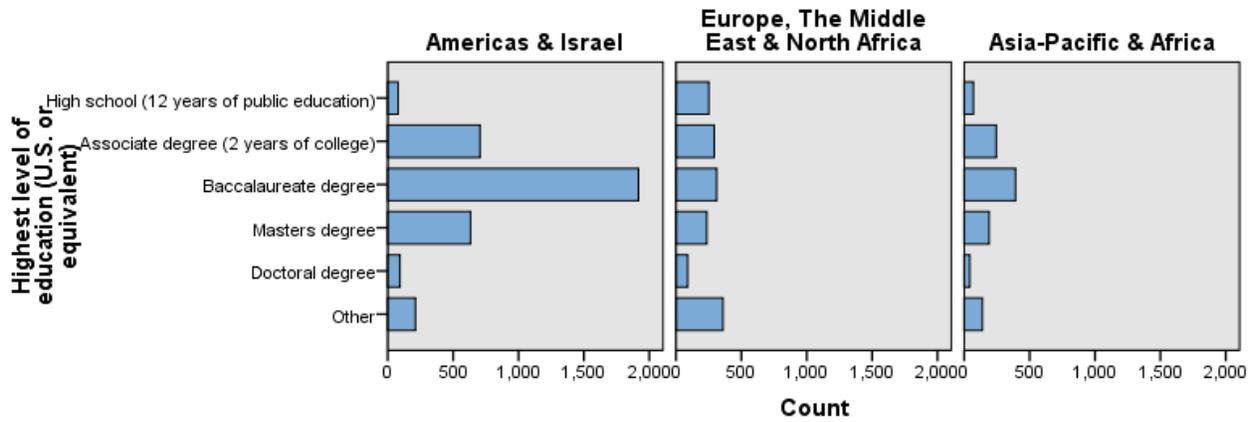


Figure 16. Highest Level of Education (U.S. or equivalent) by IBLCE Region

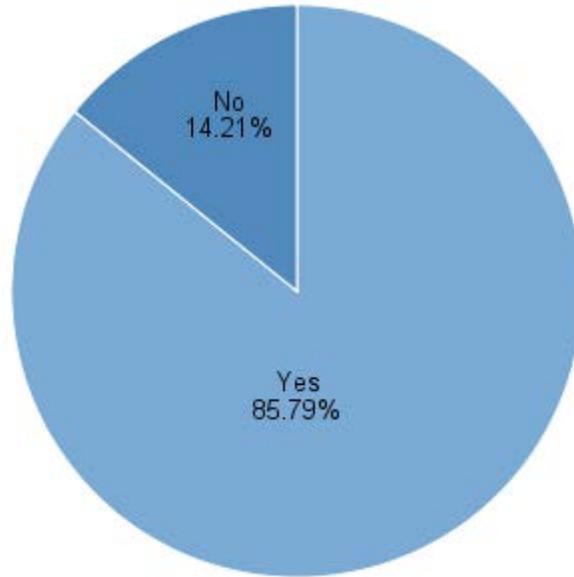


Figure 17. Are you certified by IBLCE?

