2012 Task Analysis

A Report of Midwifery Practice

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FOREWORD TO THE 2012 TASK ANALYSIS OF MIDWIFERY PRACTICE

AMCB is pleased to release the 2012 Task Analysis Report of Midwifery Practice.

Many midwives do not understand that the "task analysis" is the basis of the initial examination for certification as a nurse-midwife (CNM) or midwife (CM), mistakenly believing that the examination is developed from the ACNM Core Competency for Basic Midwifery Practice. In fact, according to the National Commission of Accrediting Agencies (NCCA):

The certification program must employ assessment instruments that are **derived from the job/practice analysis** and that are consistent with generally accepted psychometric principles.

B. The content sampling plan for test items or other assessment components must correspond to content as delineated and specified in the job/practice analysis.

C. An ongoing process must exist to ensure that linkage between the assessment instruments and the job/practice analysis is maintained, as assessment components are revised and replaced over time.

http://www.credentialingexcellence.org/NCCAAccreditation/ApplicationandAnnualReport/tabid/156/Default.aspx#application, Accessed 1/16/2011

Thus, the Task Analysis of Midwifery Practice and Core Competencies are completely separate entities, the first determined by what tasks newly certified CNMs/CMs are **performing**, the second by expert opinion of what should be included in midwifery education. The two are intertwined, but distinct. Following completion of the Task Analysis, recommendations are made to the AMCB Board of Directors for items to be considered for retention or elimination. The Board of Directors considers these recommendations, and makes the final decisions about these items. This decision is then passed on to the Examination Committee to be incorporated into the new examination blueprint.

NCCA recommends that a task analysis be performed every 5-7 years. AMCB aims to complete such an analysis every 5 years, just prior to the scheduled revision of the Core Competencies. This will allow the Core Competencies to reflect what is being done in the practice of newly certified CNMs/CMs, complementing the input of experts who are charged with the revisions.

The Board of Directors of AMCB thanks the AMCB Research Committee, led by Marie Hastings-Tolsma, CNM, PhD, FACNM, for their thoughtful review and timely execution of the task analysis process and the report that follows.

Barbara W. Graves, CNM, MN, MPH, FACNM
President, AMCB
May 15, 2012

FOREWORD TO THE 1999-2000 TASK ANALYSIS

A BRIEF HISTORY OF THE AMERICAN MIDWIFERY CERTIFICATION BOARD*

The ACNM Certification Council, Inc. (ACC) serves as the national certifying body for certified nurse-midwives (CNMs) and certified midwives (CMs) in the United States. The organization has a long history of setting high standards for professional midwifery practice through a rigorous credentialing process that includes completion of an American College of Nurse-Midwives (ACNM) accredited nurse-midwifery or midwifery program, successful performance on the national board examination, and documented continuing competency through the certificate maintenance program.

Certification of nurse-midwives began in 1971. The examination was initially administered through the ACNM Testing Committee, which developed into the Division of Examiners, then became the Division of Competency Assessment, and finally emerged as an autonomous organization, the ACNM Certification Council, Inc., in 1991. The process and scope of certification has grown as midwifery practice has evolved and as the organization has kept pace with the changes and expectations of the credentialing organizations and the health care field.

Initially, certification was limited to certified nurse-midwives. However, as midwifery practice has developed, a demand for “direct-entry” (non-nurse midwifery) programs has intensified. In 1996, committed to the principle that all midwifery practice should meet the same high standard that nurse-midwifery established, the ACC, in conjunction with the ACNM, developed a mechanism for the accreditation of professional, university-based direct-entry midwifery education programs and the certification of those graduates. Accreditation criteria for direct-entry programs are the same as for nurse-midwifery programs, augmented by the special requirements to meet the knowledge and skills that students had traditionally brought from their nursing education programs. Graduates of a direct-entry program take the same certification examination as those from nurse-midwifery programs and have a comparable level of success.

In addition to broadening the scope of certification to professionally educated direct-entry midwives, the ACC has added a program in certification maintenance. Initial certificates in nurse-midwifery were not time-limited. Although there was a professional expectation that CNMs would continue to learn and to maintain currency in their practice, their certificates did not expire and there was no documentation of continued competence by ACC. In 1996, the ACC began to issue time-limited certificates and mandated participation in its Certificate Maintenance Program for all CNMs and CMs certified after that date. During an eight-year cycle, certificants must complete three self-learning modules (including post-tests) that cover the entire scope of midwifery practice. In addition, they must accrue 2.0 (20 contact hours) of continuing education units approved either by ACNM or the Accreditation Council for Continuing Medical Education.

The nature of the national board examination has also changed. From 1971 through 1995, the certification examination was in a modified essay format. Furthermore, for the first three years, a clinical observation component was included. Analysis indicated that the clinical observation did not provide data that would change the outcome of the written component and in 1974 it was eliminated from the certification requirements. In 1988, a change was made from norm-referenced to criterion-referenced scoring. The modified essay format performed very well and was continued until 1995 when the increasing number of graduates annually made the arduous

task of grading the exams untenable. At that time, ACC moved to a multiple-choice format, which has performed very well psychometrically and significantly reduced the time required to notify candidates of their results.

A disciplinary process was introduced in the spring of 2000. Prior to the formation of ACC, the ACNM had an active and effective disciplinary process. When ACC was incorporated, the disciplinary function remained for a short time with ACNM. ACNM subsequently eliminated its disciplinary process since certification functions had been transferred to ACC. A clarification in ACC's contract with ACNM specifically recognizing ACC's prerogative to discipline all CNMs, even those certified prior to ACC's existence, allowed ACC to move forward with the development of its own disciplinary process. This process is viewed as a mechanism of last resort, when other avenues to address practice concerns have failed. The ACC Board of Directors is the final arbiter of the grievance. Potential outcomes of an investigation include dismissal of the complaint as well as actions on the certificate up to and including decertification.

Finally, as midwifery has evolved, the content of the examination has continued to reflect the changes in practice. The certification examination has always been grounded in an analysis of the tasks of midwifery. A task analysis has been conducted periodically, typically about every seven years, to determine the scope of the examination. In the early 1970s, practice focused heavily upon the traditional scope of midwifery: antepartum, intrapartum, postpartum, and newborn. Minimal content in well-woman care was included, typically annual examination, family planning, and sexually transmitted disease. Gradually, more comprehensive health care of women characterized midwifery practice, requiring the addition of content addressing issues across the life span, including the perimenopausal and menopausal ages. In recent years, CNMs and CMs have found themselves providing more general health care of women, including non-reproductive primary care. This report of the ACC task analysis addresses for the first time the types of non-reproductive health care being provided by CNMs and CMs in the United States.

The task analysis is the foundation of the certification examination blueprint. A reflection of the practice of recent graduates, it guides the ACC Examination Committee in the construction of a test for safe entry into the practice of midwifery. The ACNM Certification Council's *Task Analysis of American Nurse-Midwifery and Midwifery Practice* is the most important effort of our Research Committee. The ACC is grateful for the Research Committee's work, producing, as always, a document of extraordinarily high quality. The rigor of our examination process begins here.

Carol Howe, CNM, DNSc, FACNM
Immediate Past President (1995-2000)
ACNM Certification Council
December 2000

*From 1991 until 2005 AMCB was titled the ACNM Certification Council, Inc.

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EXECUTIVE SUMMARY

The American Midwifery Certification Board (AMCB) conducted a task analysis of the practice of midwifery in an effort to update the certification examination blueprint and subsequent test specifications. The last task analysis was conducted in 2007 and the current task analysis was intended to be an interim determination of those tasks that are performed by recently certified CNMs and CMs.

The project was conducted by the AMCB Research Committee with support by the Board of Directors. It was designed by the committee to permit limited comparability with previous task analyses performed by AMCB, including the 2007 survey (Hastings-Tolsma, Rosen, Bawden, & Mancuso, 2008) and the survey conducted under its former name, ACNM Certification Council, in 1999-2000 (Oshio, Johnson, & Fullerton, 2000). The task analysis project consisted of five phases: 1) development of the task analysis questionnaire, 2) identification of a survey population, 3) administration of the questionnaire, 4) analysis of the data collected, and 5) dissemination of findings.

Work was undertaken to identify the entry-level competencies of CNMs/CMs. The list of tasks from the previous task analysis served as the starting point for review. The *Core Competencies for Basic Midwifery Practice (American College of Nurse-Midwives [ACNM], 2008)* was also examined to ensure relevance. An expert panel of educators, clinicians and researchers subsequently made suggestions for the addition and/or deletion of specific tasks. The list that resulted was then electronically piloted (N=13); revisions were based on those responses. The final list of 224 task statements fell within one of the major midwifery practice areas: antepartum (37 items), intrapartum (58 items), postpartum (13 items), newborn (30 items), well-woman/GYN (55 items), and primary care (31 items), as did the 216 clinical conditions: antepartum (59 items), intrapartum (34 items), postpartum (16 items), newborn (8 items), well-woman/GYN (31 items), and primary care (68 items). Items related to professional

issues, which were included on past analyses as a separate component, were rolled into the existing clinical domains. Items were truncated allowing participants to only see items for areas where they currently practice. Clinical tasks and conditions were followed by a 3-item subjective opinion section that queried respondents regarding the percentage of practice that dealt with abnormal conditions, the extent to which the survey covered tasks important to midwifery, and the identification of any missing areas. A free-form response field for respondent comments followed each portion of the questionnaire, as well as upon completion of the survey. In addition, the identified tasks and clinical conditions were preceded by 17 demographic items that all participants were asked to complete, as appropriate.

An email invitation was sent to all CNMs/CMs certified by the AMCB from September 1, 2008 through October 1, 2011 and where the email address was believed to be viable (N=1,099). A total of 51 emails were returned as undeliverable. Another 1,048 emails were successfully sent and thought to have been received. A total of 510 CNMs/CMs participated between October 30, 2011 and November 28, 2011 for a response rate of approximately 49%. Of the 510 respondents, 377 (74%) completed the entire survey and 133 (26%) partially completed the survey. Study data were collected and managed using REDCap electronic data capture tools hosted at the University of Colorado.

Of those who completed the survey, respondents certified in 2009 were the largest group (34%), with only 10% in 2008; roughly a quarter were certified in 2010 and 2011. Survey respondents were exclusively female, typically white (82%), almost exclusively CNMs (99%), ranged in age from 20-60 years, and most held a master's degree (97%). Most respondents worked in a city or large metropolitan area (74%) with another 12% working in a small town or rural area. Respondents' practice locations represented all but four states. Nearly three-quarters (71%) indicated full-time employment as a midwife; 16% indicated either they were employed but not as a midwife or were unemployed. Of those employed as a midwife, the majority (56%) worked in a physician group or hospital/medical center. Over 80% of

respondents held (or had pending) hospital privileges with 68% holding medical staff hospital membership. Approximately 94% held (or had pending) prescriptive authority and 80% were employed as a Registered Nurse before certification. Finally, 18% also were certified as a Women's Health Nurse Practitioner though fewer than 5% held certification as a Family Nurse Practitioner, Adult Nurse Practitioner, or Neonatal Nurse Practitioner.

Of those currently in midwifery practice, most provided full-scope midwifery services: antepartum (93%), intrapartum (87%), postpartum (89%), newborn (72%), and well-woman/gynecology (86%) services. However, fewer than half indicated providing primary care (46%) services.

Clinical tasks were rated for both *frequency* of performance in the respondent's midwifery practice (never, rarely < 10% of patients, sometimes 10-29% of patients, often 40-59% of patients, usually 60-89% of patients, always > 90% of patients), as well as the respondent's opinion of the *importance* of being competent in the task when considering safe and effective midwifery care. A criterion was established for determining which of the clinical tasks, if any, would be eliminated from the test blueprint and subsequent calculation of examination test specification weights based on an insufficient overall rating. This criterion resulted in the elimination of 39 tasks with antepartum tasks having the fewest eliminated.

Management of select clinical conditions was ascertained by asking participants whether they would independently manage, collaboratively manage (some of the time, about half of the time, or most of the time), or refer to another provider those women with the identified condition. Management of clinical conditions in antepartum, intrapartum, postpartum, newborn and well-woman/GYN areas demonstrated relative stability from prior task analyses. Responses regarding primary care clinical conditions were less clear with no consensus on management of several conditions. Primary care conditions demonstrated less stability than other practice areas and those conditions that were independently managed were relatively simple, self-

limiting conditions that were easily amenable to treatment. There were no newborn clinical conditions that were independently managed; all conditions were referred to another provider.

Free-form responses provided a rich description of respondent thoughts about each area of midwifery practice, as well as to the overall survey, and suggestions for tasks that should be considered for inclusion on future task analyses.

New weighting of tasks based on an average of overall ratings (importance and frequency) and participant-assigned weights, reflects the need for more certification examination questions addressing postpartum tasks and fewer questions addressing intrapartum tasks. Finally, when asked to judge the percentage of practice dealing with normal versus abnormal conditions, respondents indicated that 59% of practice was related to normal conditions and 41% to abnormal conditions. This finding indicates the need to increase test emphasis on deviations from normal.

In summary, this study identified the practice tasks and management of clinical conditions by midwifery certificants engaged in practice for up to three years. Data from this survey and consideration by the AMCB Board of Directors resulted in the recommendation to eliminate 38 tasks and to reconsider the certification examination blueprint weights in two areas of midwifery practice (intrapartum, postpartum). The percentage of items addressing patients with abnormalities should increase. Findings suggest areas of midwifery practice in need of emphasis as well as tasks and clinical conditions in need of further clarification. Recommendations are made for future task analyses.

INTRODUCTION

The American Midwifery Certification Board (AMCB) is responsible for developing and administering a psychometrically sound and legally defensible national certification examination to candidates who meet pre-established criteria. As the certifying body for both midwives and nurse-midwives, the AMCB has independent responsibilities to the general public for safeguarding the entry into midwifery practice. The agency also is responsible for competency maintenance and for the discipline of those certified to practice as either nurse-midwives or midwives in the United States.

Task analysis is a systematic assessment of the knowledge and skills that characterize clinical practice. The AMCB conducts task analyses to provide evidence supporting the content validity of its certification process. Results of the task analysis serve as the foundation of the certification examination blueprint.

A task analysis is performed as often as is necessary to keep abreast of changing professional practice; one was last performed by the AMCB in 2007. Since that time, the practice of midwifery has continued to strengthen the provision of primary care for women across the lifespan, examine the extent to which newborn competencies are addressed, and refine tasks across other areas of midwifery practice. In addition, the AMCB continues to certify both midwifery practitioners (CMs) and nurse-midwives (CNMs). These are two varied pathways for eligibility to sit for AMCB certification and while the numbers of CMs remain low, it is important to detail the extent to which tasks are performed in practice and clinical conditions are managed.

PURPOSE/AIMS

A rapidly changing healthcare environment makes knowledge of the certified nurse midwifery/certified midwifery practice crucial. The purpose of this study was to understand the tasks undertaken in practice by nurse-midwives/midwives certified to practice in the United States by the American Midwifery Certification Board. The research aims were to:

1. Determine the tasks undertaken by CNMs/CMs in antenatal, intrapartal, postpartal, newborn, well-woman/gynecology, and primary care areas of practice.
2. Describe the management approach of CNMs/CMs for select antenatal, intrapartal, postpartal, newborn, and well-woman/GYN and primary care conditions.
3. Determine the extent to which CNMs/CMs provide care to patients with abnormal health conditions.

METHODS

This study was designed as a prospective descriptive survey of all nurse-midwives/midwives certified by the AMCB to practice in the United States during the past three (3) years.

Sampling

The CNM/CM certification is an entry-level assessment of knowledge. Midwives are eligible to sit for the examination immediately upon completion of their midwifery education. Therefore, consistent with the mission of the certification program and the candidate population, the Research Committee determined that all graduates of recognized nurse midwifery/midwifery programs who achieved certification in the years 2008-2011 would be eligible for inclusion. This population consisted of 1,099 CNMs/CMs. The AMCB maintains a database of email addrsses for CNMs/CMs who have been certified to practice in the US and an email was sent to all eligible certificants inviting them to participate in the survey (see Appendix A). A total of 1,048 emails were successfully sent and were thought to have been received though it is not possible to determine if they were actually read. A total of 51 emails were returned as 'undeliverable.' A total of 510 CNMs/CMs participated in the survey that was accessible from October 30, 2011 through November 28, 2011 for a response rate of approximately 49%. Of the 510 respondents, 377 (74%) completed the entire survey and 133 (26%) partially completed the survey. Approximately 34% of the eligible midwives completed all survey materials.

Information regarding the task analysis survey and an invitation to participate were advertised through several venues. Specifically, information about the survey was emailed to

members of Directors of Midwifery Education (DOME), to the American College of Nurse-midwives (ACNM) for publication in their online *Quick eNews*, and was placed on the AMCB home page (see Appendix B).

An incentive also was offered to encourage certificant participation. Compensation was awarded to all respondents who completed relevant portions of the survey. Compensation consisted of a $65.00 credit with the AMCB.

Human Subjects Approval

The protocol received exempt approval from the Colorado Multiple Institutional Review Board (#11-0279) and the University of Illinois Chicago Institutional Review Board (#2011-1003). The study was sanctioned by the AMCB Board of Directors. Individuals who completed the survey were assumed to have provided implied consent.

Survey Development

The questionnaire was developed by the AMCB Research Committee. The 2007 task analysis survey items were reviewed for relevance, with additional items added to reflect changes in practice and terminology. The questionnaire went through several drafts, was reviewed by members of the AMCB Board of Directors for additional items and suggestions for clarification, and was then piloted. The Research Committee then revised the questionnaire with the decision to improve on the last task analysis by having one questionnaire. Moving to a single form eliminated randomization to one of three (3) task analysis forms. Instead, respondents completed all items, with truncation used to complete items in relevant practice areas for those who were not in full-scope practice.

Pilot Study

Prior to live data collection via a hosted website, a convenience sample of 24 recently certified midwives were invited to complete the pilot task analysis questionnaire and provide feedback to the Research Committee during October 2011 (see Appendix C). A total of 13 certified midwives completed pilot materials. Most of their comments related to length of time

needed to complete the survey (at least one hour for those in full-scope practice), the need for information about when the survey sections were completed (completion bar), and the need for acknowledgement that they had successfully completed the full survey, as well as varied comments regarding typographical errors, missing items, and technical difficulties. The final form of the questionnaire was produced after the beta test comments were considered. Live data collections began October 30, 2011 and continued until November 22, 2011 with one extension through November 28, 2011.

Main Study

As stated, the questionnaire was developed as one survey instead of the three parallel forms utilized in the 2007 task analysis. This change was initiated because the electronic capture tool utilized for the survey allowed for participants to complete only those items relevant to their current areas of practice. Each questionnaire contained 17 demographic items, followed by tasks and clinical conditions for each area of practice: antepartum (37 task items, 59 clinical conditions), intrapartum (58 task items, 34 clinical conditions), postpartum (13 task items, 16 clinical conditions), newborn (30 task items, 8 clinical conditions), well-woman/GYN (55 task items, 31 clinical conditions), and primary care (31 task items, 68 clinical conditions). A final section consisted of 3 questions designed to elicit subject opinion regarding what percentage of practice deals with abnormal conditions, how the respondent would distribute test items across the 6 areas of clinical practice, and how well the survey covered tasks important to midwifery practice. It should be noted that the current task analysis did not include a separate section of items related to professional development though these had been included in previous task analyses. Rather, items related to professional development were included in the existing clinical domains. The rationale for excluding professional development as a separate area was 1) to minimize the number of items presented to participants, thus decreasing subject burden, and 2) while important to professional midwifery practice, professional issues typically are

excluded from task analyses as program accreditation processes best evaluate this focused area.

For all six practice areas, a total of 224 ***clinical tasks*** were identified: antepartum (37 items), intrapartum (58 items), postpartum (13 items), newborn (30 items), well-woman/GYN (55 items), and primary care (31 items). Respondents were asked to make two judgments about *each* clinical task item. The first judgment concerned the *frequency* with which respondents were asked '*How FREQUENTLY do you perform this task in your practice?'* The response categories were 1 (never), 2 (rarely, < 10% patients), 3 (sometimes, 10-39% patients), 4 (often, 40-59% patients), 5 (usually, 60-89% patients), and 6 (always, > 90% patients). The second judgment, *importance*, concerned the respondent's opinion about '*How IMPORTANT is being competent in this task when considering safe and effective midwifery care?'* The response categories for this question were 1 (of no importance), 2 (of little importance), 3 (moderately important), 4 (very important), and 5 (extremely important).