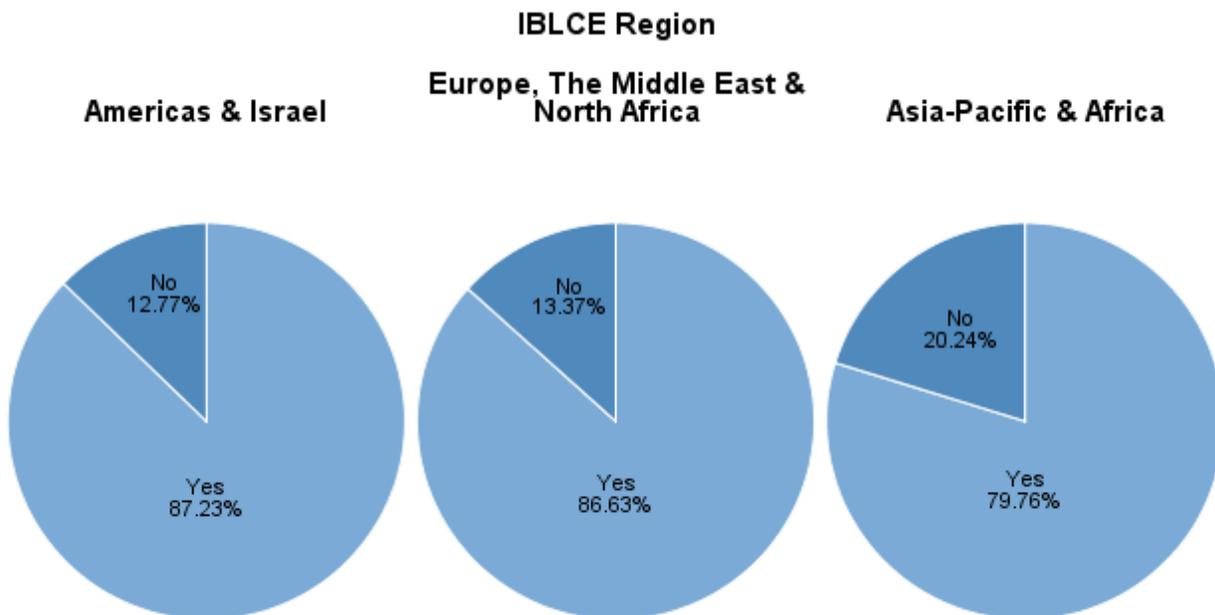


Figure 18. Are you certified by IBLCE by IBLCE Region

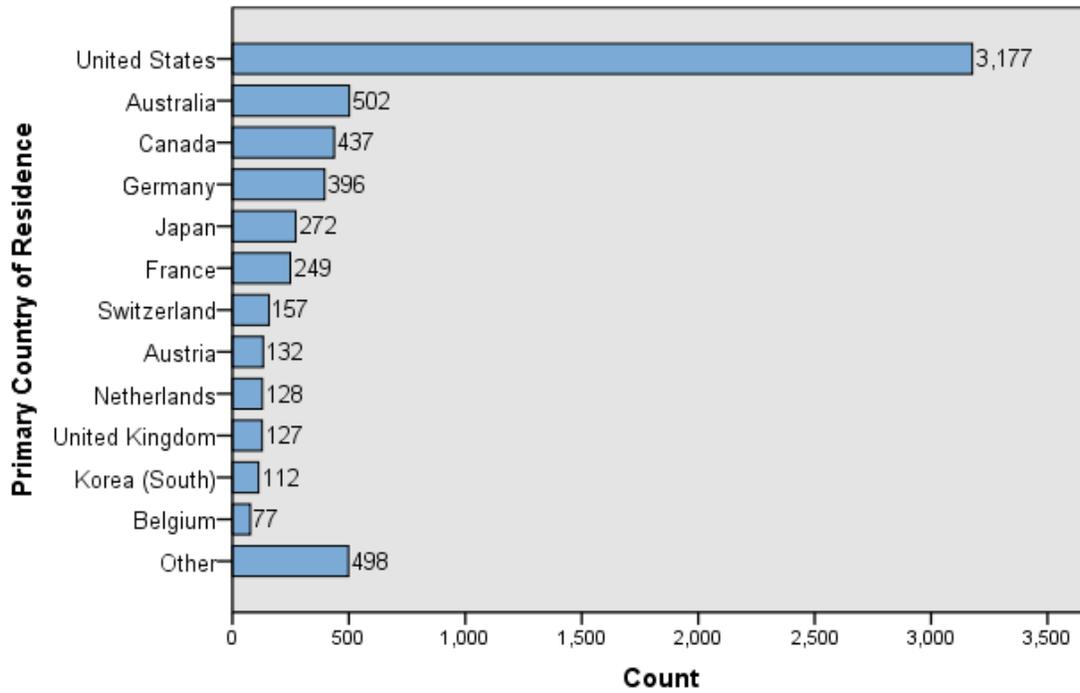


Figure 19. In which country do you practice?