Immediately following the clinical tasks in a given practice area, ***clinical conditions*** related to that area of practice were presented. A total of 216 clinical conditions were presented across the six clinical practice areas: antepartum (59 items), intrapartum (34 items), postpartum (16 items), newborn (8 items), well-woman/GYN (31 items), and primary care (68 items). Respondents were asked to indicate '*How YOU would TYPICALLY manage the condition in your practice?'* The response categories were 1 (independently manage), 2 (collaboratively manage some of the time), 3 (collaboratively manage about half the time), 4 (collaboratively manage most of the time), and 5 (refer to another provider).

The final section of the questionnaire asked all respondents some final thoughts. In particular, respondents were asked to indicate *'What percentage of your overall practice deals with patients with abnormal conditions?'* using a visual analogue scale (0% to 100%). They also were asked '*For each of the six major full-scope midwifery practice areas, what percentage of exam items would you assign to each area based on its importance?*' For this item, the

respondents were asked to sum the six weightings to equal 100. Finally, respondents were asked their opinions regarding '*How well did this survey cover the important tasks in midwifery practice?'* and *'If you feel the tasks were incompletely covered, please specify why.'* Additional comments regarding the task analysis were encouraged in free-form response fields. A copy of the final full task analysis survey appears at the end of this document (see Appendix H).

Administration of the Questionnaire

Study data were collected and managed using REDCap electronic data capture tools (version 4.8.16) hosted at the University of Colorado Denver. REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies, providing: 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulations and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources (Harris et al., 2009).

CNMs/CMs who met the inclusion criteria were sent an email from the AMCB Research Committee by the survey administrator. This email invited subject participation, provided information about the project including the purpose, how to access, time availability, and an incentive for participation (see Appendix D). Once the respondent accessed the survey, directions specific for responding to the survey were provided. All participants who did not wish to answer all of the questions in a single session were able to save their data and return to the questionnaire at a later time.

ANALYSIS

Data were analyzed using the statistical software package SAS (v 9.3). All data were cleaned before analysis.

A total of 510 CNMs/CMs participated in the survey for an overall response rate of approximately 49%. However, complete usable data were obtained from 377 respondents for a total usable completion response rate of approximately 34%. It is not possible to ascertain the

precise response rate since it cannot be definitively determined how many eligible participants actually received and read the email of invitation. It is known that some emails were removed by spam filters and others likely were never read. There were partial data available from another 133 respondents and these data were analyzed where appropriate.

Table 1 contains the summarized responses to the 17 questionnaire demographic items. Responses to clinical tasks and clinical conditions can be found in Tables 2 and 3, respectively. Free-form comments collected from respondents across each of the six clinical practice areas are presented in Appendix E. Appendix F details respondent opinion regarding tasks that should be added to future task analyses and Appendix G presents overall survey comments.

Evaluation and Retention/Elimination of Clinical Tasks

An unweighted approach was used to determine which of the clinical tasks, if any, would be recommended to the AMCB Board of Directors for elimination from the certification examination blueprint. The task analysis conducted in 2007 had used a weighted approach where the importance was weighted 4x more than frequency. It was determined by Research Committee members that item importance and frequency should be weighted equally. This later strategy seemed a more reasonable method for exclusion of items based on the pre-determined cutoff value (importance + frequency scores) and in light of comments from the respondents and available demographic factors (e.g., length of time in practice, type of practice).

This approach involved examination of the unweighted composite score (mean importance + mean frequency) of all clinical tasks that received a score of 5 or less. Where the unweighted composted score for a given task fell between 4 and 6, close attention was given to the frequency and importance scores for consideration of elimination or retention. Applying this criterion (composite score $\leq$ 5), 16.9% of overall tasks were identified for consideration of elimination. The *39 of 224* clinical tasks recommended for elimination from the test blueprint include:

Antepartum

1. “Performs sonogram to rule out fetal abnormality.” (Appendix E, Antepartum Clinical Tasks, Item # 12)

Intrapartum

2. “Administering pudendal anesthesia.” (Appendix E, Intrapartum Clinical Tasks, Item #8)
3. “Repairs 3rd degree lacerations.” (Appendix E, Intrapartum Clinical Tasks, Item #15)
4. “Repairs 4th degree lacerations.” (Appendix E, Intrapartum Clinical Tasks, Item #16)
5. “Repairs lacerations of the cervix.” (Appendix E, Intrapartum Clinical Tasks, Item #17)
6. “Delivers baby in breech position.” (Appendix E, Intrapartum Clinical Tasks, Item #29)
7. “Delivers baby in face presentation.” (Appendix E, Intrapartum Clinical Tasks, Item #30)
8. “Delivers baby with vacuum.” (Appendix E, Intrapartum Clinical Tasks, Item #31)
9. “Delivers baby with forceps.” (Appendix E, Intrapartum Clinical Tasks, Item #32)

Postpartum

10. “Lance external thrombosed hemorrhoids.” (Appendix E, Postpartum Clinical Tasks, Item #13)

Newborn

11. “Orders immunizations.” (Appendix E, Newborn Clinical Tasks, Item #15)
12. “Orders and interprets bilirubin levels.” (Appendix E, Newborn Clinical Tasks, Item #18)
13. “Manages well-baby visits past 1 week of age.” (Appendix E, Newborn Clinical Tasks, Item #19)
14. “Performs infant intubation with laryngoscope.” (Appendix E, Newborn Clinical Tasks, Item #22)
15. “Performs male infant circumcision.” (Appendix E, Newborn Clinical Tasks, Item #28)
16. “Manages infant who requires phototherapy.” (Appendix E, Newborn Clinical Tasks, Item #29)
17. “Orders/performs newborn auditory screening.” (Appendix E, Newborn Clinical Tasks, Item #30)

Well-Woman/GYN

18. “Diaphragm fitting and instruction.” (Appendix E, Well-Woman/GYN Tasks, Item #13)
19. “Counsels for the cervical cap method of contraception.” (Appendix E, Well-Woman/GYN Tasks, Item #14)
20. “Provides cervical cap fitting and instruction.” (Appendix E, Well-Woman/GYN Tasks, Item #15)
21. “Provides paracervical block for IUD insertion.” (Appendix E, Well-Woman/GYN Tasks, Item #18)
22. “Evaluates for/performs Essure and/or Adiana permanent sterilization.” (Appendix E, Well-Woman/GYN Tasks, Item #24)
23. “Treats condyloma using cryotherapy.” (Appendix E, Well-Woman/GYN Tasks, Item #27)
24. “Performs colposcopy.” (Appendix E, Well-Woman/GYN Tasks, Item #30)
25. “Performs endometrial biopsy.” (Appendix E, Well-Woman/GYN Tasks, Item #32)
26. “Performs endocervical curettage.” (Appendix E, Well-Woman/GYN Tasks, Item #33)
27. “Performs pre-hysterectomy and post-hysterectomy counseling.” (Appendix E, Well-Woman/GYN Tasks, Item #34)
28. “First assists at GYN surgery.” (Appendix E, Well-Woman/GYN Tasks, Item #35)
29. “Performs vulvar biopsy.” (Appendix E, Well-Woman/GYN Tasks, Item #42)
30. “Performs sexual assault examination.” (Appendix E, Well-Woman/GYN Tasks, Item #47)

31. “Performs gynecologic sonogram.” (Appendix E, Well-Woman/GYN Tasks, Item #50)
32. “Prescribes pharmaceuticals for treatment of infertility.” (Appendix E, Well-Woman/GYN Tasks, Item #51)
33. “Performs artificial insemination.” (Appendix E, Well-Woman/GYN Tasks, Item #52)
34. “Medically manages ectopic pregnancy.” (Appendix E, Well-Woman/GYN Tasks, Item #54)

Primary Care

35. “Performs breast biopsy.” (Appendix E, Primary Care Clinical Tasks, Item #9)
36. “Performs skin biopsy.” (Appendix E, Primary Care Clinical Tasks, Item #12)
37. “Performs removal of abnormal lesions.” (Appendix E, Primary Care Clinical Tasks, Item #13)
38. “Performs cortisone injections.” (Appendix E, Primary Care Clinical Tasks, Item #16)
39. “Sutures minor wounds.” (Appendix E, Primary Care Clinical Tasks, Item #31)

Calculation of the Examination Test Specifications Weights

The CNM/CM examination is constructed on the basis of a weighted combination of questions representing the six categories of clinical tasks. Each of the six categories of clinical tasks has a weight assigned to it that determines how many questions representing that category will appear on the examination. The new weights for the clinical tasks (Antepartum, Intrapartum, Postpartum, Newborn, Well-Woman/Gynecology, and Primary Care) were computed based on a combination of the ratings of importance and frequency for each task collected from the respondents as well as from participant-assigned weights. Of note, the prior task analysis included a small number of questions representing professional issues and that category was eliminated from this task analysis. The new suggested test specification ranges are specific to the categories queried in the current task analysis.

The strategy for the calculation of weights for the six categories of clinical tasks was different from the past task analysis. In the past, importance and frequency items were summed across both tasks and participants and then the sum for each category was divided by the total sum across categories. However, estimating sum scores confounds number of items on the task analysis survey for each category with the weighting scheme because categories with a greater number of task items on the survey will automatically be given a higher weight. For example, there were 37 antepartum items, 58 intrapartum items, 13 postpartum items, 30 newborn items, 55 well-woman/gynecology items, and 31 primary care items. Using sum

scores would artificially inflate the weights assigned to intrapartum and well-woman/gynecology and decrease the weights assigned to postpartum. In addition, missing data change the weighting scheme unless list-wise deletion is used, and there was a greater amount of missing data toward the end of the survey than in the beginning. Finally, past weighting schemes did not consider participant-reported weight assignments. The current analysis used mean scores, rather than sum scores, to weight the responses to the frequency and importance items in order to eliminate confounding based on the number of clinical tasks per category or due to missing data. This information was then aggregated with participant-assigned weights. The calculation of weights was thus accomplished in the following steps:

1. Each respondent's ratings for importance and frequency were combined to produce an overall rating for each task using the formula: Overall Rating = Importance + Frequency.
2. Within each task, the mean of the overall ratings across respondents was calculated. This provided a total score for each task.
3. For all of the tasks within each category, a mean of each total score of the overall ratings (from step 2) was calculated. This provided a score for each category.
4. The six category means (from step 3) were summed. This provided a grand total for all six categories.
5. The category totals from step 3 were each divided by the grand total calculated in step 4. This provided the proportion of the total examination for each category. Multiplying the proportions by 100 provided the percentage of the examination for each of the six categories of clinical tasks.
6. Participant-assigned weights were calculated based on the following survey item: '*For each of the six major full-scope midwifery practice areas, what percentage of exam items would you assign to each area based on its importance?'* Participants were asked to provide a value for each of the six categories so that the total summed to 100%.

7. Final weight estimates were calculated as the average of the weights derived from the frequency and importance items (step 5) and the participant-assigned weights (step 6). The range was calculated from the highest and lowest values from the two methods.

The resulting percentage for each of the six categories can be found in Table 4. It should be noted that the present examination weights are expressed as a range of percentages. The table also provides possible new ranges as well as comparison with the ranges in current use.

Participants also were asked what percentage of their current practice deals with patients with abnormal conditions. Table 5 identifies participant opinion regarding the percentage of practice dealing with normal versus abnormal conditions and provides comparison with the participant estimates from the 2007 task analysis survey.

RESULTS

Demographics

All of the survey respondents were female, with a mean age of 35 years (range = 20-57, SD = 7.71). Most respondents who completed the survey self-identified as white (81.7%) though all race/ethnicities were represented except for *Native Hawaiian or Other Pacific Islander*. Approximately 8% were Black/African American, 5% Hispanic, and 2% Asian, with less than 1% American Indian/Alaska Native. The majority of CNMs/CMs held a Master's Degree (96.8%) but the survey did not ascertain whether certificants obtained midwifery education as a major or through a post-master's certification process. Approximately 3% held either a PhD (n=1), ND/DNP (n=3), or other degree (n=8).

Of those completing the full survey, most identified themselves as a Certified Nurse-Midwife (CNM) (98.7%) with another 1.25% identifying as a Certified Midwife (CM). Of note was the fact that 59 (15.5%) did not identify their certification through the AMCB. Of all certificants completing the survey, only 10% were first certified in 2008; the remainder were fairly equally distributed across 2009, 2010, and 2011. Approximately 34% were first certified in 2009, 28%

in 2010, and 28% in 2011. Similar percentages were noted in the *Year First Licensed:* approximately 9% in 2008, 33% in 2009, 30% in 2010, and 28% in 2011.

When asked the state where the respondent's practice was located, all but four (4) states were represented as well as the District of Columbia. Those states with no respondent-identified location of practice included Arkansas, New Hampshire, Mississippi, and South Dakota. For both partial and complete survey responders, most (39% and 41%, respectively) worked in larger metropolitan areas (population over 250,000). Close to half of complete survey responders (46%) worked in urban areas with a population ranging from over 10,000 to 250,000, as was the case with partial completers (44%). Close to 15% of complete survey responders worked in a small town or rural area as did 11% of partial survey completers.

For those respondents completing the survey (34%), nearly 71% were employed full-time as a midwife; for partial completers (30%), over 80% were working full-time as a midwife. For survey completers, approximately 15% were employed part-time as a midwife and another 15.5% either were employed in a non-midwifery position or were unemployed.

For those midwives who completed the full survey and were employed in a midwifery position, most (55.7%) were employed primarily in a hospital/medical center and/or physician group. Another 12% were employed primarily in a midwifery group; approximately 7% were self-employed in solo practice. The remainder of the respondents (18.2%) worked in a community health center, federal government or military facility, or for the state/local government. Less than 3% worked in an educational facility as a primary midwifery employer.

Of all partial and complete respondents employed in midwifery, most provided full-scope midwifery services: antepartum (92.9%), intrapartum (87.3%), postpartum (89.6%), newborn (72.1%), and well-woman/gynecology (85.8%) services. However, fewer than half indicated providing primary care (46.1%) services. In the 2007 task analysis, 85.4% provided antepartum services, 80.8% intrapartum, 21.7% newborn, 80.8% well-woman/gynecology, and 47.5% primary care. When comparing the two surveys, there was an overall increase in the number of

CNMs/CMs providing antepartum, intrapartum, newborn, and well-woman/gynecology services, and a decrease in the number providing primary care.

Most complete survey respondents had hospital privileges (74.8%) as did slightly fewer of the partial survey completers (69.8%). Another 5.9% and 10.3% of the complete and partial survey respondents, respectively, had hospital privileges pending. For those with hospital privileges, 67.7% held medical staff membership and 32.3% allied health staff membership. Close to 90% of complete respondents reported having prescriptive authority with prescriptive authority pending for another 5.2%. For partial survey responders, a similar number had prescriptive authority (82.7%) though a slightly higher percentage had prescriptive authority pending (11.4%).

Finally, respondents were queried about RN employment prior to AMCB certification and other certifications. Approximately 80% of both complete and partial survey responders were employed as a Registered Nurse (RN) prior to certification. Of those who worked as an RN prior to certification as a CNM, most had worked between 1 and 10 years (68.2%). Fewer had worked more than 20 years (6.2%) or less than one year (6.6%). Other certifications held by respondents included Women's Health Nurse Practitioner (17.6%), Family Nurse Practitioner (2.3%), Adult Nurse Practitioner (0.79%), or other (2.6%). None identified as a Neonatal Nurse Practitioner or Psych-Mental Health Nurse Practitioner.

Table 1 details responses to the 17 demographic items in the current survey.

Clinical Tasks

A total of 224 tasks were identified across the six (6) midwifery practice areas: antepartum, intrapartum, postpartum, newborn, well-woman/gynecology, and primary care. A summary of survey responses for frequency and importance of clinical tasks for antepartum, intrapartum, postpartum, newborn, well woman, and primary care can be found in Table 2. In addition to the number of responses for each item, the composite score (unweighted) for each item is provided.

Of the total tasks presented, 39 were eliminated from the examination blueprint based on the unweighted ratings. Identified items were across all practice areas though the fewest were recommended for elimination from the antepartum area (see pp. 19-20). The items recommended for deletion by area of practice were antepartum (1 item), intrapartum (8 items), postpartum (1 item), newborn (7 items), well-woman/gynecology (17 items), and primary care (5 items).

Antepartum tasks included a total of 37 items with mean ***frequency*** scores ranging from 1.48 (performs sonogram to rule out fetal abnormality) to 5.87 (measures abdomen by centimeter tape and/or fingerbreath). Other antepartum tasks with high average frequency scores included: ordering lab tests to determine baseline values, counseling women about normal physiology of pregnancy, asking questions and instructing women about fetal movement, determining menstrual history and date of last normal menstrual period (LNMP), performing Leopold's maneuvers, and evaluating historical, physical, and laboratory data to determine gestational age.

The highest mean ***importance*** scores of antepartum tasks generally corresponded to the aforementioned highest antepartum task scores (frequency) with a range from 2.62 (performing sonogram to rule of fetal anomaly) to 4.86 (identifies deviations from normal pregnancy). The highest composite score for frequency and importance of antepartum tasks was 10.61 (orders, obtains, interprets laboratory work; laboratory tests to determine baseline values) while the lowest composite score was 4.11 (performs sonogram to rule out fetal abnormality).

Additionally, there were 3 antepartum items where the item had a composite score $\geq$ 5 but where the frequency score did not reach the cut-off value of 3. These items included: performs sonography to establish gestational age, performs sonography for amniotic fluid volume, presentation, and/or placental location, and evaluates serial hCG levels. The importance scores for these items were 3.07 or greater.

Intrapartum tasks (#58) had several items with low ***frequency*** scores including repairs 4th degree lacerations (1.0), delivers baby with forceps (1.0), delivers baby with vacuum (1.08), administers pudendal anesthesia (1.11), delivers baby in breech position (1.12), repairs lacerations of the cervix (1.15), delivers baby in face presentation (1.30), and repairs 3rd degree lacerations (1.33). Highest frequency items included: estimates blood loss (5.98), examines cervix, vagina, and perineum for lacerations (5.94), determines fetal presentation (5.91), inspects placenta and membranes (5.89), provides emotional support (5.79), determines separation of placenta (5.78), plans for decreasing discomfort in labor (5.72), evaluates physical response to process of labor (5.71), monitors progress of labor (5.69), determines position of presenting part (5.67), promotes effective second stage of labor progress (5.65), evaluates onset of labor (5.47), delivers placenta and membranes by maternal effort and/or gentle manual traction (5.38), evaluates fetal condition following rupture of membranes (5.36), plans for nutritional needs (5.30), estimates gestational age and fetal weight (5.23), and monitors labor pattern (5.06).

Overall, ***importance*** scores of intrapartum tasks ranged from 2.08 (delivers baby with forceps) to a high of 4.96 (initiates maneuvers to resolve shoulder dystocia). Items of lowest importance included delivers baby with forceps (2.08), administers pudendal anesthesia (2.42), repairs 4th degree lacerations (2.43), delivers baby with vacuum (2.66), and repairs lacerations of the cervix (2.70). The majority of intrapartum items (53 of 58) were rated very or extremely important.

Combined frequency and importance scores for intrapartum tasks resulted in eight (8) intrapartum tasks with very low composite (frequency + importance less than 5) scores. These items included: delivers baby with forceps (3.08), repairs 4th degree lacerations (3.43), administers pudendal anesthesia (3.53), delivers baby with vacuum (3.74), repairs lacerations of the cervix (3.85), repairs 3rd degree lacerations (4.44), delivers baby in breech position (4.73), and delivers baby in face presentation (4.89).

There were 10 intrapartum items where the item had a composite score ≥ 5 but where the frequency score was less than the cut-off value of 3; all of these items had an importance score of 3.23 or greater. Items which had a frequency score of less than 3 were: places intrauterine catheter, delivers infant in the occiput posterior position, performs manual exploration of the uterus, orders and manages amnioinfusion, first assists with Cesarean birth, applies internal fetal scalp electrode performs episiotomies when indicated, sends placenta to pathology, manages spontaneous labor with a prior Cesarean birth, initiates labor induction for women electing VBAC, and manages care of the woman having a waterbirth.