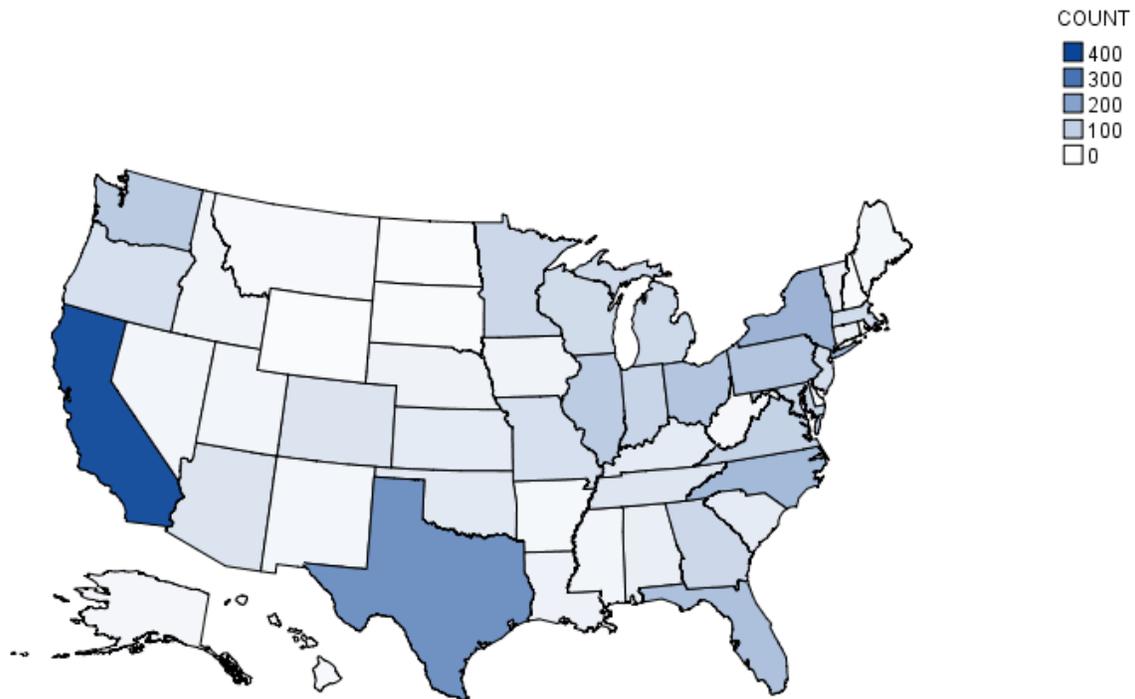


Figure 20. If you live in the United States, please choose your primary state of residence.

Table 5. Other Professional License and/or Registration

| | Frequency | Percent |
|------------------------------------|-----------|---------|
| Dietitian or nutritionist | 277 | 4.9 |
| Midwife | 1,337 | 23.5 |
| Nurse | 4,169 | 73.4 |
| Physical or occupational therapist | 25 | 0.4 |
| Physician | 280 | 4.9 |
| Physician assistant | 45 | 0.8 |
| Other (please specify) | 752 | 13.2 |
| Total | 6,885 | 121.2 |

*Note. Because respondents were allowed to choose more than one answer, percentages will not sum to 100%.

Table 6. Source of Pre-examination Education

| | Frequency | Percent |
|---|-----------|---------|
| University/college coursework provided in-person | 2,049 | 32.7 |
| University/college coursework provided online | 542 | 8.7 |
| Online training, conferences, courses, webinars provided by independent education providers | 2,707 | 43.2 |
| In-person workshops, seminars, lectures provided by professional associations | 3,442 | 54.9 |
| In-service training provided by employers such as hospitals or public health department | 2,059 | 32.9 |
| Printed and/or online independent study modules | 1,972 | 31.5 |
| Certificate programs, i.e., courses that culminate in the award of a credential upon passing an assessment based on the course. | 2,299 | 36.7 |
| Other (please specify) | 246 | 3.9 |
| Total | 15,316 | 244.5 |

*Note. Because respondents were allowed to choose more than one answer, percentages will not sum to 100%.