Postpartum tasks included a total of 13 items. Performing a postpartum physical exam received the highest mean score for ***frequency*** (5.64) with other high-frequency items including: discusses plans for continued health care (5.46) and evaluates for postpartum abnormalities (5.37). Other postpartum tasks receiving high average frequency scores included management of pain relief (4.97) and providing information about lactation (4.95). The items with low frequency scores included lance external thrombosed hemorrhoids (1.17), manages vaginal, perineal or rectal hematomas (2.80), and evaluates and manages post-Cesarean care (2.86).

The lowest average item score for frequency (lance external thrombosed hemorrhoids [1.17]) also resulted in the lowest average score for ***importance*** of the postpartum tasks (2.38). The highest average importance score was: performs postpartum physical exam (4.65), closely followed by evaluates for postpartum abnormalities (4.61), screens for symptoms of depression (4.49), and provides information about lactation (4.43). The low composite score for lancing thrombosed hemorrhoids (3.55) met criteria for consideration for future removal from postpartum tasks.

There were 2 postpartum items where the item had a composite score ≥ 5 but where the frequency score was less than the cut-off score of 3. These items both had importance scores of 3.80 or greater and included: manages vaginal, perineal or rectal hematomas, and evaluates and manages post-Cesarean care.

Newborn tasks included 30 items. The task ***frequency*** scores ranged from a low of 1.11 (intubates infant with laryngoscope) to a high of 5.71 (examines cord for umbilical vessels). Other low-scoring frequency items for newborn care included: manages infant who requires phototherapy (1.16), performs male infant circumcision (1.21), orders and interprets bilirubin levels (1.41), orders immunizations (1.47), orders/performs newborn auditory screening, (1.59), manages well-baby visits past one week of age (1.61), and manages infant with problems (1.97). High-frequency newborn items included: educates about breastfeeding (5.05), supports newborn thermoregulation (5.27), provides education about newborn feeding (5.27), maintains infant's temperature (5.41), creates an environment for healthy maternal-infant interaction (5.42), and examines cord for umbilical vessels (5.71).

Low ***importance*** tasks included: performs male infant circumcision (2.07), manages infant who requires phototherapy (2.51), orders/performs newborn auditory screening (2.53), and orders immunizations (2.95). Newborn tasks of highest importance were: evaluates infant for transition to extrauterine life (4.23), provides guidance concerning newborn care (4.24), evaluates well-being of the newborn by Apgar scoring (4.33), examines cord for umbilical vessels (4.38), observes and clears infant's breathing passages (4.41), creates an environment for healthy maternal-infant interaction (4.56), resuscitates infant (4.58), educates about breastfeeding (4.59), provides education about newborn feeding (4.60), supports newborn thermoregulation (4.65), promotes adequate respirations by stimulating the newborn (4.66), and maintains infant's temperature (4.66).

When considering the combined unweighted scores for all newborn tasks, seven (7) items meet criteria for removal from the test blueprint. These items and the composite unweighted scores were: orders immunizations (4.42), orders and interprets bilirubin levels (4.67), manages well-baby visits past one week of age (4.67), performs infant intubation with laryngoscope (4.7), performs male circumcision (3.28), manages infant who requires phototherapy (3.67), and orders/performs newborn auditory screening (4.12).

There were 7 newborn items where the item had a composite score ≥ 5 but where the frequency score was less than the cut-off score of 3. These items all had importance scores of 3.38 or greater and included: initiates chemoprophylaxis, performs complete newborn physical exam, manages infants with problems, obtains or arranges for blood specimens from infant, resuscitates infant, performs gestational age examination, and recognizes minor malformations.

Well-Woman/Gynecology tasks included a total of 55 items. The highest calculated mean ***frequency*** scores were reported for: gathers health information about gynecological history and health status (5.75), screens for indications for contraceptive methods (5.46), provides information on contraceptive options (5.43), counsels about prevention of sexually transmitted infections (5.29), assesses for high-risk sexual behavior (5.28), obtains Papanicolaou test (5.27), and assesses for sexually transmitted infections (5.15). Low-frequency tasks included: performs artificial insemination (1.10), performs gynecological sonogram (1.12), first assists at GYN surgery (1.13), performs colposcopy (1.14), provides paracervical block for IUD insertion (1.15), performs endocervical curettage (1.17), performs vulvar biopsy (1.22), performs sexual assault examination (1.23), provides cervical cap fitting and instruction (1.24), evaluates for/performs Essure and/or Adiana permanent sterilization (1.29), counsels for the cervical cap method of contraception (1.34), medically manages ectopic pregnancy (1.41), treats condyloma using cryotherapy (1.45), prescribes pharmaceuticals for treatment of infertility (1.53), performs pre-hysterectomy and post-hysterectomy counseling (1.56), performs endometrial biopsy (1.60), performs Implanon insertion (1.62), diaphragm fitting and instruction (1.75), and provides counseling following a sexual assault (1.90).

Importance scores ranged from a low of 2.03 (performs artificial insemination) to a high of 4.75 (obtains papanicolaou test). Items rated of lowest importance included: performs artificial insemination (2.03), first assists at GYN surgery (2.21), provides paracervical block for IUD insertion (2.34), performs gynecological sonogram (2.34), evaluates for/performs Essure and/or Adiana permanent sterilization (2.55), provides cervical cap fitting and instruction (2.61),

performs endocervical curettage (2.66), counsels for the cervical cap method of contraception (2.73), performs pre-hysterectomy and post-hysterectomy counseling (2.79), performs vulvar biopsy (2.83), prescribes pharmaceuticals for treatment of infertility (2.84), and performs colposcopy (2.90).

Unweighted composite scores for well-woman/gynecology tasks resulted in 17 tasks that fell at or below a score of 5: diaphragm fitting and instruction (5.0), counsels for the cervical cap method of contraception (4.07), provides cervical cap fitting and instruction (3.85), provides paracervical block for IUD insertion (3.49), evaluates for/performs Essure and/or Adiana permanent sterilization (3.84), treats condyloma using cryotherapy (4.48), performs colposcopy (4.04), performs endometrial biopsy (4.87), performs endocervical curettage (3.83), performs pre-hysterectomy and post-hysterectomy counseling (4.35), first assists at GYN surgery (3.34), performs vulvar biopsy (4.05), performs sexual assault examination (4.59), performs gynecological sonogram (3.46), prescribes pharmaceuticals for treatment of infertility (4.37), performs artificial insemination (3.13), and medically manages ectopic pregnancy (4.65).

Review of well-woman/GYN items demonstrated 9 items where the item had a composite score $\geq$ 5 but where the frequency score was less than the cut-off score of 3. These items all had importance scores of 3.63 or greater and included: treats partner(s) for sexually transmitted infections, removes condyloma, guidance for the prevention of toxic shock syndrome, administers injectable contraceptive, performs Implanon insertion, prescribes hormone replacement therapy, evaluates/manages woman diagnosed with premenstrual syndrome, provides counseling following a sexual assault, and expectantly manages ectopic pregnancy.

Primary care included 31 tasks. On examination of high item ***frequency***, seven (7) items were reported as 'always (>90% patients)': interviews about medical history (5.59), counsels regarding use of medications, recreational drugs, smoking, alcohol, and caffeine (5.53), evaluates breasts for abnormalities (5.45), assesses mental and emotional status (5.38), evaluates for vaginal, cervical, uterine and adnexal abnormalities (5.34), educates about safe

sexual practices (5.23), and assesses/refers for risk of domestic violence or sexual abuse (5.03). Five (5) items were reported as having a low frequency of 'rarely (<10% patients)': performs breast biopsy (1.01), performs cortisone injections (1.06), performs skin biopsy (1.20), sutures minor wounds (1.35), and performs removal of abnormal lesions (1.50).

Importance scores for primary care tasks ranged from a low of 1.96 (performs cortisone injection) to a high of 4.68 (interviews about medical history). Only one (1) item had low importance: performs cortisone injections (1.96); another 15 items were judged to be extremely important: interviews about medical history (4.68), evaluates breasts for abnormalities (4.62), counsels regarding use of medications, recreational drugs, smoking, alcohol, and caffeine (4.59), educates about safe sexual practices (4.58), assesses/refers for risk of domestic violence or sexual abuse (4.58), evaluates for vaginal, cervical, uterine and adnexal abnormalities (4.55), assesses mental and emotional status (4.52), assesses for signs of genitourinary infection (4.36), assesses high-risk sexual behavior (4.34), orders standard screening tests (4.30), assesses for mood disorders (4.15), evaluates for cardiac abnormalities (4.09), plan for substance abuse and refers as indicated (4.04), inspects skin for abnormalities (4.03), and counsels regarding sexual satisfaction or dysfunction (4.02).

Unweighted items recommended for removal included five (5) items: performs breast biopsy (3.15), performs skin biopsy (3.57), performs removal of abnormal lesions (3.91), performs cortisone injections (3.02), and sutures minor wounds (3.97). There were 5 primary care items where the item had a composite score $\geq$ 5 but where the frequency score was less than the cut-off score of 3. These items all had importance scores of 3.12 or greater and included: examines eyes for abnormalities, treats for mood disorders, counsels for sexual disorders, prescribes maintenance medications, and evaluates and treats minor wounds.

Clinical Conditions

There were a total of 216 clinical conditions distributed across the six clinical practice areas: antepartum (59 conditions), intrapartum (34 conditions), postpartum (16 conditions), newborn (8

conditions), well-woman/gynecology (31 conditions), and primary care (68 conditions). Participants were asked to identify whether they would typically manage a patient with a given condition in their midwifery practice independently, collaboratively, or refer. Like clinical tasks, respondents provided information about how they would manage clinical conditions in a specific area of practice but only if they were currently working as a midwife in that practice area. Table 3 displays the responses for preferred management for a specific clinical condition.

Antepartum Conditions

There were 59 antepartum clinical conditions surveyed. Ectopic pregnancy, pancreatitis and HIV (+) antibody were three conditions that the majority of respondents referred for care. In the survey from 2007, women with ectopic pregnancy also were referred for care. Although 54% of respondents would refer women with a twin gestation, 45% of respondents would collaboratively manage. Consensus for management was less clear between independently manage and collaboratively manage for: postmaturity, excessive maternal weight gain, gestational diabetes, late prenatal care and first trimester bleeding. Consensus also was less clear between collaboratively manage or refer for: thrombophlebitis in pregnancy and thrombophilias in pregnancy. Respondents were more likely to independently manage common minor variations from normal in pregnancy (e.g., anemia, varicosities, cystitis, GBS colonization, hemorrhoids) than clinical conditions where the mother or fetus would be at significant risk (e.g., ectopic pregnancy, HIV (+) antibody, thrombophilias, spontaneous abortion, large or small fetus).

Intrapartum Conditions

There were 34 intrapartum clinical conditions surveyed. Breech presentation was the only clinical condition where there was clear consensus for referring care. While the majority of respondents referred women with HIV +, inverted uterus, and prolapsed cord, approximately 40% of respondents would collaboratively manage women with these clinical conditions. There was no clear consensus regarding management of women with a trial of labor after previous cesarean or genital herpes lesions. All other conditions were identified as most appropriate for

either independent management or collaborative management. In the 2007 Task Analysis, two conditions were not clearly delineated for referral or independent or collaborative management (genital herpes and 3rd degree perineal laceration). These findings suggest that respondents are either independently or collaboratively managing a significant number of intrapartum complications.

Postpartum Conditions

Sixteen (16) postpartum conditions were surveyed. Only dehiscence or infection of cesarean incision was most often referred for management, although 34% of respondents would collaboratively manage women with this condition. Management of postoperative cesarean birth was the only clinical condition where there was no clear consensus. The management of postpartum conditions was most likely to be independently or collaboratively managed. There were no other items with significant change from the prior survey.

Newborn Conditions

There were 8 newborn clinical conditions surveyed. Uncoordinated or poor suck was the only clinical condition that was either collaboratively managed or referred for management. There were no listed conditions that the majority of respondents independently managed. In the 2007 Task Analysis, two conditions were found to be equally likely to be referred or collaboratively managed: respiratory distress of the newborn (bag and mask) and uncoordinated suck/poor suck.

Well-Woman/GYN Conditions

There were 31 well-woman/GYN conditions surveyed. Male infertility and ovarian/tubal mass were the only 2 clinical conditions where the majority of respondents referred women for management. Female infertility, post-abortion endometritis, postmenopausal bleeding, and breast mass and uterine enlargement were conditions where women were either referred or collaboratively managed. All other well-woman/GYN clinical conditions were either

independently or collaboratively managed. Management of clinical well-woman/GYN clinical conditions was similar to the findings of the 2007 Task Analysis.

Primary Care Conditions

There were 68 primary care clinical conditions surveyed. Of the 68 clinical conditions surveyed, only women with bipolar disorder, anaphylactic shock and major depression had consensus to be referred for care. In the 2007 Task Analysis, two conditions shifted *from referral* to *independent management*: cholecystitis and anaphylactic shock. There was no clear consensus in the management of tuberculosis, non-genital warts, persistent cough, strains and sprains, asthma, low back pain, insomnia, dysfunctional uterine bleeding, osteoporosis, or tonsillitis. The majority of primary care clinical conditions were either independently or collaboratively managed.

Test Specifications Weights

The calculated test specification weights are reflected in Table 5. These weights reflect mean scores to weight the responses to the frequency and importance items; data then were aggregated with participant-assigned weights. Antepartum and intrapartum ranges are about the same at 19-26% and 17-26%, respectively. Postpartum and well-woman/GYN ranges were equal (15-18%). Primary care and newborn ranges were the lowest and were roughly equal with ranges of 8-16% and 7-16%, respectively.

Comparison of the new calculated test weight ranges with those from the 2007 task analysis reflect relatively small changes in antepartum, newborn, well-woman/GYN, and primary care. There was a more substantial downward shift in intrapartum and an increase in postpartum test weight specifications. Intrapartum ranges decreased approximately 10% and postpartum ranges increased by about 10%. However, exact comparison is not possible as professional issues were weighted up to 5% in the prior task analysis and eliminated as a separate domain from the current survey. In addition, the current survey calculated the test specifications weights for the certification examination using mean scores rather than sum scores and on the

average of overall ratings, as well as participant-assigned weights. The 2007 task analysis did not combine these later two ratings, making direct comparison of test weight specifications between the two surveys impossible.

Finally, participants were queried as to the percentage of their overall practice that dealt with patients with abnormal conditions. Respondents in this survey reported 59% of their practice dealt with patients who had normal conditions; conversely, 41% of patients were reported to have conditions that deviated from normal. These percentages reflect a substantial change from the last task analysis where participants reported that 34% of patients in practice had conditions that were abnormal.

Free-Form Responses

Comments from each area of the six practice areas were reviewed to provide additional insight into participant practice issues and concerns. A total of 35 comments related to *antepartum* tasks and conditions with notable clustering around management of patients due to practice setting restrictions. For example, one participant noted that women with a prior cesarean birth are required to be transferred to physician care in her practice setting. Another stated, “Many of these tasks require some collaboration in our State” and yet another commented, “I have privileges at a Level 2 hospital. Many conditions require transfer.” Alternately, other respondents practiced in an environment where consulting and collaborating arrangements were geographically difficult, mandating more independent functioning by the midwife. There were also several comments from midwives with a homebirth practice and their vigilance in referring any patient who was not low-risk. Finally, many had employment relationships with OB/GYN physicians or Maternal Fetal Medicine physician specialists and consulted/collaborated frequently in the course of ongoing practice.

There were 31 separate comments related to *intrapartum* tasks and conditions. There were again references to system requirements or restrictions that sometimes structured the extent to which the midwife was able to execute desired tasks. For example, one participant commented,

"I collaboratively managed VBACs until the anesthesia department stopped letting us do them because of lack of staff and cost." And, there was again confusion over the rating of importance for some respondent's.

Review of the 20 comments related to *postpartum* tasks and conditions generally related to screening and management of postpartum depression, lactation support, ordering postpartum immunizations, and restrictions related to the birth and postpartum setting. Depression and lactation support remarks focused on collaborating with non-physician providers for management, when necessary. Postpartum immunizations, other than RhoGAM, were recommended if not available in the facility. And lastly, respondents made mention that some items did not relate to the scope of postpartum care in their practice setting (e.g., epidurals are not available in the homebirth and some other settings), and some items may have occurred only in the immediate in-patient setting (e.g., assesses for post-anesthesia complications, early onset postpartum hemorrhage), which may have made the items irrelevant if the CNM/CM did not see patients in that setting.

Newborn tasks and clinical conditions elicited 39 responses. Most comments related to limited management opportunities beyond the immediate postpartum period due to institutional protocols for newborn care, though midwives in birth center/homebirth settings reported more extensive management responsibilities. Several respondents noted that while they did little newborn care, the tasks were important for midwives to be able to provide when necessary.

For *well-woman/GYN* tasks and conditions, there were 13 comments. Respondents primarily described practice restrictions in writing prescriptions to treat partners for STIs and restrictive protocols that place limits on the CNM/CM scope of practice. Comments focused on *primary care* practice (9 statements) largely referred to care focusing on normal annual well-woman examinations with limited experience in seeing patients with chronic problems.

Appendix E lists the unedited participant comments by area of midwifery practice.

Suggestions for Tasks on Future Task Analyses and Overall Comments

Survey participants also were asked whether or not the task analysis survey covered the important tasks in midwifery practice. Most (98%) felt that the questionnaire completely covered the important midwifery tasks. For those indicating that tasks were incompletely covered, several suggestions were made. Respondents identified the need for items on ordering sonohistograms, substance abuse in pregnancy, chronic hypertension and pre-eclampsia, first assist at cesarean births, caring for patients with an intrauterine fetal demise, and counseling patients after miscarriage or perinatal loss. There were several recommendations to add ethics and professional issues including scope of practice, maintenance of certification, variations in practice setting (e.g., home birth, birth center, hospital birth), and policy and legal implications related to midwifery practice. Respondents also suggested adding tasks related to documentation, billing and coding, empanelment by insurance carriers, and establishing and maintaining collaborative agreements.

Finally, space was provided for participants to provide general comments regarding the nature of the survey. Some individuals experienced problems with the online survey due to the type of browser used. There were several comments indicating the directions lacked clarity, particularly related to frequency of task performance, and that the survey was too long and cumbersome. Appendices F and G summarize participant comments.

DISCUSSION

This study had some ***limitations***. While online survey offers many advantages related to cost and convenience, there are also known potential problems with the approach (Evans & Mathur, 2005) and these were likely in this study. Email survey recipients have been noted to suffer from electronic fatigue syndrome (Baker & Orton, 2006), which may well have been a factor in this survey. Some emails were screened by spam filters. While it is unknown exactly how many emails were screened out, some participants confirmed such activity. Future web-based task analysis questionnaires should carefully consider distribution strategies that improve deliverable emails, and verify that they are read.

There were known instances of technological variations reported to the survey administrator and noted in overall comments about the task analysis survey. For example, some respondents complained of slow survey download times. Online surveys are known to be affected by the type of internet connection, the configuration of the user's computer, and the speed of the user's browser (Evans & Mathur, 2005). Survey directions that offer instruction regarding higher speed browsers and other technological considerations to facilitate speed and ease of questionnaire completion should be included on future works.

In an effort to increase the response rate above the 15% found in the 2007 task analysis, there was increased advertisement about the survey and four reminders were provided to participants encouraging them to complete the survey. Compensation was offered to all participants who completed relevant portions of the survey, a strategy demonstrated to increase electronic survey response rates (Edwards et al., 2009). A combination of these factors was believed to be influential in increasing the response rate to approximately 49% for this survey and the completion rate to 34%.

Despite the improved response rate over the 2007 survey, the overall completion rate remained relatively low and continued efforts are needed to foster participation by eligible subjects. It may be useful to consider development of materials (e.g., PowerPoint program) detailing the purpose of the task analysis for distribution and use in midwifery educational programs. Student understanding of the purpose of the task analysis may be helpful in the promotion of certificant engagement. In addition, the researchers made no effort to conduct further followup of non-respondents beyond the reminder emails. Alternate use of reminder-based interventions may be useful for increasing response rates and might include text messages, tweets, phone call reminders, pagers, and interactive voice response systems. It also may be useful to offer a postal questionnaire option with the ability for FAX return; this has been demonstrated to improve response rates for some participants who are less comfortable with electronic options (Nicholls et al., 2011).

Another known study limitation was the length of the survey. There were several comments related to the long length and this was undoubtedly a factor in the relatively high partial completion rates. The number and relevance of items is known to be a factor in online questionnaire attrition (McCambridge et al., 2011) and future surveys should carefully consider this factor. In addition, future electronic surveys would benefit from a completion bar for each section as feedback to participants. A completion bar was not available in the REDCap electronic data capture tool utilized for the current study though it is a planned feature in upcoming versions.

There were issues with clarity of survey directions, particularly related to rating the frequency of clinical tasks. This problem also was noted on the 2007 task analysis and in an effort to correct for this difficulty the current survey utilized a Likert-type scale asking participants to indicate "How frequently do you perform this task in your practice?" Response options included "Rarely (< 10% patients)", "Sometimes (10-39% patients)", "Often (40-59%)", "Usually (60-89%)", and "Always (> 90% patients)". Despite efforts to clarify, a number of respondents found directions confusing and were uncertain whether they should respond based on the total number of patients seen in the practice or the number of patients seen by the individual CNM/CM.

Finally, there are known limitations with the use of retrospective questionnaires. Use of a prospective design may be particularly useful in gaining accurate, real-time data. It may be useful to consider electronic recording of daily activities, examination of ICD-9-CM and CPT-4 codes, time-motion study, and telephone survey. Use of prospective, real-time data would be particularly appealing and would provide evidence of midwifery services that could be useful in shaping future health policy reforms (Sonenberg, 2010). The CNM is one of four advanced practice RN roles (National Council of State Boards of Nursing, 2008) and has been identified as an essential APRN role by the Institute of Medicine (IOM) in *The Future of Nursing Report* (2011).

Demographics. The average age of survey respondents was 35 years, a finding consistent with the last task analysis and with the average age of students responding to the 2006-2008 national survey by the American College of Nurse-Midwives (ACNM) (Schuiling, Sipe, & Fullerton, 2010). The ACNM survey found the average age of CNMs/CMs was 50. Age of certificants is an important consideration given the projected high numbers of midwives who will be retiring within the next decade (Schuiling et al., 2010). While the net increase in newly AMCB-certified midwives has trended upward since 2008 (American Midwifery Certification Board [AMCB], 2011), workforce modeling projections are needed.

There were no survey respondents who self-identified as male though approximately 1.5% indicated such on the ACNM survey (Schuiling et al., 2010). And, while most respondents on the current survey were white, all race/ethnicities were represented except for *Native Hawaiian or Other Pacific Islander*. Race/ethnicity was not ascertained on the 2007 task analysis. However, race/ethnicity percentages on this questionnaire were similar to those reported for student nurse-midwives on the 2006-2008 ACNM survey except this study found nearly double the number of Black/African American (8.2%) respondents, and nearly 10% fewer who identified as white (81.7%). As the nation becomes more ethnically and racially diverse, there will be increasing need for healthcare systems and providers who reflect a population that is increasingly heterogeneous. Changes in race/ethnicity found in this study are encouraging as the need for healthcare professionals of varying gender and ethnicity has been identified as a priority by the Institute of Medicine (IOM) (2004) and the Health Resources and Services Administration (HRSA) Maternal and Child Health Bureau (2012). Similarly, the ACNM has published a position statement on *Ethnic and Cultural Diversity* recognizing the need to recruit and retain ethnic and cultural minorities into educational programs (1999) although the Statement is silent on the need for gender equity.

Encouraging participation by ethnic and gender minorities, and description of task variation within those groups, may help inform a certification examination that has increased ethnic and

cultural sensitivity. Existing certification examinations are known to have the potential for bias (Aguinis, Culpepper, & Pierce, 2010; Santelices & Wilson, 2010). Finally, data regarding gender and race/ethnicity were not queried on the 2007 task analysis. Determining these data on the current survey was an important addition and continuing to examine this demographic characteristic on future task analyses will afford the ability to track trends over time.

Most of the survey respondents were CNMs (98.7%); very few were CMs (1.25%) – a number virtually unchanged from the prior task analysis. Only 6 CMs completed all or part of the survey. However, there have been only 15 CMs certified by the AMCB between 2008 and 2011 indicating an overall minimum response rate of 40% of eligible CMs. Given the low number of respondents, CNM/CM data needed to be aggregated to maintain anonymity.

It was interesting to find less than 1% (n=3) of the CNM certificants held a practice doctorate (DNP). This number was virtually unchanged from the 2007 survey. A graduate degree from a program accredited by the Accreditation Commission for Midwifery Education (ACME) is required to sit for AMCB certification (American Midwifery Certification Board [AMCB], 2012) and the ACNM endorses a minimum of a master's degree as basic preparation for midwifery practice (American College of Nurse-midwives [ACNM], 2009a). However, the ACNM supports the practice doctorate (2009b), although not as a requirement for entry to practice, and the American Association of Colleges of Nursing has established the DNP as the level of preparation necessary for advanced nursing practice by the year 2015 (American Association of Colleges of Nursing [AACN], 2004). With the rapid expansion of DNP programs over the past 5 years and since the majority of midwifery educational programs are housed within Colleges of Nursing, it is surprising that there were not greater numbers holding the degree in the current survey. However, it is likely that many new midwifery graduates hold a master's degree and that there will be no noticeable change in the number of midwives earning a DNP until the degree becomes mandatory for advanced practice nurses. Educational preparation as a DNP will be an important parameter to monitor as it impacts future task analysis processes.

A notable finding in this survey was the fact that approximately 70% of respondents reported working full-time as a midwife; another 13.4% worked part-time as a midwife. These percentages are nearly identical to those from the 2007 survey. However, it should be noted that this questionnaire did not ask certificants their desired employment status and those working part-time in midwifery may have sought to do so due to personal or professional circumstances. Similarly, there were few changes from the 2007 task analysis in respondents' primary employer, except for the number in a (nurse) midwifery group practice where the percentage increased from 5% to 12%. This shift may reflect changes in national healthcare policy (i.e., Affordable Healthcare Act) or other influences. Further examination of this finding would be valuable.

A somewhat troubling finding in this task analysis was the number of certificants practicing in a rural setting. In 2007, 7.5% worked in a rural area; the percentage decreased to 5.6% in the current study. The number of respondents working in a large city/metropolitan area (> 100,000) increased from 52% to 60%. While those working in larger urban areas may be providing care to populations designated as HPSAs (Health Professional Shortage Areas) (Health Resources and Services Administration [HRSA], 2011), it is of concern to see a decrease in the number of newly certified midwives in rural practice.

The majority of CNMs/CMs were employed in a hospital/medical center and/or physician group (55.7%); 53% were employed in similar settings in the 2007 survey. Overall, there were a wide variety of midwifery employers. However, the current survey did not ascertain the nature of the birth setting (e.g., free-standing birth center, hospital birth center, home birth) and there were a number of free-form responses from individuals providing out-of-hospital birth services which suggested that setting impacted the conduct of clinical tasks and management of clinical conditions. Vedam, Stoll, White, Aaker and Schummers (2009) found that exposure to home birth clinical experience in educational programs was a major determinant in CNM choice of

practice site. Examination of care in varied birth settings and differences in clinical tasks and management of clinical conditions should be considered on future questionnaires.

In the current survey, approximately 70% had hospital privileges with another 10% pending. This was a decrease from the 75.8% with privileges reported in 2007 though fewer were pending privileges in the earlier work (2.9%). Approximately 90% had prescriptive authority in the current survey, a near 10% increase from the prior task analyses. CNMs now have prescriptive authority in every state, which was not the case at the time of the last task analysis in 2007. Higher numbers of certificants with prescriptive authority likely reflect a change in state laws.

Those employed in midwifery, whether full or part-time, were highly likely to be engaged in full-scope practice. There was an increase in the proportion of midwives providing care in all practice areas but the greatest increase was the number of respondents providing newborn care. In this survey, 72.1% indicated providing newborn care where only 21.7% indicated doing so in 2007. Given the large percentage providing intrapartum services (87.3%), this finding is not particularly surprising.

Of all partial and complete respondents employed in midwifery, most provided full-scope midwifery services: antepartum (92.9%), intrapartum (87.3%), postpartum (89.6%), newborn (72.1%), and well-woman/gynecology (85.8%) services. However, fewer than half indicated providing primary care (46.1%) services. In the 2007 task analysis, 85.4% provided antepartum services, 80.8% intrapartum, 21.7% newborn, 80.8% well-woman/gynecology, and 47.5% primary care. The proportion providing postpartum care in the 2007 survey was unavailable.

Since the majority of certificants (55.7%) were employed by a medical center/hospital or physician, the proportion providing primary care services may reflect policy that is more restrictive for providing services outside of traditional obstetric and gynecologic services. The number of respondents indicating they provide primary care services may also reflect how the

certificant defined such care. It may reduce bias if definitions and examples of this practice area were provided on future surveys.

Of the CNM participants, 80% were employed as an RN prior to certification while 92% reported working as an RN in 2007. The 2007 survey found most (54%) of respondents had worked 1 to 10 years prior to certification with fewer than 3% working less than 1 year. On the current survey, approximately 9% worked less than a year with another 60% employed as an RN for 1 to 10 years. These changes may reflect the fact that fewer nurse midwifery educational programs require clinical experience as an RN as an admission requirement. Otherwise, the change in numbers of certificants with prior RN experience remains unexplained.

About 24% of both complete and partial survey respondents held some sort of certification in addition to certification as a CNM/CM. Certification as a Women's Health Care Nurse Practitioner (WHNP) was the most common (18%), which was slightly higher than the 2007 survey where 16.7% were certified as an WHNP but significantly higher than the 11% indicating WHNP certification on the ACNM 2006-2008 national survey of members (Schuiling et al., 2010). Roughly 2% were certified as Family Nurse Practitioners, slightly lower than the last survey where 4.6% had such certification.

Finally, research demonstrates that midwives continue to serve populations who are disproportionately at risk for poor pregnancy outcomes (Bussey, Bell, & Lydon-Rochelle, 2007; Declercq, Koontz, Paine, Streit, & McCloskey, 2001; Raisler & Kennedy, 2005; Hastings-Tolsma et al., 2009). Recent study examining care provided by CNMs and obstetricians suggests that care by CNMs is comparable, if not better, and that midwifery care could expand access to high-quality health care, particularly for underserved populations (Newhouse et al., 2011; Johantgen et al., 2012). This study did not examine populations served by certificants; however, respondents estimated over 40% of patients had abnormal conditions. This finding warrants consideration of the amount of high-risk content provided in midwifery education programs. Similarly, future revision of professional core competencies may benefit from examination of the

extent to which abnormal conditions are detailed and emphasized. Current *Core Competencies for Basic Midwifery Practice* (American College of Nurse-midwives [ACNM], 2008) favor normal conditions related to the care of women and newborns and may not reflect the extent to which midwives deal with deviations from normal.

Review of ***clinical tasks*** demonstrated that 39 out of a total of 224 items should be considered for elimination from the certification examination blueprint. Generally, the scores on these items demonstrate the tasks to be, in combination, of both low importance and frequency. Only one antepartum clinical task was targeted for elimination based on a composite combined score of $\leq$ 5: *performs sonogram to rule out fetal abnormality*. This task would require advanced training not typically provided in basic midwifery educational programs. Additionally, there were 3 antepartum items which had a composite score of $\geq$ 5 but where the frequency score was less than 3: performs sonography to establish gestational age, performs sonography for amniotic fluid volume, presentation, and/or placental location, and evaluate serial hCG levels. Following discussion with the Directors of Midwifery Education and based on the importance score, *performs sonography to establish gestational age* was also recommended for elimination.

Similarly, only one postpartum clinical task was identified for elimination: *lance external thrombosed hemorrhoids*. Thrombosed hemorrhoids may be believed to be encountered infrequently because of low recognition by certificants, as was found in a study of physicians (Grucela et al., 2010).

Several items were identified for elimination from each of the intrapartum, well-woman/GYN, and primary care tasks. Items in these areas reflect changes in consumer demand and interest (e.g., *administering pudendal anesthesia, diaphragm fitting and instruction, counsels for the cervical cap method of contraception*), need for training beyond basic midwifery education (e.g., *repair of 4th degree lacerations, delivers baby with forceps or vacuum, provides cervical cap fitting and instruction, evaluates for/performs Essure and/or Adiana permanent sterilization, perf*

orms colposcopy, performs gynecologic sonogram, performs endometrial biopsy and endocervical curettage, provides paracervical block for IUD insertion, performs sexual assault examination, performs breast biopsy, performs cortisone injections, sutures minor wounds), or likely restriction by institutional policy or collaborative physician agreements (e.g., *delivers baby in breech position, first assists at GYN surgery*). It should be noted that many of the tasks designed to treat abnormal conditions were either targeted for removal or tended to receive lower scores than did tasks that were aimed at screening or counseling for health promotion. There were some tasks identified for elimination across these areas that are unexplained, such as *treats condyloma using cryotherapy* and *provides pre-hysterectomy and post-hysterectomy counseling.*

Of note, there were two intrapartum tasks that had a composite score $\leq$ 5 but an importance score $\geq$ 2 (see Table 2); these items had been targeted for elimination: *delivers baby in breech position* and *delivers baby in face presentation*. Following secondary analyses of select demographic variables and discussion with the Directors of Midwifery Education, the decision was made to retain these two items. Both of these tasks were more likely to be performed if the midwife held hospital privileges ($p \leq 0.002$) or worked in a rural setting and had importance scores $\geq$ 3.59.

Newborn clinical tasks merit separate discussion. Seven (7) tasks were identified for blueprint elimination. Most of the items reflect care generally rendered by newborn nursery or well-child healthcare providers. For example, *orders immunizations*, *orders and interprets bilirubin levels,* and *manages phototherapy. S*ome of the newborn tasks require advanced training, such as *orders/performs newborn auditory screening* and *performs male infant circumcision*. Other tasks would typically be provided by neonatal providers immediately after birth (e.g., *performs infant intubation with laryngoscope*) though this finding would be influenced by the fact that the majority of respondents were employed by a hospital/medical center or physician group and likely cared for intrapartum patients and newborns in the hospital setting

where ancillary providers would be readily available. Survey respondents working in rural areas were found to have higher mean aggregate newborn scores than those working in large metropolitan areas ($p = 0.0003$). Educators may want to re-examine items such as *performs infant intubation with laryngoscope* in an effort to sustain midwifery options in multiple settings.

Finally, newborn tasks which had a composite score ≥ 5 but a frequency score < 3 were reviewed with secondary analysis of demographic variables. The AMCB Board of Directors voted to retain these two items (orders and interprets bilirubin levels, performs infant intubation with laryngoscope) based on the importance scores (≥ 3.26) and following discussion with the Directors of Midwifery Education. Newborn tasks should be carefully monitored with future task analyses.

The majority of clinical tasks receiving high scores across the six practice areas related to counseling and screening for health promotion and disease prevention, identification of normal and deviations from normal, and evaluation for appropriate intervention, consultation and/or referral. There was little difference across the practice areas in relation to the higher scored, retained items though, in general, newborn items were not rated as high.

The tasks identified for potential elimination from the certification examination blueprint were based on a composite score (frequency + importance) of ≤ 5. Items which had a composite score > 5 but did not have not have a frequency score of ≥ 3 and an importance score ≥ 2 were carefully reviewed by the AMCB Board of Directors for further discussion and consideration. The review resulted in a recommendation to retain 3 items (delivers baby in breech position, delivers baby in face position, performs infant intubation with laryngoscope) and to eliminate 2 items (performs sonography to establish gestational age, first assists with Cesarean birth). Overall, this process resulted in a recommendation for elimination of 37 clinical tasks across the six midwifery practice areas (see Table 4).

Clinical conditions in this survey demonstrated few substantive changes across the six midwifery practice areas. Similarly to the last task analysis, there were few conditions where

management was not clearly delineated. An interesting note, however, is that many of the clinical conditions identified for independent management demonstrated a decrease in the percentage from the prior task analysis. These changes may reflect the fact that respondents of the current task analysis were certified for three years or less. Respondents on the 2007 survey had been certified for as long as five years, likely reflecting the ability to manage greater numbers of tasks independently. Again, consistent with the 2007 task analysis, the primary care area had the greatest number of items where there was no consensus for management. This fact may reflect a lack of uniform content in educational programs, as well as variation in clinical experiences. It also may reflect lack of clarity regarding the severity of the clinical condition.

Antepartum Conditions. Management of all antepartum conditions was clearly identified by respondents. Conditions for independent management reflected those related to the physiologic changes found in pregnancy (e.g., constipation, ligament pain, and lower back pain) or common abnormal conditions (e.g., anemia, cystitis, headache). Conditions where collaborative management was the preferred modality largely related to hypertensive disorders, preterm labor and postmaturity, fetal growth abnormalities, fetal demise, issues with maternal weight gain, and pregnancy superimposed on an underlying chronic disease. There were five conditions where the preferred management changed from the 2007 task analysis. The conditions of *mood disorder: depression* and *mood disorder: anxiety* had preferred independent management on the 2007 survey and for collaborative management on the current survey. The shift in management for these items is not clear, especially in light of widespread efforts to screen and treat for mood disorders in pregnancy and postpartum. One item that had been identified for referral on the 2007 survey, *thrombophlebitis related to pregnancy*, demonstrated preferred collaborative management on the current survey. One condition identified for collaborative management, *late prenatal care*, may reflect institutional restrictions in providing care. Only four conditions were identified for referral by a majority of the certificants: *ectopic*

pregnancy, *pancreatitis in pregnancy*, *HIV (+) antibody*, and *twin gestation*. *HIV (+) antibody* had previously been identified for independent management and *twin gestation* for collaborative management. As noted earlier, many of the changes in preferred management suggest less clinical experience may have been influential in management decisions.

Intrapartum Conditions. Clinical conditions in this area reflected clear consensus for management. There was some variation in management preference from the last survey. Fever (< 101.4^{o}F) was identified for collaborative management on prior task analysis but independent management on the current survey. Several items identified for independent management on the 2007 survey were identified for collaborative management on this survey. These items included: *laceration – sulcus*, *hemorrhage – late pp*, *urinary retention*, and *breech presentation*. Two items where the preferred management was for referral on this survey had been identified for collaborative management on the prior survey: *inverted uterus* and *prolapsed umbilical cord.*

Postpartum Conditions. There was stability in preferred management for all clinical conditions from the 2007 survey. Most conditions identified for independent management were related to lactation and relatively common problems, such as postpartum blues and hemorrhoids. The only item where preferential management was for referral was *dehiscence or infection of cesarean incision*, unlike the 2007 survey where none of the conditions demonstrated preferred referral for management. This finding may reflect the work environment of respondents, the majority of whom were employed in a hospital/medical center or by a physician. Such settings likely mandate physician followup following surgical intervention.

Newborn Conditions. All listed conditions were unlikely to be independently or collaboratively managed by the CNM/CM. Without exception, respondents indicated clear preference for referral of all listed conditions to another provider. For the majority of conditions, the percentage for referral increased. Only one condition, *uncoordinated/poor suck*, demonstrated a low preference for referral with an almost equal number preferring to

collaboratively manage. While 72% of respondents indicated providing newborn services, this care is likely limited to care immediately following birth with referral to neonatal specialists where abnormalities ensue.

Consistent with the 2007 task analysis, this survey failed to demonstrate that midwives independently manage newborn conditions. This finding may be due to restrictive institutional policies, insufficient midwifery educational program content and/or clinical experiences, or a combination of factors. The ACNM *Core Competencies for Basic Midwifery Practice* (2008) detail newborn care as a required competency stating, "Newborn Care: Independently manages the care of the well newborn during the first 28 days of life." This survey, as well as the past two task analyses, has raised concerns about the provision of newborn care by newly certified CNMs/CMs. The extent of newborn management should be carefully examined by midwifery educational programs, and future revisions of the ACNM core competencies might reconsider expectation that the CNM/CM independently manages the well newborn in the first month of life. It also would be useful if future surveys described the nature of normal care that is provided by new certificants, as well as the limitations placed on CNMs/CMs who desire providing newborn services.

Well-Woman/GYN Conditions. The conditions in this area demonstrated modest changes from the 2007 survey. Five items, where the preferred management was 'independent' on the 2007 survey, now demonstrated preference for collaborative management. These conditions included: *intermenstrual bleeding (reproductive age), dyspareunia, amenorrhea, perimenopausal/menopausal symptoms,* and *abnormal Pap test.* One item was identified for referral on the 2007 survey and for collaborative management on the current survey (*postmenopausal bleeding*). Three of the clinical conditions lacked clear consensus for management: *abnormal Pap test (atypia), perimenopausal/menopausal symptoms,* and *abnormal Pap test (dysplasia).* Conditions that had potential for cancer, were chronic in nature, were likely to require aggressive antibiotic intervention, or were likely to require surgical

intervention, were less likely to be independently managed. The extent of clinical experience in managing many of these conditions may have influenced independent management being limited to treatment of sexually transmitted infections, emergency contraception, vaginitis, and common menstrual problems.