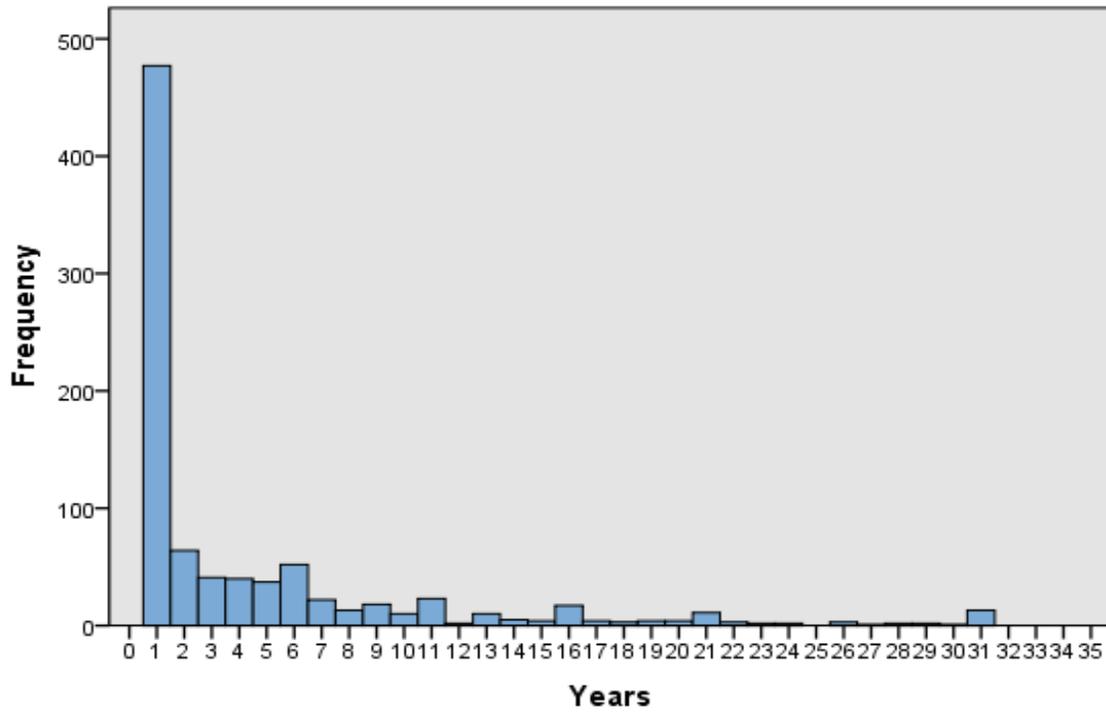


Figure 21. (If not certified by IBLCE) How many years of experience do you have as a lactation consultant?