Primary Care Conditions. Listed conditions were as likely to be independently managed as referred. Similar to the 2007 task analysis, those conditions that were independently managed were self-limiting and typically of short duration, commonly encountered in clinical practice (e.g., *substance abuse: cigarette smoking*), and amenable to treatment interventions. Conditions with 'referral' as the preferred management were of a more serious and/or chronic nature (e.g., *bipolar disorder, cholecystitis, osteoporosis, anxiety disorder, restless leg syndrome*). Four clinical conditions demonstrated a shift in management preference: *styes, substance abuse: ETOH, anaphylactic shock, cholecystitis,* and *insomnia.* There were 17 clinical conditions that demonstrated no clear consensus for either collaborative management or referral. Finally, *hyperlipidemia, obesity*, and *diabetes* were not included in the list of clinical conditions. Given the prevalence in the general population, management of these conditions should be determined. It also would be important to consider the inclusion of immunizations, an important component in health promotion and disease prevention. Increased attention in management of primary care clinical conditions in educational programs would be useful, given planned changes with the Affordable Health Care Act and the need for primary care providers (Iglehart, 2012). Greenberg and Greenberg (2007) have described the need for access to cost-effective primary healthcare services and a shift from treatment to management and prevention, a role that midwives would be well-positioned to provide.

It is clear from the clinical conditions results of this survey that CNMs/CMs new to practice care for women with a variety of clinical conditions that are not consistent with the "normal" or low-risk health care of women. In general, respondents were likely to independently manage conditions that were self-limiting and/or more easily amenable to treatment. However, newly

certified midwives collaboratively manage a wide range of complications, thus requiring a depth of knowledge and experience with the management of complications. Like the previous task analysis, CNMs/CMs refer almost all conditions related to neonatal care.

Free-Form Responses

Each section allowed respondents to provide comments about the tasks and clinical conditions provided in each area of clinical midwifery practice, and the nature of the practice arrangements. Respondents made particular note of practice variation based on clinical setting, restrictions on midwifery practice, confusion over item wording and the need for clearer definitions (e.g., collaboration). Several suggestions were made for tasks recommended for addition to future task analyses. These suggestions largely related to professional services (e.g., billing, coding, documentation) and professional issues. The latter may reflect certificants' knowledge of such content on past certification examinations. There were some tasks/clinical conditions identified for future surveys that were included in one area of midwifery practice but not others. For example, pre-eclampsia was an identified antenatal clinical condition but was not listed under intrapartum or postpartum practice areas. Placing a given clinical condition in a primary area of practice was done in an effort to keep the survey length manageable, minimizing subject burden. This decision should be reconsidered with additional task analysis surveys.

In ***summary,*** there were 38 tasks identified for elimination from the certification examination blueprint. Clinical conditions demonstrated relative stability in management from the last task analysis though there was an overall downward trend in the percentages for those that were independently managed. Primary care conditions demonstrated the greatest number of conditions without clear consensus for management. Independently managed primary care conditions were those that were straightforward and easily amenable to treatment. Antepartum, intrapartum, postpartum, newborn, and well-woman/GYN conditions demonstrated little change over the past three task analyses.

New weighting of tasks based on an average of overall ratings (importance and frequency) and participant-assigned weight, reflects the need for more questions addressing postpartum tasks and fewer questions addressing intrapartum tasks. Finally, when asked to judge the percentage of practice dealing with normal versus abnormal conditions, respondents indicated that 59% of practice was related to normal and 41% to abnormal conditions. This indicates the need to increase test emphasis on deviations from normal.

RECOMMENDATIONS

1. Directions for the survey need further clarification. There were several anecdotal comments indicating that some respondents did not understand how to respond to frequency and importance of clinical tasks, despite efforts to clarify from the last survey. Similarly, there were comments indicating that management of clinical tasks can vary with the nature and severity of the condition. Future surveys should continue efforts to clarify how participants are to respond to items.
2. Consider psychometric response scales that might foster timely response to the IMPORTANCE of task items. For example, use of a visual analogue scale would allow for rapid judgments that could reduce subject burden and allow for a wider range of statistical methods. Such scales have advantages over discrete Likert-type scales (Reips & Funke, 2008).
3. Consider prospective study designs to ascertain tasks performed by newly certified CNMs/CMs in clinical practice. Retrospective surveys, such as the current study, are known to have significant biases related to subject recall, and the temporal relationship is difficult to determine.
4. The addition of birth setting should be added to future surveys. Such information would allow for secondary analyses of essential tasks performed in a variety of settings where newly certified CNM/CMs practice.

5. For the item asking participants to assign a percentage to each area of midwifery practice for weighting certification examination items, develop procedures that force summing to 100%.
6. Add a completion bar to online survey task analyses. This feature was not available in the current version of REDCap but will be added to the next version and should be used in future analyses.
7. Further clarify survey instructions including suggestions for decreasing download time of the questionnaire.
8. Consider deletion of the 38 clinical tasks that were of low frequency and importance from the AMCB certification examination blueprint.
9. Clarity in the management of newborn clinical conditions is needed. Future task analysis work should carefully consider this area as none of the listed conditions were independently managed.
10. Management of primary care conditions demonstrated wide variation and lack of consensus in several areas. Rigorous examination of midwifery education and clinical participation in this area is warranted. In addition, the common primary care problems of *hyperlipidemia, diabetes,* and *obesity* should be added, along with *offering immunizations.*
11. Based on test weight specifications, consider the addition of more postpartum items and fewer items focusing on intrapartum care.
12. Consider structuring the certification examination to emphasize 59% normal and 41% abnormal conditions.

SUMMARY

This task analysis surveyed recently certified CNMs/CMs regarding the clinical tasks performed in midwifery practice. Data were also obtained regarding preferred management of varied clinical conditions and other select information used to inform the broader context of

entry-level midwifery practice. The survey was administered online and utilized one truncated form with an overall response rate of 49% and a completion rate of approximately 34%.

The primary purpose of the task analysis was to identify basic clinical tasks performed by newly certified midwives to allow for the design of a certification examination based on those basic tasks. Identified tasks also are used to update the examination test specifications (how questions are weighted across each area of practice) so that knowledge and skills related to those critical tasks are reflective of clinical practice.

Findings from this survey provide evidence of the need to reconsider test specifications in two particular areas of midwifery practice, intrapartum and postpartum. Data from the survey suggests the need to decrease intrapartum items and increase postpartum items. In addition, the percentage of items addressing patients with abnormalities should increase to about 40% of items, which is a substantial change from the last task analysis where participants reported that 34% of patients in practice had conditions that were abnormal.

Certification as a CNM/CM is intended to provide a mechanism to first and foremost, protect the public. The work of this task analysis survey contributes to that mission.

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Table 1. Demographic Characteristics of Respondents Completing Full Survey (N=377)

Age						
Completed Survey	**N**	**Mean**	**Std Dev**	**Minimum**	**Maximum**	**Missing**
Yes	377	35.10	7.71	20	57	2
No	130	35.92	8.40	24	60	3

Gender		
Gender	**Frequency**	**Percent**
Female	377	99.47
Missing	2	0.52

Race				
	Completed Surveys		**Incomplete Surveys**	
	Frequency	**Percent**	**Frequency**	**Percent**
American Indian or Alaska Native	2	0.53	2	1.55
Asian	8	2.12	2	1.55
Black or African American	31	8.20	8	6.20
Hispanic or Latino	18	4.76	2	1.55
Native Hawaiian or other Pacific Islander	0	0	1	0.78
White	309	81.75	109	84.50
Decline to Answer	10	2.65	5	3.88
Missing	1	0.26	4	3.00

Location of Practice		
State	**Frequency**	**Percentage**
AL	1	0.26%
AK	2	0.53%
AZ	4	1.06%
AR	0	0.00%
CA	33	8.71%
CO	9	2.37%
CT	9	2.37%

DC	4	1.06%
DE*	1	0.26%
FL	14	3.69%
GA	11	2.90%
HI*	0	0.00%
ID	2	0.53%
IL	22	5.80%
IN	4	1.06%
IA	5	1.32%
KS	3	0.79%
KY	3	0.79%
LA	2	0.53%
ME	3	0.79%
MD	7	1.85%
MA	10	2.64%
MI	16	4.22%
MN	5	1.32%
MS	0	0.00%
MO	4	1.06%
MT	1	0.26%
NE	3	0.79%
NV	2	0.53%
NH	0	0.00%
NJ	8	2.11%
NM	7	1.85%
NY	40	10.55%
NC	11	2.90%
ND	3	0.79%
OH	13	3.43%
OK	3	0.79%
OR	16	4.22%
PA	18	4.75%
RI	1	0.26%
SC	4	1.06%
SD	0	0.00%
TN	6	1.58%
TX	16	4.22%
UT	7	1.85%
VT	2	0.53%
VA	7	1.85%
WA	18	4.75%
WV*	2	0.53%
WI	7	1.85%

WY	1	0.26%
Other - Overseas, Licensed in US	5	1.32%
Other - Uniformed Services	6	1.58%
Decline to answer	8	2.11%

*There were one or more respondents from these states. These states were inadvertently left out but the survey was corrected following survey administrator notification.

Highest Degree Earned		
	Frequency	**Percent**
Master's Degree	366	96.83
PhD Degree	1	0.26
ND/DNP Degree	3	0.79
Other	8	2.12
Missing	1	0.26

Employment in Midwifery				
	Completed Surveys		**Incomplete Surveys**	
	Frequency	**Percent**	**Frequency**	**Percent**
Unemployed	20	5.28	4	3.13
Employed, but not in a midwife position	39	10.29	2	1.56
Full-time as a Midwife	269	70.98	103	80.47
Part-time as a Midwife	51	13.46	19	14.84
Missing	0	0.0	5	3.75

Primary Midwifery Employer		
	Frequency	**Percent**
(Nurse) Midwifery Group	39	12.07
Community Health Center	39	12.07
Educational Institution	8	2.48
Federal Government/Military	15	4.64
Health Maintenance Organization (HMO)	4	1.24
Hospital/Medical Center	89	27.55
Physician Group	91	28.17
Self-employed/solo practice	21	6.50
State/Local Government	5	1.55
Other	12	3.72
Missing	56	14.77

Certification				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
CM	4	1.25	2	1.61
CNM	316	98.75	122	98.39
Missing	59	15.56	9	6.76

Year First Certified				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
2008	32	10.00	10	8.20
2009	109	34.06	28	22.95
2010	90	28.13	50	40.98
2011	89	27.81	34	27.87
Missing	59	15.56	11	8.27

	Year First Licensed	
	Frequency	Percent
2008	28	8.81
2009	105	33.02
2010	95	29.87
2011	90	28.30
Missing	61	60.09

Practice Setting				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
Rural	28	8.72	7	5.65
Town (population less than 10,000)	18	5.61	7	5.65
City (population 10,001-50,000)	50	15.58	11	8.87
City (population 50,001-100,000)	56	17.45	19	15.32
City (population 100,001-250,000)	42	13.08	24	19.35
City (population over 250,000)	125	38.94	51	41.13
Decline to answer	2	0.62	5	4.03
Missing	58	15.3	9	6.76

Hospital Privileges				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
Yes	238	74.84	88	69.84
No	61	19.18	25	19.84
Pending	19	5.97	13	10.32
Missing	61	16.09	7	5.26

Hospital Staff Membership Through:		
	Frequency	Percent
Medical staff	153	67.70
Allied Health staff	73	32.30
Missing	153	40.36

Prescriptive Authority				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
Yes	287	89.13	101	75.93
No	18	5.59	7	5.26
Pending	17	5.28	14	10.52
Missing	57	15.03	11	8.27

Employed as an RN before Certification				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
No	66	20.50	25	20.00
Yes	256	79.50	100	80.00
Missing	57	15.03	8	6.01

Before Certification, Worked as an RN for:				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
Less than 1 year	16	6.69	8	8.79
1-3 years	55	23.01	17	18.68
4-6 years	52	21.76	25	27.47
7-10 years	56	23.43	13	14.29
11-15 years	35	14.64	13	14.29
16-20 years	10	4.18	6	6.59
More than 20 years	15	6.28	9	9.89
Missing	140	36.93	42	31.57

Other Certifications				
	Complete Surveys		Incomplete Surveys	
	Frequency	Percent	Frequency	Percent
Midwife Only	217	57.26%	78	58.65%
Family Nurse Practitioner	9	2.37%	3	2.26%
Women's Health Care Nurse Practitioner	67	17.68%	27	20.30%
Adult Nurse Practitioner	3	0.79%	1	0.75%
Neonatal Nurse Practitioner	0	0.00%	1	0.75%
Psych-Mental Health Nurse Practitioner	0	0.00%	0	0.00%
Other	10	2.64%	3	2.26%
No Certification Information/Missing	77	20.32%	22	18.05%

Table 2. Clinical Tasks across the Six Areas of Midwifery Practice: Antepartum, Intrapartum, Postpartum, Newborn, Well-Woman/Gynecology, and Primary Care

Antepartum					
Task	**N**	**Frequency Mean (SD) Range**	**Importance Mean (SD) Range**	**Unweighted Composite Score**	**Recommended for Removal, Unweighted Composite ≤5**
Evaluates for presumptive signs of pregnancy.	380	4.25 (1.44) 1-6	3.88 (0.95) 1-5	8.14	
Screens for violence or abuse.	383	5.28 (1.04) 2-6	4.55 (0.64) 2-5	9.83	
Laboratory tests to determine baseline values.	380	5.83 (0.48) 1-6	4.78 (0.42) 3-5	10.61	
Assesses acceptance of pregnancy.	383	5.28 (0.97) 2-6	4.24 (0.74) 2-5	9.52	
Supports for mothering role development.	381	4.85 (1.19) 1-6	4.08 (0.79) 2-5	8.93	
Evaluates bony pelvis and pelvic type.	384	3.97 (1.58) 1-6	3.22 (1.02) 1-5	7.19	
Refers to community resources as indicated.	381	4.67 (1.24) 1-6	4.15 (0.73) 2-5	8.83	
Promotes the involvement of parents and families.	377	5.26 (0.90) 1-6	4.22 (0.73) 2-5	9.48	
Identifies deviations from normal pregnancy.	379	5.45 (0.99) 2-6	4.86 (0.36) 3-5	10.31	
Performs sonography to establish gestational age.*	373	2.26 (1.79) 1-6	3.07 (1.18) 1-5	5.35	
Orders sonography to establish gestational age.	378	4.38 (1.39) 1-6	3.89 (0.87) 2-5	8.26	
Performs sonogram to rule out fetal abnormality.	**373**	**1.48 (1.22) 1-6**	**2.62 (1.30) 1-5**	**4.11**	**X**

Refers for sonogram to rule out fetal abnormality.	377	5.02 (1.34) 1-6	4.16 (0.85) 1-5	9.18	
Orders biophysical profile.	374	3.10 (1.03) 1-6	4.04 (0.81) 1-5	7.13	
Interprets biophysical profile results.	375	3.82 (1.67) 1-6	4.31 (0.82) 1-5	8.12	
Performs sonography for amniotic fluid volume, presentation, and/or placental location.*	374	2.30 (1.49) 1-6	3.36 (1.24) 1-5	5.67	
Evaluates historical, physical and laboratory data to determine gestational age.	373	5.51 (0.92) 1-6	4.63 (0.59) 2-5	10.14	
Provides counseling regarding pregnancy options.	372	3.53 (1.59) 1-6	4.06 (0.97) 1-5	7.58	
Questions about fetal movement; instructs in fetal movement monitoring.	374	5.73 (0.72) 1-6	4.67 (0.61) 2-5	10.39	
Measures abdomen by centimeter tape and/or fingerbreadth.	375	5.87 (0.51) 1-6	4.49 (0.67) 2-5	10.35	
Orders and interprets nonstress tests.	373	4.01 (1.22) 1-6	4.54 (0.64) 2-5	8.54	
Prepares for expected mode of birth.	367	5.36 (0.97) 1-6	4.38 (0.72) 1-5	9.75	
Questions and counsels regarding possible teratogen exposure.	372	5.22 (1.06) 1-6	4.39 (0.68) 3-5	9.6	
Determines menstrual history and date of LNMP.	372	5.71 (0.77) 1-6	4.59 (0.61) 2-5	10.3	
Determines presence and level of hCG in the serum or urine.	370	3.93 (1.50) 1-6	3.81 (0.93) 1-5	7.74	

Identifies the need for genetic counseling.	369	4.49 (1.45) 1-6	4.19 (0.78) 2-5	8.68	
Evaluates current nutritional status.	374	5.11 (1.22) 1-6	4.20 (0.74) 2-5	9.31	
Determines BMI.	372	4.74 (1.46) 1-6	3.78 (0.89) 1-5	8.53	
Counsels about normal physiology of pregnancy.	369	5.75 (0.55) 2-6	4.55 (0.60) 3-5	10.3	
Orders/obtains/interprets laboratory work.	372	5.86 (0.45) 2-6	4.75 (0.46) 3-5	10.61	
Performs Leopold's maneuvers on abdomen.	373	5.69 (0.70) 1-6	4.55 (0.66) 2-5	10.24	
Prepares for pain management in labor.	370	5.47 (0.88) 1-6	4.41 (0.69) 2-5	9.88	
Determines appropriateness of vaginal birth after cesarean.	369	3.88 (1.66) 1-6	4.41 (0.74) 1-5	8.3	
Evaluates serial hCG levels.*	366	2.94 (1.16) 1-6	3.97 (0.83) 1-5	6.91	
Evaluates for and manages A1 diabetes in pregnancy.	368	3.20 (1.57) 1-6	4.18 (0.92) 1-5	7.39	
Evaluates for and manages A2 diabetes in pregnancy.	367	2.51 (1.44) 1-6	3.82 (1.06) 1-5	6.34	
Counsels about alternate and complementary therapies.	372	3.66 (1.38) 1-6	3.56 (0.87) 1-5	7.22	

Intrapartum					
Task	**N**	**Frequency Mean (SD) Range**	**Importance Mean (SD) Range**	**Unweighted Composite Score**	**Recommended for Removal, Unweighted Composite ≤5**
Determines fetal presentation.	326	5.91 (0.34) 4-6	4.89 (0.32) 4-5	10.8	
Plan for nutritional needs.	322	5.30 (1.19) 1-6	4.16 (0.88) 1-5	9.46	
Monitors labor pattern.	324	5.06 (1.26) 1-6	4.38 (0.78) 2-5	9.44	
Performs artificial rupture of membranes.	325	3.52 (0.98) 1-6	4.14 (0.90) 2-5	7.66	
Places intrauterine pressure catheter.*	323	2.63 (1.05) 1-6	4.02 (0.98) 1-5	6.66	
Plan for decreasing discomfort in labor.	323	5.72 (0.60) 3-6	4.70 (0.54) 2-5	10.41	
Plan of care for managing deviations from the normal progress of labor.	325	4.78 (1.22) 2-6	4.69 (0.56) 2-5	9.48	
Administers pudendal anesthesia.	**314**	**1.11 (0.42) 1-6**	**2.42 (1.04) 1-5**	**3.54**	**x**
Delivers infant in mother's choice of appropriate supportive modalities.	320	4.18 (1.77) 1-6	4.29 (0.81) 1-5	8.48	
Delivers infant in the occiput posterior position.*	324	2.97 (1.11) 2-6	4.36 (0.73) 1-5	7.33	
Manages nuchal cord.	326	4.13 (1.19) 2-6	4.68 (0.54) 3-5	8.82	
Management of the third stage of labor.	325	4.34 (1.49) 1-6	4.29 (0.84) 1-5	8.63	
Delivers placenta and membranes by maternal effort and/or gentle manual traction.	320	5.38 (0.89) 2-6	4.62 (0.58) 3-5	10.01	