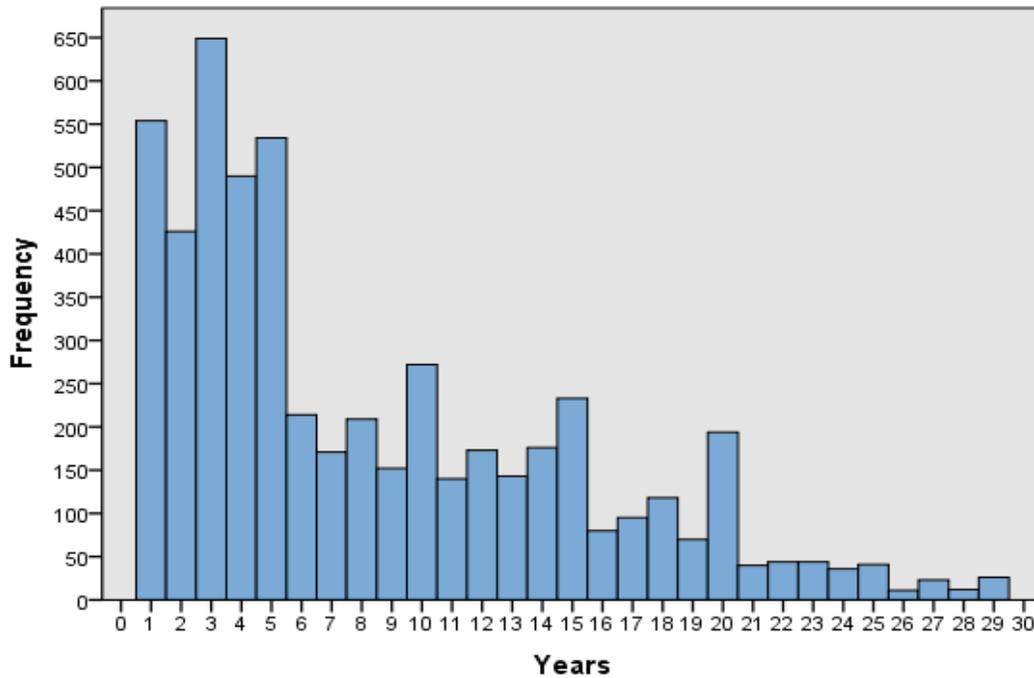


Figure 22. (If certified by IBLCE) Number of years certified as IBCLC (round up)

Results Related to Clinical Presentations and Clinical Skills

To gather data from the respondents, the rating scales shown previously were used for respondents to judge Clinical Presentation topics. The mean frequency ratings ranged from 1.17 (for #40: infant cancer) to 4.63 (for #82: positioning). The mean rating of frequency, calculated across all 85 Clinical Presentations, was 3.10, with a standard deviation of 0.89. A grouped frequency distribution of the overall frequency ratings for the 85 topics is shown in *Table 7*.

Table 7. Distribution of Mean Topic Frequency Ratings

| Mean Rating | Frequency | Percent |
|-------------------|-----------|---------|
| Greater than 4.49 | 3 | 3.5 |
| 3.50-4.49 | 27 | 31.8 |
| 2.50-3.49 | 32 | 37.6 |
| 1.50-2.49 | 22 | 25.9 |
| Less than 1.49 | 1 | 1.2 |
| Total | 85 | 100.0 |

The mean importance ratings ranged from 1.55 (for #17: maternal exercise) to 2.91 (for #79: latching). The mean rating of importance, calculated across all 85 topics, was 2.30, with a standard deviation of 0.30. A grouped frequency distribution is shown in *Table 8*.

Table 8. Distribution of Mean Topic Importance Ratings

| Mean Rating | Frequency | Percent |
|-------------------|-----------|---------|
| Greater than 2.49 | 24 | 28.2 |
| 1.50-2.49 | 61 | 71.8 |
| Less than 1.49 | 0 | 0.0 |
| Total | 85 | 100.0 |

A Criticality Index was created, by multiplying the frequency rating by the importance rating, in an attempt to capture the overall criticality of content. A guideline for interpreting the Criticality Index is presented in *Table 9*, with the upper left indicating low criticality and the lower right indicating the highest criticality.

Table 9. Criticality Index: Frequency * Importance

| | Min (1) | Imp (2) | Hi (3) |
|-------------|---------|---------|--------|
| Never (1) | 1 | 2 | 3 |
| Yearly (2) | 2 | 4 | 6 |
| Monthly (3) | 3 | 6 | 9 |
| Weekly (4) | 4 | 8 | 12 |
| Daily (5) | 5 | 10 | 15 |

The mean Criticality Indices ranged from 2.11 (for # 40: infant cancer) to 13.53 (for # 79: latching). The mean rating of Criticality Indices, calculated across all 85 topics, was 7.62, with a standard deviation of 2.89. A grouped frequency distribution of the overall mean Criticality Indices for the 85 topics is shown in *Table 10*.

Table 10. Distribution of Mean Topic Criticality Indices

| Mean Criticality Indices | Frequency | Percent |
|--------------------------|-----------|---------|
| Greater than 12.49 | 4 | 4.7 |
| 10.50-12.49 | 12 | 14.1 |
| 9.50-10.49 | 6 | 7.1 |
| 8.50-9.49 | 12 | 14.1 |
| 6.50-8.49 | 18 | 21.2 |
| 5.50-6.49 | 12 | 14.1 |
| 4.50-5.49 | 4 | 4.7 |
| 3.50-4.49 | 11 | 12.9 |
| 2.50-3.49 | 5 | 5.9 |
| Less than 2.49 | 1 | 1.2 |
| Total | 85 | 100.0 |

For the Clinical Skills, while relative comparisons of the data are appropriate (e.g., items with the higher mean rating could be said to be more frequently seen in practice), it is also important to consider the absolute meaning of the ratings. The reader should bear in mind that the response options (also known as anchors) for the Clinical Skill rating scale were:

- 1) Rarely, if at all,
- 2) Sometimes,
- and 3) Usually, if not always.