Repairs episiotomy.	323	4.48 (1.21) 2-6	4.77 (0.47) 2-5	9.25	
Repairs 3rd degree lacerations.	**322**	**1.33 (0.69) 1-6**	**3.11 (1.26) 1-5**	**4.45**	**X**
Repairs 4th degree lacerations.	**318**	**1.00 (0.06) 1-2**	**2.43 (1.34) 1-5**	**3.44**	**X**
Repairs lacerations of the cervix.	**322**	**1.15 (0.53) 1-6**	**2.70 (1.34) 1-5**	**3.85**	**X**
Inspects placenta and membranes.	321	5.89 (0.44) 2-6	4.74 (0.49) 3-5	10.63	
Performs manual exploration of the uterus.*	326	2.18 (0.79) 1-6	4.10 (0.89) 1-5	6.27	
Evaluates onset of labor.	325	5.47 (0.86) 2-6	4.63 (0.59) 2-5	10.1	
Determines status of amniotic membranes.	323	4.77 (1.25) 2-6	4.67 (0.57) 3-5	9.43	
Orders/administers cervical ripening agents.	320	3.34 (1.24) 1-6	4.32 (0.79) 1-5	7.66	
Evaluates fetal condition following rupture of membranes.	321	5.36 (1.08) 1-6	4.71 (0.55) 2-5	10.08	
Orders and manages amnioinfusion.*	322	2.21 (1.03) 1-6	3.71 (1.09) 1-5	5.92	
Provides emotional support.	320	5.79 (0.57) 3-6	4.77 (0.48) 2-5	10.57	
Manages care of the woman with an epidural.	318	4.24 (1.55) 1-6	4.29 (0.91) 1-5	8.56	
Administers local anesthesia.	318	3.63 (1.02) 1-6	4.37 (0.77) 1-5	8	
Delivers infant with mother in various positions.	323	4.07 (1.35) 1-6	4.48 (0.67) 3-5	8.55	
Delivers baby in breech position.**	**319**	**1.12 (0.33) 1-2**	**3.61 (1.24) 1-5**	**4.74**	**x**

Delivers baby in face presentation.**	**319**	**1.30 (0.48) 1-3**	**3.59 (1.19) 1-5**	**4.89**	**x**
Delivers baby with vacuum.	**319**	**1.08 (0.30) 1-3**	**2.66 (1.31) 1-5**	**3.74**	**x**
Delivers baby with forceps.	**318**	**1.00 (0.06) 1-2**	**2.08 (1.27) 1-5**	**3.09**	**x**
First Assists with Cesarean birth.***	320	2.31 (1.49) 1-6	3.23 (1.25) 1-5	5.55	
Delays cord clamping until pulsations have ceased.	318	4.77 (1.33) 1-6	4.02 (0.89) 2-5	8.81	
Evaluates rectal integrity.	321	4.55 (1.66) 1-6	4.49 (0.69) 2-5	9.05	
Controls hemorrhage.	319	4.37 (1.56) 2-6	4.87 (0.35) 3-5	9.24	
Performs bimanual compression.*	317	2.41 (0.99) 1-6	4.67 (0.59) 1-5	7.08	
Evaluates etiology of postpartum hemorrhage.	318	4.36 (1.65) 1-6	4.83 (0.40) 3-5	9.18	
Estimates gestational age and fetal weight.	317	5.23 (1.24) 1-6	4.31 (0.82) 1-5	9.54	
Determines position of presenting part.	321	5.67 (0.67) 3-6	4.70 (0.56) 3-5	10.37	
Evaluates physical response to process of labor.	315	5.71 (0.62) 2-6	4.58 (0.64) 2-5	10.29	
Monitors fetal wellbeing and response to contractions.	313	4.91 (1.54) 1-6	4.37 (0.82) 1-5	9.3	
Monitors progress of labor.	316	5.69 (0.71) 2-6	4.69 (0.57) 2-5	10.38	
Applies internal fetal scalp electrode.*	312	2.61 (0.95) 1-6	4.16 (0.90) 1-5	6.78	
Uses complementary analgesic therapies.	315	3.39 (1.62) 1-6	3.90 (0.95) 1-5	7.29	
Monitors for side effects of medications.	311	3.36 (1.74) 1-6	4.27 (0.81) 1-5	7.64	

Promotes effective second stage of labor progress.	317	5.65 (0.65) 2-6	4.66 (0.62) 2-5	10.31	
Performs episiotomies when indicated.*	314	2.50 (1.38) 1-6	4.18 (0.88) 1-5	6.69	
Initiates maneuvers to resolve shoulder dystocia.	312	3.00 (1.56) 1-6	4.96 (0.22) 3-5	7.95	
Determines separation of placenta.	316	5.78 (0.65) 2-6	4.67 (0.56) 3-5	10.45	
Estimates blood loss.	315	5.98 (0.17) 4-6	4.45 (0.69) 2-5	10.43	
Examines cervix, vagina and perineum for lacerations.	315	5.94 (0.30) 3-6	4.81 (0.43) 3-5	10.75	
Sends placenta to pathology.*	313	2.25 (0.86) 1-6	3.36 (1.00) 1-5	5.6	
Orders pitocin for augmentation of labor.	316	3.27 (1.17) 1-6	4.08 (0.90) 1-5	7.35	
Manages chorioamnionitis.	311	3.21 (1.55) 1-6	4.42 (0.73) 1-5	7.65	
Manages spontaneous labor with a prior Cesarean birth.*	313	2.75 (1.43) 1-6	4.35 (0.88) 1-5	7.11	
Initiates labor induction for women electing VBAC. *	310	1.87 (1.21) 1-6	3.76 (1.21) 1-5	5.64	
Manages care of the woman having a waterbirth. *	311	2.01 (1.52) 1-6	3.74 (1.07) 1-5	5.76	

Postpartum					
Task	**N**	**Frequency Mean (SD) Range**	**Importance Mean (SD) Range**	**Unweighted Composite Score**	**Recommended for Removal, Unweighted Composite ≤5**
Provides information about lactation.	300	4.95 (1.10) 2-6	4.43 (0.65) 3-5	9.37	
Refers for lactation consultation.	304	4.22 (1.49) 1-6	4.35 (0.74) 1-5	8.58	
Performs postpartum physical exam.	304	5.64 (0.85) 1-6	4.65 (0.57) 2-5	10.28	
Screens for symptoms of depression.	304	4.88 (1.67) 1-6	4.49 (0.70) 2-5	9.37	
Manages vaginal, perineal or rectal hematomas.*	305	2.80 (1.57) 1-6	4.06 (0.85) 1-5	6.85	
Manage pain relief.	302	4.97 (1.42) 1-6	4.38 (0.72) 2-5	9.35	
Assesses for postanesthesia complications or side effects.	304	3.31 (1.76) 1-6	4.00 (0.94) 1-5	7.31	
Orders maternal immunizations.	305	3.96 (1.71) 1-6	4.02 (0.97) 1-5	7.98	
Discusses plans for continued health care.	297	5.46 (0.97) 1-6	4.41 (0.71) 2-5	9.87	
Evaluates for postpartum abnormalities.	304	5.37 (1.13) 1-6	4.61 (0.57) 3-5	9.98	
Evaluates and manages post-Cesarean care.*	302	2.86 (1.55) 1-6	3.80 (1.04) 1-5	6.67	
Manages postpartum hemorrhoids.	299	3.99 (1.37) 1-6	3.99 (0.80) 2-5	7.96	
Lance external thrombosed hemorrhoids.	**302**	**1.17 (0.62) 1-6**	**2.38 (1.12) 1-5**	**3.55**	**x**

Newborn					
Task	**N**	**Frequency Mean (SD) Range**	**Importance Mean (SD) Range**	**Unweighted Composite Score**	**Recommended for Removal, Unweighted Composite <5**
Promotes adequate respirations by stimulating the newborn.	241	4.43 (1.65) 1-6	4.66 (0.62) 2-5	9.1	
Supports newborn thermoregulation.	236	5.27 (1.36) 1-6	4.65 (0.65) 2-5	9.9	
Evaluates well-being of the newborn by Apgar scoring.	239	3.90 (1.96) 1-6	4.33 (0.83) 2-5	8.22	
Initiates chemoprophylaxis.*	235	2.99 (2.00) 1-6	3.65 (1.13) 1-5	6.63	
Provides education about newborn feeding.	237	5.27 (1.11) 1-6	4.60 (0.66) 1-5	9.86	
Observes and clears infant's breathing passages.	238	4.48 (1.63) 1-6	4.41 (0.78) 2-5	8.87	
Maintains infant's temperature.	238	5.41 (1.22) 1-6	4.66 (0.62) 2-5	10.07	
Examines cord for umbilical vessels.	238	5.71 (0.83) 1-6	4.38 (0.78) 2-5	10.09	
Orders and/or administers Vitamin K.	239	3.48 (2.12) 1-6	3.88 (1.06) 1-5	7.34	
Educates about breastfeeding.	239	5.05 (1.16) 1-6	4.59 (0.62) 2-5	9.63	
Educates about formula feeding.	240	3.51 (1.64) 1-6	3.89 (0.96) 1-5	7.4	
Performs complete newborn physical exam.*	239	2.61 (1.97) 1-6	3.95 (1.14) 1-5	6.57	
Manages infants with problems.*	239	1.97 (1.46) 1-6	3.65 (1.21) 1-5	5.63	

Obtains or arranges for blood specimens from infant.*	238	2.29 (2.04) 1-6	3.38 (1.32) 1-5	5.69	
Orders immunizations.	238	1.47 (1.21) 1-6	2.95 (1.34) 1-5	4.43	**X**
Creates an environment for healthy maternal-infant interaction.	239	5.42 (1.12) 1-6	4.56 (0.76) 1-5	9.97	
Provides guidance concerning newborn care.	240	4.39 (1.59) 1-6	4.24 (0.90) 1-5	8.64	
Orders and interprets bilirubin levels.**	240	1.41 (0.88) 1-6	3.26 (1.26) 1-5	4.68	**X**
Manages well-baby visits past 1 week of age.***	238	1.61 (1.51) 1-6	3.06 (1.32) 1-5	4.66	**x**
Evaluates infant for transition to extrauterine life.	238	4.28 (2.03) 1-6	4.23 (1.07) 1-5	8.55	
Resuscitates infant.*	238	2.18 (1.15) 1-6	4.58 (0.84) 1-5	6.77	
Performs infant intubation with laryngoscope.**	234	1.11 (0.32) 1-2	3.59 (1.29) 1-5	4.71	**X**
Collects cord blood.	235	4.86 (1.54) 1-6	3.94 (0.95) 2-5	8.78	
Obtains cord gases when necessary.	238	3.08 (1.75) 1-6	3.93 (0.97) 1-5	7.01	
Performs gestational age examination.*	238	2.68 (1.84) 1-6	3.41 (1.13) 1-5	6.1	
Recognizes minor malformations.*	234	2.85 (1.64) 1-6	4.08 (1.01) 1-5	6.93	
Provides guidance and counseling regarding male circumcision.	237	4.09 (1.59) 1-6	3.87 (0.99) 1-5	7.95	
Performs male infant circumcision.	**238**	**1.21 (0.85) 1-6**	**2.07 (1.29) 1-5**	**3.28**	**x**

Manages infant who requires phototherapy.	**233**	**1.16 (0.53) 1-6**	**2.51 (1.32) 1-5**	**3.67**	**x**
Orders/performs newborn auditory screening.	**231**	**1.59 (1.46) 1-6**	**2.53 (1.37) 1-5**	**4.14**	**x**

Well-Woman/GYN					
Task	**N**	**Frequency Mean (SD) Range**	**Importance Mean (SD) Range**	**Unweighted Composite Score**	**Recommended for Removal, Unweighted Composite ≤5**
Gathers information about gynecological history and health status.	279	5.75 (0.76) 2-6	4.73 (0.49) 3-5	10.47	
Counsels about prevention of sexually transmitted infections.	278	5.29 (1.02) 2-6	4.65 (0.57) 3-5	9.94	
Assesses for high-risk sexual behavior.	276	5.28 (1.02) 2-6	4.52 (0.63) 3-5	9.8	
Assesses for sexually transmitted infections.	275	5.15 (1.01) 2-6	4.63 (0.55) 2-5	9.78	
Treats for sexually transmitted infections.	277	4.19 (1.52) 1-6	4.72 (0.48) 3-5	8.92	
Treats partner(s) for sexually transmitted infections.*	274	2.97 (1.70) 1-6	4.11 (0.99) 1-5	7.07	
Removes condyloma.*	276	2.23 (1.24) 1-6	3.69 (0.99) 1-5	5.93	
Screens for indications for contraceptive methods.	280	5.46 (0.92) 1-6	4.70 (0.53) 3-5	10.16	
Provides information on contraceptive options.	278	5.43 (0.87) 1-6	4.70 (0.51) 3-5	10.12	
Provides guidance regarding natural family planning methods.	276	3.42 (1.39) 1-6	4.11 (0.82) 2-5	7.53	
Instruction regarding use of condoms.	275	4.97 (1.15) 1-6	4.54 (0.62) 2-5	9.51	
Guidance regarding chemical methods of contraception.	279	3.13 (1.63) 1-6	3.73 (1.05) 1-5	6.86	

Diaphragm fitting and instruction.	**276**	**1.75 (0.92) 1-6**	**3.25 (1.08) 1-5**	**5**	**X**
Counsels for the cervical cap method of contraception.	**276**	**1.34 (0.77) 1-6**	**2.73 (1.15) 1-5**	**4.08**	**X**
Provides cervical cap fitting and instruction.	**274**	**1.24 (0.68) 1-6**	**2.61 (1.13) 1-5**	**3.85**	**X**
Guidance for the prevention of toxic shock syndrome.*	274	2.62 (1.32) 1-6	3.63 (1.01) 1-5	6.24	
Administers injectable contraceptive.*	278	2.93 (1.42) 1-6	3.86 (1.04) 1-5	6.78	
Provides paracervical block for IUD insertion.	**278**	**1.15 (0.56) 1-6**	**2.34 (1.02) 1-5**	**3.49**	**X**
Inserts intrauterine devices (i.e., paragard, Mirena IUS).	276	3.46 (1.40) 1-6	4.48 (0.73) 1-5	7.95	
Manages women using oral contraceptives.	274	4.52 (1.20) 1-6	4.62 (0.58) 3-5	9.13	
Prescribes oral, injectable and emergency contraceptives.	276	3.89 (1.63) 1-6	4.48 (0.79) 1-5	8.37	
Performs Implanon insertion.*	275	1.62 (1.11) 1-6	3.49 (1.12) 1-5	5.11	
Counsels for permanent sterilization.	278	3.18 (1.24) 1-6	4.11 (0.83) 2-5	7.29	
Evaluates for/performs Essure and/or Adiana permanent sterilization.	**271**	**1.29 (0.82) 1-6**	**2.55 (1.17) 1-5**	**3.86**	**x**
Performs a wet mount or culture for diagnosis of vaginitis.	277	4.20 (1.33) 1-6	4.41 (0.76) 1-5	8.6	
Prescribes pharmaceuticals and/or alternative therapies	275	4.52 (1.20) 1-6	4.47 (0.66) 2-5	9.01	

for treatment of vaginitis.					
Treats condyloma using cryotherapy.	**272**	**1.45 (0.91) 1-6**	**3.03 (1.16) 1-5**	**4.48**	**x**
Obtains Papanicolaou test.	278	5.27 (0.91) 1-6	4.75 (0.48) 3-5	10.04	
Arranges for colposcopy.	278	4.43 (1.56) 1-6	4.55 (0.62) 2-5	8.97	
Performs colposcopy.	**273**	**1.14 (0.68) 1-6**	**2.90 (1.19) 1-5**	**4.05**	**x**
Evaluates woman for menstrual irregularities.	276	4.40 (1.27) 1-6	4.40 (0.67) 2-5	8.8	
Performs endometrial biopsy.	**273**	**1.60 (1.06) 1-6**	**3.27 (1.15) 1-5**	**4.89**	**x**
Performs endocervical curettage.	**274**	**1.17 (0.68) 1-6**	**2.66 (1.19) 1-5**	**3.82**	**x**
Performs pre-hysterectomy and post-hysterectomy counseling.	**273**	**1.56 (0.95) 1-6**	**2.79 (1.11) 1-5**	**4.36**	**x**
First assists at GYN surgery.	**272**	**1.13 (0.55) 1-6**	**2.21 (1.09) 1-5**	**3.35**	**x**
Evaluation of infertility.*	276	2.63 (1.23) 1-6	3.60 (0.93) 1-5	6.24	
Obtains data regarding signs and symptoms of the climacteric/menopause.	275	3.19 (1.36) 1-6	3.99 (0.86) 1-5	7.16	
Initiates a plan to manage menopause.	279	3.01 (1.43) 1-6	3.98 (0.89) 1-5	6.98	
Prescribes hormone replacement therapy.*	276	2.35 (1.33) 1-6	3.86 (0.92) 1-5	6.2	
Counsels about management of perimenopausal and menopausal symptoms.	279	3.21 (1.40) 1-6	4.05 (0.85) 1-5	7.26	
Assess woman for vulvar disease.	275	3.28 (1.57) 1-6	4.03 (0.87) 1-5	7.32	
Performs vulvar biopsy.	**271**	**1.22 (0.59) 1-6**	**2.83 (1.15) 1-5**	**4.05**	**x**

Counsels regarding physiological and emotional changes throughout the menstrual cycle.	276	4.28 (1.28) 1-6	4.21 (0.78) 2-5	8.49	
Guidance for the prevention and recognition of premenstrual syndrome.	278	3.50 (1.37) 1-6	3.91 (0.90) 1-5	7.41	
Evaluates/manages woman diagnosed with premenstrual syndrome.*	276	2.87 (1.41) 1-6	3.83 (0.91) 1-5	6.72	
Refers woman for pelvic ultrasound.	275	3.33 (1.24) 1-6	4.13 (0.78) 2-5	7.46	
Performs sexual assault examination.	**275**	**1.23 (0.57) 1-6**	**3.36 (1.20) 1-5**	**4.6**	**x**
Provides counseling following a sexual assault.*	277	1.90 (0.99) 1-6	3.94 (1.04) 1-5	5.84	
Refers for gynecological sonogram.	274	3.00 (1.28) 1-6	3.93 (0.90) 1-5	6.93	
Performs gynecological sonogram.	**269**	**1.12 (0.48) 1-5**	**2.34 (1.12) 1-5**	**3.43**	**x**
Prescribes pharmaceuticals for treatment of infertility.	**272**	**1.53 (0.80) 1-5**	**2.84 (1.12) 1-5**	**4.38**	**x**
Performs artificial insemination.	**273**	**1.10 (0.45) 1-5**	**2.03 (1.07) 1-5**	**3.12**	**x**
Expectantly manages ectopic pregnancy.***	276	2.08 (1.19) 1-6	3.87 (1.13) 1-5	5.94	
Medically manages ectopic pregnancy.	**272**	**1.41 (0.83) 1-6**	**3.24 (1.25) 1-5**	**4.67**	**x**
Orders Rh immunoglobulin when indicated.	273	4.47 (1.61) 1-6	4.57 (0.67) 1-5	9.03	

Primary Care					
Task	**N**	**Frequency Mean (SD) Range**	**Importance Mean (SD) Range**	**Unweighted Composite Score**	**Recommended for Removal, Unweighted Composite ≤5**
Interviews about medical history.	148	5.59 (0.88) 2-6	4.68 (0.52) 3-5	10.26	
Assesses/refers for risk of domestic violence or sexual abuse.	149	5.03 (1.30) 2-6	4.58 (0.62) 3-5	9.6	
Assesses mental and emotional status.	149	5.38 (0.96) 2-6	4.52 (0.63) 3-5	9.89	
Counsels regarding use of medications, recreational drugs, smoking, alcohol, and caffeine.	146	5.53 (0.80) 3-6	4.59 (0.59) 3-5	10.11	
Plan for substance abuse and refers as indicated.	149	3.17 (1.59) 1-6	4.04 (0.95) 1-5	7.19	
Counsels about exposure to environmental or work hazards.	147	3.66 (1.62) 1-6	3.87 (0.93) 1-5	7.5	
Examines eyes for abnormalities.*	147	2.36 (1.48) 1-6	3.20 (1.10) 1-5	5.58	
Evaluates breasts for abnormalities.	148	5.45 (0.88) 3-6	4.62 (0.56) 3-5	10.07	
Performs breast biopsy.	**144**	**1.01 (0.12) 1-2**	**2.14 (1.09) 1-5**	**3.16**	**X**
Evaluates for cardiac abnormalities.	146	4.72 (1.52) 1-6	4.09 (0.92) 1-5	8.83	
Inspects skin for abnormalities.	147	4.52 (1.42) 1-6	4.03 (0.90) 2-5	8.54	
Performs skin biopsy.	**144**	**1.20 (0.51) 1-3**	**2.37 (1.16) 1-5**	**3.57**	**X**

Performs removal of abnormal lesions.	**143**	**1.50 (0.88) 1-6**	**2.41 (1.15) 1-5**	**3.94**	**X**
Evaluates/manages neurological abnormalities.	147	3.24 (1.30) 1-6	3.76 (1.00) 1-5	6.99	
Evaluates for musculoskeletal abnormalities.	144	3.32 (1.56) 1-6	3.37 (1.09) 1-5	6.67	
Performs cortisone injections.	**143**	**1.06 (0.36) 1-4**	**1.96 (1.04) 1-5**	**3.02**	**X**
Evaluates for abdominal abnormalities.	144	3.87 (1.68) 1-6	3.79 (1.06) 1-5	7.66	
Assesses for signs of genitourinary infection.	146	4.85 (1.25) 1-6	4.36 (0.69) 2-5	9.2	
Evaluates for vaginal, cervical, uterine and adnexal abnormalities.	147	5.34 (0.97) 2-6	4.55 (0.58) 3-5	9.88	
Evaluates/ manages swelling or varicosities of the extremities.	148	3.43 (1.52) 1-6	3.69 (1.01) 1-5	7.11	
Assesses high risk sexual behavior.	147	4.99 (1.18) 2-6	4.34 (0.74) 3-5	9.32	
Educates about safe sexual practices.	147	5.23 (1.06) 2-6	4.58 (0.60) 3-5	9.82	
Assesses for mood disorders.	146	4.47 (1.34) 1-6	4.15 (0.84) 2-5	8.62	
Treats for mood disorders.*	143	2.63 (1.19) 1-6	3.63 (1.11) 1-5	6.28	
Counsels regarding sexual satisfaction or dysfunction.	147	3.94 (1.39) 1-6	4.02 (0.86) 1-5	7.97	
Counsels for sexual disorders.*	146	2.65 (1.30) 1-6	3.59 (1.03) 1-5	6.24	
Prescribes maintenance medications.*	146	2.60 (1.16) 1-6	3.55 (1.05) 1-5	6.17	
Orders immunizations.	147	3.80 (1.43) 1-6	3.97 (0.88) 1-5	7.78	

Orders standard screening tests.	146	4.34 (1.34) 1-6	4.30 (0.73) 3-5	8.64	
Evaluates and treats minor wounds.*	146	2.05 (0.98) 1-6	3.12 (1.07) 1-5	5.18	
Sutures minor wounds.	**145**	**1.35 (0.75) 1-6**	**2.62 (1.16) 1-5**	**3.98**	**X**

*These items had a composite score of $\geq$ 5 but the frequency score may have been < 3 or the importance score < 2. Each of these items was reviewed by the Research Committee and the AMCB Board of Directors for decision to recommend retention or elimination.

**The AMCB Board of Directors voted to retain these items.

***The AMCB Board of Directors voted to eliminate these items.

Table 3. Management of Clinical Conditions by Area of Midwifery Practice

Antepartum					
Clinical Condition	**N**	**Independently Manage**	**Collaboratively Manage**	**Refer**	**Mean (SD)**
Constipation	372	**368 (98.92%)**	3 (0.81%)	1 (0.27%)	1.02 (0.23)
Ligament Pain	368	**352 (95.65%)**	15 (4.08%)	1 (0.27%)	1.06 (0.34)
Genital Colonization of GBS	371	**354 (95.42%)**	15 (4.04%)	2 (0.54%)	1.10 (0.51)
Leg Cramps	369	**334 (90.51%)**	33 (8.94%)	2 (0.54%)	1.12 (0.46)
Hemorrhoids, Pregnancy-related	369	**330 (89.43%)**	38 (10.3%)	1 (0.27%)	1.12 (0.38)
Maternal Non-Immune Rubella Status	369	**328 (88.89%)**	38 (10.3%)	3 (0.81%)	1.25 (0.79)
Rh Negative Mother (Unsensitized)	367	**315 (85.83%)**	48 (13.08%)	4 (1.09%)	1.34 (0.91)
Lower Back Pain	368	**271 (73.64%)**	95 (25.82%)	2 (0.54%)	1.33 (0.63)
Inverted Nipple	371	**261 (70.35%)**	95 (25.61%)	15 (4.04%)	1.54 (1.03)
Cystitis	366	**251 (68.58%)**	96 (26.23%)	19 (5.19%)	1.72 (1.23)
Sleep Difficulty: Restless Leg Syndrome	370	**236 (63.78%)**	122 (32.97%)	12 (3.24%)	1.58 (0.99)
Headache, Pregnancy-related	372	**234 (62.9%)**	136 (36.56%)	2 (0.54%)	1.47 (0.74)
Varicosities (vulvar and lower extremities)	372	**234 (62.9%)**	133 (35.75%)	5 (1.34%)	1.58 (0.91)
Esophagitis/Gastric Reflux Disease	367	**230 (62.67%)**	130 (35.42%)	7 (1.91%)	1.62 (0.98)
Carpal Tunnel Syndrome	369	**227 (61.52%)**	117 (31.71%)	25 (6.78%)	1.72 (1.17)
Anemia: Normocytic	370	**224 (60.54%)**	141 (38.11%)	5 (1.35%)	1.68 (1.02)

Varicosities (vulvar)	370	**220 (59.46%)**	143 (38.65%)	7 (1.89%)	1.66 (0.98)
Decreased Fetal Movement	370	**218 (58.92%)**	148 (40%)	4 (1.08%)	1.81 (1.15)
Skin Infestations in Pregnancy	370	**203 (54.86%)**	156 (42.16%)	11 (2.97%)	1.90 (1.21)
Anemia: Microcytic	368	**200 (54.35%)**	166 (45.11%)	2 (0.54%)	1.74 (0.99)
Large/Small Fetus	369	35 (9.49%)	**324 (87.8%)**	10 (2.71%)	3.07 (1.08)
Vaginal Bleeding - Second or Third Trimester	371	30 (8.09%)	**315 (84.91%)**	26 (7.01%)	3.08 (1.12)
Oligohydramnios	369	35 (9.49%)	**309 (83.74%)**	25 (6.78%)	3.38 (1.11)
Polyhydramnios	366	31 (8.47%)	**306 (83.61%)**	29 (7.92%)	3.39 (1.10)
Hypertensive Disorder of Pregnancy without Proteinuria	369	16 (4.34%)	**307 (83.2%)**	46 (12.47%)	3.47 (1.07)
Pruritic Entities in Pregnancy	369	46 (12.47%)	**306 (82.93%)**	17 (4.61%)	3.00 (1.14)
Mood Disorder: Depression	370	53 (14.32%)	**290 (78.38%)**	27 (7.3%)	2.74 (1.19)
Intrauterine Fetal Death	366	10 (2.73%)	**276 (75.41%)**	80 (21.86%)	3.83 (1.00)
Hypothyroidism in Pregnancy	365	44 (12.05%)	**275 (75.34%)**	46 (12.6%)	3.28 (1.26)
Hepatitis Antigen(s) (+)	368	19 (5.16%)	**275 (74.73%)**	74 (20.11%)	3.67 (1.10)
Atypical Antibody in Serum	368	8 (2.17%)	**275 (74.73%)**	85 (23.1%)	3.90 (0.93)
Mood Disorder: Anxiety	369	68 (18.43%)	**275 (74.53%)**	26 (7.05%)	2.54 (1.18)
Preterm Labor	370	8 (2.16%)	**271 (73.24%)**	91 (24.59%)	3.83 (1.00)
Preeclampsia	372	0 (0%)	**270 (72.58%)**	102 (27.42%)	4.09 (0.76)
Excessive Nausea and	371	96 (25.88%)	**267 (71.97%)**	8 (2.16%)	2.33 (1.12)

Vomiting					
Pyelonephritis	369	11 (2.98%)	**259 (70.19%)**	99 (26.83%)	3.83 (1.05)
Proteinuria without Hypertension	367	99 (26.98%)	**255 (69.48%)**	13 (3.54%)	2.54 (1.26)
Anemia: Macrocytic	368	100 (27.17%)	**254 (69.02%)**	14 (3.8%)	2.40 (1.20)
Irritable Bowel Disease in Pregnancy	368	48 (13.04%)	**253 (68.75%)**	67 (18.21%)	3.24 (1.32)
Hyperthyroidism in Pregnancy	368	11 (2.99%)	**250 (67.93%)**	107 (29.08%)	3.96 (0.99)
Glucose Intolerance	367	81 (22.07%)	**246 (67.03%)**	40 (10.9%)	2.92 (1.37)
Gall Bladder Disease in Pregnancy	369	7 (1.9%)	**245 (66.4%)**	117 (31.71%)	3.91 (1.03)
Prior Cesarean Birth	371	77 (20.75%)	**244 (65.77%)**	50 (13.48%)	3.13 (1.39)
Poor Weight Gain	371	129 (34.77%)	**240 (64.69%)**	2 (0.54%)	2.06 (1.02)
Mood Disorder: Bipolar Disorder	371	8 (2.16%)	**239 (64.42%)**	124 (33.42%)	3.86 (1.11)
Spontaneous Abortion	368	105 (28.53%)	**230 (62.5%)**	33 (8.97%)	2.50 (1.32)
TORCH Infections in Pregnancy	367	1 (0.27%)	**222 (60.49%)**	144 (39.24%)	4.26 (0.74)
Gestational Diabetes: A2	368	8 (2.17%)	**222 (60.33%)**	138 (37.5%)	4.07 (0.99)
Vaginal Bleeding - First Trimester	370	135 (36.49%)	**223 (60.27%)**	12 (3.24%)	2.20 (1.19)
Gestational Diabetes: A1	368	78 (21.2%)	**218 (59.24%)**	72 (19.57%)	3.19 (1.46)
Excessive Maternal Weight Gain	370	154 (41.62%)	**213 (57.57%)**	3 (0.81%)	1.89 (0.97)
Postmaturity	366	106 (28.96%)	**208 (56.83%)**	52 (14.21%)	2.86 (1.49)
Thrombophlebitis Related to Pregnancy	366	5 (1.37%)	**204 (55.74%)**	157 (42.9%)	4.17 (0.95)

Thrombophilias in Pregnancy	367	0 (0%)	**194 (52.86%)**	173 (47.14%)	4.35 (0.75)
Late Prenatal Care	371	151 (40.7%)	**192 (51.75%)**	28 (7.55%)	2.27 (1.35)
Ectopic Pregnancy	369	2 (0.54%)	59 (15.99%)	**308 (83.47%)**	4.78 (0.58)
Pancreatitis in Pregnancy	370	1 (0.27%)	130 (35.14%)	**239 (64.59%)**	4.57 (0.67)
HIV (+) Antibody	368	4 (1.09%)	133 (36.14%)	**231 (62.77%)**	4.55 (0.70)
Twin Gestation	367	4 (1.09%)	164 (44.69%)	**199 (54.22%)**	4.42 (0.78)

Intrapartum					
Clinical Condition	**N**	**Independently Manage**	**Collaboratively Manage**	**Refer**	**Mean (SD)**
Genital Colonization of GBS	315	**302 (95.87%)**	13 (4.13%)	0 (0%)	1.08 (0.42)
Periurethral/Labial/Vaginal Laceration	314	**255 (81.21%)**	57 (18.15%)	2 (0.64%)	1.28 (0.69)
Meconium Stained Fluid ("thin")	313	**245 (78.27%)**	67 (21.41%)	1 (0.32%)	1.40 (0.88)
Grand Multiparous Patient	316	**241 (76.27%)**	73 (23.1%)	2 (0.63%)	1.44 (0.92)
Maternal Obesity: Class I (BMI > 30 and < 35)	317	**234 (73.82%)**	82 (25.87%)	1 (0.32%)	1.45 (0.89)
Induction of Labor (elective)	312	**170 (54.49%)**	96 (30.77%)	46 (14.74%)	2.21 (1.56)
Maternal Obesity: Class II (BMI > 35 and < 40)	314	**155 (49.36%)**	147 (46.82%)	12 (3.82%)	2.04 (1.25)
Fever (< 101.4 degrees F)	313	**154 (49.2%)**	153 (48.88%)	6 (1.92%)	2.14 (1.31)
Nonreassuring Fetal Heart Tracing	315	21 (6.67%)	**259 (82.22%)**	35 (11.11%)	3.45 (1.08)
Intrauterine Growth Restricted Fetus	314	11 (3.5%)	**257 (81.85%)**	46 (14.65%)	3.77 (0.92)
Fetal Macrosomia	313	44 (14.06%)	**256 (81.79%)**	13 (4.15%)	2.97 (1.17)
Fever (>101.4 degrees F)	315	39 (12.38%)	**247 (78.41%)**	29 (9.21%)	3.32 (1.20)
Failure to Progress	315	25 (7.94%)	**239 (75.87%)**	51 (16.19%)	3.57 (1.14)
Maternal Hematoma	313	11 (3.51%)	**233 (74.44%)**	69 (22.04%)	3.66 (1.11)
Chorioamnionitis	312	44 (14.1%)	**231 (74.04%)**	37 (11.86%)	3.26 (1.26)
Retained Placenta	315	12 (3.81%)	**231 (73.33%)**	72 (22.86%)	3.66 (1.11)
Shoulder Dystocia	313	87 (27.8%)	**221 (70.61%)**	5 (1.6%)	2.53 (1.24)
Prolonged Rupture of	315	99 (31.43%)	**211 (66.98%)**	5 (1.59%)	2.40 (1.23)

Membranes					
Induction of Labor (indicated)	315	99 (31.43%)	**186 (59.05%)**	30 (9.52%)	2.56 (1.39)
Non-Vertex Presentation - Other than Breech	313	14 (4.47%)	**183 (58.47%)**	116 (37.06%)	4.01 (1.09)
Preterm Labor	314	7 (2.23%)	**182 (57.96%)**	125 (39.81%)	4.16 (0.93)
Meconium Stained Fluid ("heavy")	314	120 (38.22%)	**178 (56.69%)**	16 (5.1%)	2.43 (1.38)
Postdates Pregnancy	311	97 (31.19%)	**175 (56.27%)**	39 (12.54%)	2.82 (1.49)
No Prenatal Care	313	45 (14.38%)	**175 (55.91%)**	93 (29.71%)	3.31 (1.47)
Maternal Obesity: Class III (BMI > 40)	316	91 (28.8%)	**173 (54.75%)**	52 (16.46%)	2.85 (1.50)
Laceration – Sulcus	314	110 (35.03%)	**165 (52.55%)**	39 (12.42%)	2.58 (1.47)
Hemorrhage - Immediate PP	315	149 (47.3%)	**165 (52.38%)**	1 (0.32%)	1.99 (1.16)
Trial of Labor after Cesarean Birth	315	67 (21.27%)	**163 (51.75%)**	85 (26.98%)	3.39 (1.49)
Genital Herpes Lesions	315	59 (18.73%)	**163 (51.75%)**	93 (29.52%)	3.50 (1.46)
Urinary Retention	314	150 (47.77%)	**155 (49.36%)**	9 (2.87%)	2.09 (1.27)
Breech Presentation	314	3 (0.96%)	59 (18.79%)	**252 (80.25%)**	**4.77 (0.55)**
Inverted Uterus	313	3 (0.96%)	123 (39.3%)	**187 (59.74%)**	**4.50 (0.75)**
HIV + Status	315	3 (0.95%)	124 (39.37%)	**188 (59.68%)**	**4.45 (0.83)**
Prolapsed Umbilical Cord	315	4 (1.27%)	137 (43.49%)	**174 (55.24%)**	**4.48 (0.71)**

Postpartum					
Clinical Condition	**N**	**Independently Manage**	**Collaboratively Manage**	**Refer**	**Mean (SD)**
Engorgement	304	**284 (93.42%)**	19 (6.25%)	1 (0.33%)	1.12 (0.52)
Cracked Nipple	304	**255 (83.88%)**	46 (15.13%)	3 (0.99%)	1.28 (0.77)
Postpartum Hemorrhoids	304	**244 (80.26%)**	56 (18.42%)	4 (1.32%)	1.32 (0.78)
Postpartum Blues	303	**234 (77.23%)**	63 (20.79%)	6 (1.98%)	1.46 (0.98)
Mastitis	306	**220 (71.9%)**	83 (27.12%)	3 (0.98%)	1.50 (0.95)
Inverted Nipples in Lactation	304	**158 (51.97%)**	135 (44.41%)	11 (3.62%)	1.88 (1.16)
Low Milk Supply	303	**153 (50.5%)**	144 (47.52%)	6 (1.98%)	1.88 (1.11)
Postpartum Hemorrhage (late onset)	302	29 (9.6%)	**251 (83.11%)**	22 (7.28%)	3.2 (1.3)
Postpartum Endometritis	303	31 (10.23%)	**237 (78.22%)**	35 (11.55%)	3.09 (1.16)
Postpartum Depression	308	43 (13.96%)	**219 (71.1%)**	46 (14.94%)	3.22 (1.21)
Uterine Subinvolution	302	55 (18.21%)	**209 (69.21%)**	38 (12.58%)	3.16 (1.29)
Postpartum Hemorrhage (early onset)	299	102 (34.11%)	**191 (63.88%)**	6 (2.01%)	2.91 (1.33)
Perineal Wound Dehiscence or Infection	302	11 (3.64%)	**173 (57.28%)**	118 (39.07%)	2.21 (1.17)
Attachment Difficulty	302	92 (30.46%)	**170 (56.29%)**	40 (13.25%)	3.93 (1.15)
Postoperative Cesarean Birth	301	64 (21.26%)	**152 (50.5%)**	85 (28.24%)	2.67 (1.44)
Dehiscence or Infection of Cesarean Incision	300	5 (1.67%)	102 (34%)	**193 (64.33%)**	4.43 (0.95)

Newborn					
Clinical Condition	**N**	**Independently Manage**	**Collaboratively Manage**	**Refer**	**Mean (SD)**
Respiratory Distress of the Newborn	234	1 (0.43%)	25 (10.68%)	**208 (88.89%)**	4.84 (0.55)
Poor Weight Gain	235	5 (2.13%)	42 (17.87%)	**188 (80%)**	4.63 (0.89)
Hypoglycemia	230	13 (5.65%)	44 (19.13%)	**173 (75.22%)**	4.44 (1.14)
Jaundice (physiological)	232	25 (10.78%)	34 (14.66%)	**173 (74.57%)**	4.29 (1.37)
Transient Tachypnea of Newborn	235	13 (5.53%)	56 (23.83%)	**166 (70.64%)**	4.34 (1.22)
Temperature Instability	235	13 (5.53%)	56 (23.83%)	**166 (70.64%)**	4.37 (1.17)
Feeding Intolerance	235	16 (6.81%)	72 (30.64%)	**147 (62.55%)**	4.24 (1.23)
Uncoordinated/ Poor Suck	234	22 (9.4%)	104 (44.44%)	**108 (46.15%)**	3.81 (1.39)

Well-Woman/GYN					
Clinical Condition	**N**	**Independently Manage**	**Collaboratively Manage**	**Refer**	**Mean (SD)**
Bacterial Vaginosis	278	**276 (99.28%)**	1 (0.36%)	1 (0.36%)	1.03 (0.30)
Vaginitis	278	**267 (96.04%)**	11 (3.96%)	0 (0%)	1.06 (0.32)
Sexually Transmitted Infections	278	**244 (87.77%)**	32 (11.51%)	2 (0.72%)	1.19 (0.60)
Emergency Contraception	274	**233 (85.04%)**	15 (5.47%)	26 (9.49%)	1.48 (1.23)
Premenstrual Syndrome	274	**227 (82.85%)**	45 (16.42%)	2 (0.73%)	1.29 (0.75)
Contact Vulvitis/Vaginitis	276	**206 (74.64%)**	65 (23.55%)	5 (1.81%)	1.44 (0.92)
Partner Treatment for STIs	278	**172 (61.87%)**	21 (7.55%)	85 (30.58%)	2.36 (1.83)
Atrophic Vaginitis	279	**162 (58.06%)**	103 (36.92%)	14 (5.02%)	1.84 (1.22)
Human Papilloma Virus	276	**155 (56.16%)**	104 (37.68%)	17 (6.16%)	1.82 (1.19)
Molluscum Contagiosum	275	**154 (56%)**	90 (32.73%)	31 (11.27%)	2.03 (1.43)
Dysmenorrhea	277	**153 (55.23%)**	119 (42.96%)	5 (1.81%)	1.66 (0.91)
Cervicitis	277	**146 (52.71%)**	105 (37.91%)	26 (9.39%)	2.13 (1.42)
Dysfunctional Uterine Bleeding	279	68 (24.37%)	**190 (68.1%)**	21 (7.53%)	2.41 (1.20)
Chronic Pelvic Pain	279	14 (5.02%)	**179 (64.16%)**	86 (30.82%)	3.64 (1.21)
Galactorrhea	277	39 (14.08%)	**171 (61.73%)**	67 (24.19%)	3.20 (1.42)
Premenstrual Dysphoric Disorder	277	79 (28.52%)	**170 (61.37%)**	28 (10.11%)	2.48 (1.33)
Pelvic Inflammatory Infection	278	78 (28.06%)	**166 (59.71%)**	34 (12.23%)	2.71 (1.43)
Bartholin's Gland Cyst	278	65 (23.38%)	**166 (59.71%)**	47 (16.91%)	2.87 (1.45)
Intermenstrual Bleeding -	279	104 (37.28%)	**165 (59.14%)**	10 (3.58%)	2.03 (1.08)