The mean frequency ratings ranged from 1.31 (for #35: design research) to 2.97 (for #12: active listening). The mean rating of frequency, calculated across all 50 topics, was 2.34, with a standard deviation of 0.45. A grouped frequency distribution of the overall mean topic frequency ratings for the 50 topics is shown in *Table 11*.

Table 11. Distribution of Mean Topic Ratings

| Mean Rating | Frequency | Percent |
|-------------------|-----------|---------|
| Greater than 2.49 | 22 | 44.0 |
| 1.50-2.49 | 26 | 52.0 |
| Less than 1.49 | 2 | 4.0 |
| Total | 50 | 100.0 |

The demographic questions were included in the survey to provide descriptive information about the respondents, as shown previously. For some demographic questions, however, it is important to ensure that individuals from different subgroups view the topics required of lactation consultants similarly, and that the ratings exceed a level of significance sufficient to warrant inclusion on an international examination. Data on the Clinical Presentations and Clinical Skills, broken down by relevant subgroups, were available for evaluation by the PATF.

Examination Specifications

In developing Examination Specifications (or a Detailed Content Outline), subject matter expert judgment must be used in interpreting the data gathered through the practice analysis survey. For purposes of this report, the Examination Specifications will be defined as the confidential document that is used to guide the examination development process, and that includes sufficient detail to ensure the development of comparable examination forms. The Detailed Content Outline can be defined as a subset of the Examination Specifications; it is a document that includes a detailed listing of content available in outline form for candidates, item writers, and other interested parties. Every examination item must be linked to the Detailed Content Outline as the first step in meeting the Examination Specifications during the examination development process.

Of particular importance to an international certification examination program is that the Examination Specifications must appropriately reflect the responsibilities of all groups who will participate in the certification program. Therefore, it is important to ensure that neither the Examination Specifications nor the resulting examinations include topics that are not considered to be important responsibilities of the individuals for whom the examination is intended.

Several decision rules were proposed for consideration by the PATF in determining criteria by which topics should be considered *ineligible* for assessment, and therefore excluded from the Detailed Content Outline. The general areas for consideration were discussed by the PATF during a meetings held in September 2014, and were based on a variety of the demographic characteristics included in the survey. Applying the decision rules ensures that the resulting examination reflects the responsibilities of lactation consultants, as judged by a demographically representative group of lactation consultants.

Three decision rules were adopted for the Clinical Presentation topics by the PATF based on the overall respondent group. First, the Clinical Presentation had to be “part of practice” – topics were considered *ineligible* if a specified percentage of respondents indicated a rating of “Do Not See.” Second, the topics had to be important to practice, as evidenced by a mean rating exceeding the threshold identified by the PATF. Third, the topic had to be critical to practice, as evidenced by a specified Criticality Index adopted by the PATF. In addition to the first three decision rules, the PATF identified eight decision rules based on subgroup analyses of the Criticality Index. These decision rules were based on language translation of the survey, primary professional setting, geographical location, primary language, education level, certification status, and years of experience (if certified or not). Application of these 11 decision rules led to elimination of 13 of the Clinical Presentation topics, which will therefore not be included on the IBCLC examination.

A similar process was used to establish decision rules and criteria related to the Clinical Skills topics, with the only minor difference being due to the different rating scale used. The first rule ensured that the Clinical Skill was part of practice, and the second ensured that it was seen frequently in practice. The eight subgroup analyses used for the Clinical Presentation topics were also applied to the Clinical Skills. As a result of applying the 10 decision rules, a total of 12 Clinical Skill topics were eliminated.

When developing the survey, the PATF had determined that each topic was clearly linked to the associated major knowledge area. During the meetings in September 2014, the PATF reconfirmed that linkage. Item writers will be instructed to classify items according to the competencies required for a specific topic, and to ensure that the item is associated with the major area. When approving items, the examination committee will similarly confirm that linkage.

The PATF determined that the final 75 Clinical Presentation topics and 37 Clinical Skill topics could be appropriately assessed by way of a total of 175 multiple-choice examination items to ensure appropriate content coverage. Item writers will be advised that any knowledge area underlying a topic may be appropriate for assessment, and that the item should be directly related to competencies needed for the topic. After agreeing on the number of items on the examination, the PATF discussed how these items should be distributed across the major areas. Based on the ratings and the breadth of content within each major and minor knowledge domain, the PATF used an interactive process to determine item distribution across major and minor domains, as shown in *Table 12*.

Table 12. Overview of Detailed Content Outline

| | | Number of Items |
|--------------|---|--------------------|
| I. | Development and Nutrition | 26 |
| II. | Physiology and Endocrinology | 24 |
| III. | Pathology | 31 |
| IV. | Pharmacology and Toxicology | 13 |
| V. | Psychology, Sociology, and Anthropology | 21 |
| VI. | Techniques | 25 |
| VII. | Clinical Skills | 35 |
| Total | | 175 |

The PATF also determined that a second dimension would be appropriate as a part of the Examination Specifications. Competencies related to clients at different chronological ages were discussed as a possible second dimension. The PATF used the data collected through the survey on how frequently survey respondents worked with each age group and the percentage of clients in each age group to determine the number of items needed for each age group or linked to general principles.

In addition, to ensure linkage to practice and as documented by the practice analysis survey results, examination items will relate to the key responsibilities associated with developing a care plan, which include: 1) Assessment, 2) Develop a plan, 3) Document, 4) Evaluate, 5) Help mother determine goals, 6) History taking, and 7) Work with other medical providers. The PATF also determined that among 175 items, IBLCE will plan to administer approximately half of the items without images in a morning session and half with images or associated with cases in an afternoon session. Unanimous agreement of the PATF was reached during the September 2014 meeting regarding the Examination Specifications, which was subsequently reviewed and approved by the IBLCE Board. The full Detailed Content Outline appears on the following pages.



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Psychometrics Department
January 2015



**International Board of Lactation Consultant Examiners (IBLCE)
International Board Certified Lactation Consultant® (IBCLC®)
Detailed Content Outline**

**# of
Items**

| I. Development and Nutrition | 26 |
|--|----|
| A. Infant | |
| <ol style="list-style-type: none"> 1. Feeding behaviours at different ages 2. Food intolerances/allergies 3. Infant anatomy and anatomical/oral challenges 4. Introducing complementary foods 5. Low birth weight 6. Milk banking – formal and informal 7. Normal infant behaviours 8. Nutritional requirements - preterm 9. Preterm development and growth 10. Skin tone, muscle tone, reflexes 11. Term development and growth 12. WHO growth charts with gestational age adjustment | |
| B. Maternal | |
| <ol style="list-style-type: none"> 1. Breast development and growth 2. Breast surgery 3. Composition of human milk 4. Maternal anatomical challenges 5. Maternal nutritional status 6. Nipple structure and variations | |
| II. Physiology and Endocrinology | 24 |
| <ol style="list-style-type: none"> 1. Diabetes 2. Infertility Issues 3. Maternal metabolic and hormonal disorders (e.g., thyroid, Polycystic Ovarian Syndrome) 4. Maternal autoimmune disorders 5. Multiples 6. Newborn hypoglycemia 7. Pregnancy and breastfeeding – tandem 8. Relactation 9. Stooling and voiding | |



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| III. Pathology | 31 |
|--|----|
| A. Infant | |
| <ul style="list-style-type: none"> 1. Allergies 2. Ankyloglossia 3. Cleft lip and palate 4. Congenital anomalies (e.g., gastrointestinal, cardiac) 5. Gastroesophageal Reflux Disease (GERD), reflux 6. Hyperbilirubinemia 7. Infant acute disease (bacterial, viral, fungal, systemic) 8. Infant neurological disabilities 9. Small for Gestational Age (SGA), Large for Gestational Age (LGA) | |
| B. Maternal | |
| <ul style="list-style-type: none"> 1. Abscess 2. Milk ejection reflex dysfunction 3. Maternal acute disease (bacterial, viral, fungal, systemic) 4. Maternal chronic disease 5. Maternal disability (physical and neurological) 6. Mastitis 7. Milk supply, low or over 8. Nipple and breast conditions 9. Nipple pain and trauma 10. Post-partum hemorrhage 11. Pre-eclampsia / pregnancy induced hypertension | |
| IV. Pharmacology and Toxicology | 13 |
| <ul style="list-style-type: none"> 1. Alcohol and tobacco 2. Contraception 3. Drugs of abuse 4. Galactogogues 5. Gel dressings/nipple creams 6. Medication (prescription, over-the-counter, diagnostic and therapeutic procedures) 7. Medicinal Herbs | |
| V. Psychology, Sociology, and Anthropology | 21 |
| <ul style="list-style-type: none"> 1. Transition to parenthood 2. Birth practices 3. Foods to eat/avoid that affect lactation 4. Employment – returning to work 5. Family lifestyle | |



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- 6. Identifying support networks
- 7. Maternal mental health
- 8. Maternal psychological/cognitive issues
- 9. Mother-baby relationship
- 10. Safe sleep
- 11. Weaning
- 12. Cultural competency

VI. Techniques

25

- 1. Effective milk transfer (including medically-indicated supplementation)
- 2. First hour
- 3. Latching
- 4. Managing supply
- 5. Milk expression
- 6. Positioning
- 7. Refusal of breast, bottle
- 8. Skin-to-skin (Kangaroo care)
- 9. Test-weighing

VII. Clinical Skills

35

A. Equipment and Technology

- 1. Feeding devices (e.g., tubes at breast, cups, syringes, teats)
- 2. Handling and storage of human milk
- 3. Nipple devices (e.g., shields, everters)
- 4. Pacifiers
- 5. Pumps
- 6. Scales
- 7. Communication technology
- 8. Websites

B. Education and Communication

- 1. Active listening
- 2. Anticipatory guidance
- 3. Care plan development and sharing
- 4. Documentation
- 5. Educating mothers and families
- 6. Educating professionals, peers, and students
- 7. Extending the duration of breastfeeding
- 8. Emotional support
- 9. Empowerment
- 10. Group support

|  <p style="text-align: center;">International Board of Lactation Consultant Examiners (IBLCE) International Board Certified Lactation Consultant® (IBCLC®) Detailed Content Outline</p> | # of Items |
|--|-----------------------|
| C. Ethical and Legal Issues | |
| <ol style="list-style-type: none"> 1. Breastfeeding in public 2. Clinical competencies 3. Code of Professional Conduct (CPC) 4. Principles of confidentiality 5. WHO code –advocacy and policy | |
| D. Research | |
| <ol style="list-style-type: none"> 1. Apply research in practice 2. Appraise and interpret research results 3. Use research to help develop policies and protocols | |
| E. Public Health and Advocacy | |
| <ol style="list-style-type: none"> 1. Advocate for Baby-Friendly Hospital Initiative (BFHI) 2. Advocate for compliance with World Health Organization International Code of Marketing of Breast milk Substitutes (WHO Code) 3. Advocate for mother / baby in healthcare system 4. Develop breastfeeding-related policies | |
| Total Number of Items | 175 |

Approximately half of the items will include images, and these will be administered in the afternoon session; items without images will be administered in the morning session. As supported by the practice analysis results, examination items should generally relate to the key tasks associated with developing a care plan, which include:

1. Assessment
2. Develop a plan
3. Document
4. Evaluate
5. Help mother determine goals
6. History taking
7. Work with other medical providers

Except for those items addressing general principles, items are classified according to the chronological period, using the following guidelines:

| CHRONOLOGICAL PERIODS | Target # of Items* |
|--|--------------------|
| 1. Prenatal - maternal | 8 |
| 2. Labor - maternal / birth - perinatal | 9 |
| 3. Prematurity | 12 |
| 4. 0 - 2 days | 21 |
| 5. 3 - 14 days | 21 |
| 6. 15 - 28 days | 20 |
| 7. 1 - 3 months | 12 |
| 8. 4 - 6 months | 12 |
| 9. 7 - 12 months | 5 |
| 10. Beyond 12 months | 5 |
| 11. General principles (including preconception) | 50 |
| Total | 175 |

*Appropriate flexibility will be allowed surrounding these targets.