Reproductive Age					
Dyspareunia	276	108 (39.13%)	**153 (55.43%)**	15 (5.43%)	2.16 (1.24)
Amenorrhea	279	119 (42.65%)	**149 (53.41%)**	11 (3.94%)	1.97 (1.11)
Breast Mass	277	18 (6.5%)	**145 (52.35%)**	114 (41.16%)	3.82 (1.30)
Postmenopausal Bleeding	280	7 (2.5%)	**142 (50.71%)**	131 (46.79%)	4.06 (1.12)
Postabortion Endometritis	276	20 (7.25%)	**138 (50%)**	118 (42.75%)	3.95 (1.24)
Abnormal Pap Test (atypia)	279	118 (42.29%)	**131 (46.95%)**	30 (10.75%)	2.37 (1.45)
Perimenopausal/Menopausal Symptoms	279	128 (45.88%)	**130 (46.59%)**	21 (7.53%)	2.05 (1.26)
Abnormal Pap Test (dysplasia)	279	38 (13.62%)	**124 (44.44%)**	117 (41.94%)	3.73 (1.44)
Male Infertility	275	1 (0.36%)	14 (5.09%)	**260 (94.55%)**	4.91 (0.46)
Ovarian Tubal Mass (non-pregnant)	278	1 (0.36%)	42 (15.11%)	**235 (84.53%)**	4.77 (0.65)
Infertility	276	2 (0.72%)	132 (47.83%)	**142 (51.45%)**	4.20 (1.01)
Uterine Enlargement (non-pregnant)	278	1 (0.36%)	138 (49.64%)	**139 (50%)**	4.23 (0.97)

Primary Care					
Clinical Condition	**N**	**Independently Manage**	**Collaboratively Manage**	**Refer**	**Mean (SD)**
Herpes, Oral	147	**127 (86.39%)**	17 (11.56%)	3 (2.04%)	1.29 (0.85)
Constipation	148	**113 (76.35%)**	29 (19.59%)	6 (4.05%)	1.46 (1.00)
Upper Respiratory Infection, Viral	147	**108 (73.47%)**	22 (14.97%)	17 (11.56%)	1.65 (1.32)
Diarrhea, Acute	146	**107 (73.29%)**	27 (18.49%)	12 (8.22%)	1.61 (1.22)
Allergic Rhinitis	146	**103 (70.55%)**	26 (17.81%)	17 (11.64%)	1.72 (1.35)
Cystitis	143	**97 (67.83%)**	33 (23.08%)	13 (9.09%)	1.73 (1.29)
Sinusitis	145	**98 (67.59%)**	26 (17.93%)	21 (14.48%)	1.80 (1.43)
Headache: Tension	147	**98 (66.67%)**	34 (23.13%)	15 (10.2%)	1.78 (1.33)
Indigestion	145	**95 (65.52%)**	38 (26.21%)	12 (8.28%)	1.78 (1.29)
Substance Abuse: Cigarette Smoking	148	**92 (62.16%)**	43 (29.05%)	13 (8.78%)	1.91 (1.38)
Skin Infestations	147	**89 (60.54%)**	34 (23.13%)	24 (16.33%)	2.03 (1.53)
Fungal Infections (tinea)	148	**89 (60.14%)**	38 (25.68%)	21 (14.19%)	1.94 (1.44)
Pharyngitis	147	**83 (56.46%)**	35 (23.81%)	29 (19.73%)	2.22 (1.63)
Laryngitis	147	**82 (55.78%)**	31 (21.09%)	34 (23.13%)	2.31 (1.69)
Pharyngitis, not Strep Throat	146	**81 (55.48%)**	35 (23.97%)	30 (20.55%)	2.22 (1.62)
Otitis Media	143	**78 (54.55%)**	29 (20.28%)	36 (25.17%)	2.34 (1.71)
Otitis Externa	145	**77 (53.1%)**	30 (20.69%)	38 (26.21%)	2.37 (1.72)
Hemorrhoids (nonpregnant)	148	**78 (52.7%)**	48 (32.43%)	22 (14.86%)	2.00 (1.41)
Conjunctivitis	147	**77 (52.38%)**	30 (20.41%)	40 (27.21%)	2.40 (1.74)

Anemia	147	**76 (51.7%)**	63 (42.86%)	8 (5.44%)	1.83 (1.12)
Viral GI Syndromes	147	**70 (47.62%)**	50 (34.01%)	27 (18.37%)	2.35 (1.59)
Uticaria (hives)	145	**66 (45.52%)**	61 (42.07%)	18 (12.41%)	2.09 (1.37)
Styes	147	**63 (42.86%)**	29 (19.73%)	55 (37.41%)	2.87 (1.84)
Burns (superficial)	146	**60 (41.1%)**	43 (29.45%)	43 (29.45%)	2.68 (1.74)
Acne	147	**58 (39.46%)**	**51 (34.69%)**	**38 (25.85%)**	2.56 (1.63)
Dysfunctional Uterine Bleeding	146	30 (20.55%)	**94 (64.38%)**	22 (15.07%)	2.89 (1.38)
Domestic Abuse	145	18 (12.41%)	**89 (61.38%)**	38 (26.21%)	3.55 (1.34)
Sexual Abuse	148	12 (8.11%)	**90 (60.81%)**	46 (31.08%)	3.74 (1.25)
Abdominal Pain	147	10 (6.8%)	**84 (57.14%)**	53 (36.05%)	3.71 (1.28)
Urinary Incontinence	148	15 (10.14%)	**83 (56.08%)**	50 (33.78%)	3.55 (1.36)
Pyelonephritis	145	8 (5.52%)	**80 (55.17%)**	57 (39.31%)	3.85 (1.24)
Insomnia	145	40 (27.59%)	**79 (54.48%)**	26 (17.93%)	2.76 (1.48)
Headache: Migraine	146	18 (12.33%)	**73 (50%)**	55 (37.67%)	3.49 (1.44)
Substance Abuse: ETOH	148	10 (6.76%)	**73 (49.32%)**	65 (43.92%)	3.92 (1.26)
Thyroid Disorders: Hypothyroidism*	147	18 (12.24%)	**71 (48.3%)**	58 (39.46%)	3.64 (1.44)
Viral Diseases	143	41 (28.67%)	**65 (45.45%)**	37 (25.87%)	2.87 (1.60)
Esophagitis/Gastric Reflux Disorder	148	50 (33.78%)	**67 (45.27%)**	31 (20.95%)	2.64 (1.56)
Depression (minor)	146	53 (36.3%)	**66 (45.21%)**	27 (18.49%)	2.53 (1.54)
Dermatitis, Rashes and Abnormal Lesions	147	31 (21.09%)	**66 (44.9%)**	50 (34.01%)	3.12 (1.59)
Swollen Glands/Lymphadenopathy	145	21 (14.48%)	**62 (42.76%)**	**62 (42.76%)**	3.47 (1.55)

Backache	146	47 (32.19%)	**61 (41.78%)**	38 (26.03%)	2.74 (1.59)
Asthma, Mild Intermittent	146	36 (24.66%)	**58 (39.73%)**	52 (35.62%)	3.18 (1.65)
Low Back Pain, Nonpregnant	147	35 (23.81%)	**56 (38.1%)**	56 (38.1%)	3.18 (1.65)
Bipolar Disorder	147	1 (0.68%)	17 (11.56%)	**129 (87.76%)**	4.81 (0.61)
Anaphylactic Shock	146	1 (0.68%)	25 (17.12%)	**120 (82.19%)**	4.76 (0.61)
Depression (major)	146	1 (0.68%)	36 (24.66%)	**109 (74.66%)**	4.66 (0.68)
Cholecystitis	148	3 (2.03%)	49 (33.11%)	**96 (64.86%)**	4.44 (0.96)
Injuries (minor wound repair)	147	20 (13.61%)	33 (22.45%)	**94 (63.95%)**	3.94 (1.55)
Cellulitis	147	11 (7.48%)	45 (30.61%)	**91 (61.9%)**	4.16 (1.30)
Tendonitis	147	16 (10.88%)	40 (27.21%)	**91 (61.9%)**	3.99 (1.47)
Hypertension (essential or chronic)	146	5 (3.42%)	51 (34.93%)	**90 (61.64%)**	4.27 (1.14)
Positive Tuberculin Test	148	18 (12.16%)	42 (28.38%)	**88 (59.46%)**	4.11 (1.37)
Eating Disorders	147	3 (2.04%)	58 (39.46%)	**86 (58.5%)**	4.31 (1.02)
Irritable Bowel Syndrome	146	20 (13.7%)	43 (29.45%)	**83 (56.85%)**	3.87 (1.52)
Strains and Sprains	146	29 (19.86%)	34 (23.29%)	**83 (56.85%)**	3.70 (1.67)
Abnormal Breast Exam (tumors, nipple discharge, cysts)	145	6 (4.14%)	58 (40%)	**81 (55.86%)**	4.27 (1.07)
Thyroid Disorders: Hyperthyroidism*	145	3 (2.07%)	62 (42.76%)	**80 (55.17%)**	4.23 (1.07)
Asthma, chronic	146	10 (6.85%)	57 (39.04%)	**79 (54.11%)**	4.05 (1.29)
Substance Abuse: Street Drugs	148	7 (4.73%)	63 (42.57%)	**78 (52.7%)**	4.22 (1.10)
Tuberculosis, Currently Treated	146	23 (15.75%)	49 (33.56%)	**74 (50.68%)**	3.88 (1.49)

Warts, Nongenital	147	41 (27.89%)	32 (21.77%)	**74 (50.34%)**	3.33 (1.80)
Anxiety Disorder	147	11 (7.48%)	66 (44.9%)	**70 (47.62%)**	3.87 (1.35)
Persistent Cough	145	24 (16.55%)	53 (36.55%)	**68 (46.9%)**	3.54 (1.59)
Osteoporosis	147	18 (12.24%)	63 (42.86%)	**66 (44.9%)**	3.73 (1.46)
Tonsillitis	144	45 (31.25%)	37 (25.69%)	**62 (43.06%)**	3.15 (1.78)
Restless Leg Syndrome	147	33 (22.45%)	52 (35.37%)	**62 (42.18%)**	3.35 (1.65)
Headache: Cluster	146	29 (19.86%)	58 (39.73%)	**59 (40.41%)**	3.38 (1.60)
Bronchitis	146	47 (32.19%)	47 (32.19%)	**52 (35.62%)**	3.02 (1.72)

Table 4. Final Listing of Clinical Tasks Recommended for Elimination from the AMCB Examination Blueprint.

Area of Practice	Item
Antepartum	Performs sonogram to rule out fetal abnormality.
	Performs sonography to establish gestational age.
Intrapartum	Administering pudendal anesthesia.
	Repairs 3rd degree lacerations.
	Repairs 4th degree lacerations.
	Repairs lacerations of the cervix.
	Delivers baby with vacuum.
	Delivers baby with forceps.
	First Assists at Cesarean birth.
Postpartum	Lance external thrombosed hemorrhoids.
Newborn	Orders immunizations.
	Manages well-baby visits past 1 week of age.
	Performs male infant circumcision.
	Manages infant who requires phototherapy.
	Orders/performs newborn auditory screening.
Well-Woman/GYN	Diaphragm fitting and instruction.
	Counsels for the cervical cap method of contraception.
	Provides cervical cap fitting and instruction.
	Provides paracervical block for IUD insertion.
	Evaluates for/performs Essure and/or Adiana permanent sterilization.
	Treats condyloma using cryotherapy.
	Performs colposcopy.

	Performs endometrial biopsy.
	Performs endocervical curettage.
	Performs pre-hysterectomy and post-hysterectomy counseling.
	First assists at GYN surgery.
	Performs vulvar biopsy.
	Performs sexual assault examination.
	Performs gynecologic sonogram.
	Prescribes pharmaceuticals for treatment of infertility.
	Performs artificial insemination.
	Expectantly manages ectopic pregnancy.
	Medically manages ectopic pregnancy.
Primary Care	Performs breast biopsy.
	Performs skin biopsy.
	Performs removal of abnormal lesions
	Performs cortisone injections.
	Sutures minor wounds.

Table 5. Calculated Test Specifications Weights for the CNM/CM Examination Based on an Average of Overall Ratings (Importance and Frequency) and Participant-Assigned Weights

Category	New %	Possible New Range	Current Range
Antepartum	22%	19-26%	15-25%
Intrapartum	22%	17-26%	25-35%
Postpartum	16%	15-18%	5-10%
Newborn	11%	7-16%	10-15%
Well-Woman/GYN	16%	15-18%	15-20%
Primary Care	12%	8-16%	12-16%
Professional Issues	DELETED	DELETED	up to 5%

Table 6. Participant Opinion Regarding Percentage of Practice Dealing with Normal vs Abnormal Conditions

Practice Condition	New %	Current %
Normal	59%	66%
Deviation	41%	34%

APPENDIX A. EMAIL INVITATION TO MAIN STUDY PARTICIPANTS

Dear Midwife:

The AMCB Research Committee is conducting a survey of midwives certified since 9/1/2008. The purpose of the survey is to identify the activities carried out in clinical practice and the frequency of those activities. A survey is periodically conducted to help to determine the structure and content of the AMCB certification exam.

This online survey is now available through November 22, 2011. Completion of the survey will take about an hour and responses are anonymous and confidential. Individuals who complete the survey will have the annual fee ($65.00) for participating in the CMP (Certificate Maintenance Program) waived.

You may take the survey by clicking on the following link:

[weblink]

Should you have any questions, please contact Marie Hastings-Tolsma at marie.hastings-tolsma@ucdenver.edu.

Thank you.

Research Committee
American Midwifery Certification Board

APPENDIX B. ADVERTISEMENT OF TASK ANALYSIS SURVEY

Participate in the 2011 AMCB Task Analysis Survey!!!

The AMCB Task Analysis is now up and running through November 22, 2011. Those midwives certified by the AMCB since 9/1/2008 have been sent an email inviting them to complete the online survey along with a link to access the website. If you did not receive an email and would like to participate, please contact Carrie Bright, AMCB Executive Director cbright@amcbmidwife.org to verify your email address.

The 2011 Task Analysis Survey, created by The American Midwifery Certification Board and conducted every five years, describes tasks performed by CNMs and CMs who have been certified within the last three (3) years. This survey aims to identify those tasks newly certified midwives actually perform and to use this information to help us make the certifying examination reflective of these tasks.

Recent graduates are being asked to complete an online survey which details tasks done in clinical midwifery practice and to identify how they manage varied clinical conditions. The survey should take about 1 hour to complete. By participating in this survey, CNMs and CMs will be providing a valuable service to the midwifery profession.

Upon completion of the survey, participants will have waived the annual fee ($65.00) for participating in the CMP (Certificate Maintenance Program).

AMCB Research Committee
Chair, Marie Hastings-Tolsma, PhD, CNM
marie.hastings-tolsma@ucdenver.edu

AMCB Executive Director
Carrie Bright, IOM, CAE
cbright@amcbmidwife.org

APPENDIX C. EMAIL INVITATION TO PILOT PARTICIPANTS

Dear Midwife:

The AMCB Research Committee is conducting a survey of midwives certified within the past three years. The purpose of the survey is to identify the activities carried out in clinical practice and the frequency of those activities. A survey is periodically conducted to help determine the structure and content of the AMCB certification exam.

A pilot of the task analysis is now being conducted. This online pilot survey will be **accessible from Sunday, October 23 through Thursday, October 27, 2011.** Completion of the survey should take less than an hour and responses are anonymous and confidential.

You may take the survey by clicking on the following link:

[weblink]

Should you have any questions, please contact Marie Hastings-Tolsma at marie.hastings-tolsma@ucdenver.edu.

Research Committee
American Midwifery Certification Board

APPENDIX D. TASK ANALYSIS SURVEY DIRECTIONS

Task Analysis Survey

This survey, created by The American Midwifery Certification Board, describes tasks performed by CNMs and CMs who practice in the United States. Our intent is to identify what tasks new midwives actually perform and to use this information to help us make the AMCB certifying examination reflective of these tasks.

The survey will take about 1 hour to complete. You are asked to make judgments about specific tasks, keeping your practice in mind. Please read each task carefully and then rate each task with respect to the FREQUENCY (how often you do a particular task) and IMPORTANCE (your opinion on how important a task is in proving safe and effective care). The survey has several sections but you will only be completing those sections related to the areas of midwifery that you are currently providing care. You may skip any items that you wish.

NOTE: if you leave the survey and plan to return later to complete, be sure and click the SAVE AND RETURN LATER button so that you will not have to start the survey over again. We would also recommend the Mozilla Firefox browser.

Completion of this questionnaire constitutes your informed consent to act as a participant in this research. The survey is anonymous and your name will not be linked to your responses. This research has been approved by the Colorado Multiple Institutional Review Board (#11-1303).

By participating in this survey you will be providing a valuable service to your profession. Please accept our sincere thanks.

AMCB Research Committee
Chair, Marie Hastings-Tolsma, PhD, CNM
Cathy Emeis, PhD, CNM
Barbara McFarlin, PhD, CNM, RDMS
Sarah Schmiege, PhD

APPENDIX E. ACCUMULATED SUBJECT FREE-FORM RESPONSES BY AREA OF MIDWIFERY PRACTICE

Antepartum Comments

As a homebirth midwife, I collaboratively manage or refer probably more than those who deliver in the hospital. It is very important to me that our clients have normal, healthy, low-risk pregnancies.

I only attend home births, so consultation on many of the above topics means an automatic referral for a hospital birth.

We see TOLAC patients until 36 weeks then transfer to MD care.

In our practice we refer out high risk patients. Any woman with higher risk categories are managed for routine visits by the CNM with consultation with the OB/GYN for conditions that are new onset problems or changes in management of the conditions. We refer to genetics or the perinatologist for management of high risk status with CNM management of the normal components of the pregnancy.

I work in a relatively conservative practice where MDs expect that I will refer any abnormalities to them.

We do not currently have insurance coverage to offer VBACs. Preterm labor patients are managed by our back-up physician, but we can still attend the delivery as long as we consult with them. We manage mild pre-e, but for severe pre-e, our docs take over care.

Collaboration can encompass many different things. I defined it in broad terms (i.e., I always collaborate with GI re: Hep B/C + women but independently manage their labor/delivery).

Referring to another provider often means the OB/GYN M.D. that I work for; other conditions require referrals to different specialties altogether.

Some of the questions are misleading such as whether certain tests are performed. The questions are confusing as to whether they are independently ordered and interpreted by midwife (e.g., #10: Performs sonography to establish or confirm gestational age).

I have yet to begin taking call and working in the inpatient setting; therefore, although I may see/ evaluate/diagnose many of these conditions in the office, their care is currently out of my hands in the hospital. I tried to answer based on what I think I will do when I begin full scope care.

I practice with large group of physicians. We constantly consult with each other. While I do not completely give up care and responsibility of the patient, I always keep the physician's in the loop with respect to abnormalities such as phlebitis, etc.

We are unable to perform VBACs in our hospital due to anesthesia restrictions so each prior C-section is seen primarily by the midwives and then referred to the MD in the last week or two of the pregnancy for C-section consult and operation.

I am new to my practice and am not 100% certain on how we manage every atypical condition as I have yet to see them all. I provided information to the best of my knowledge.

When stating that I 'refer to another provider,' I am referring to my backup MD. In my practice, I am a sole CNM providing care in a group with 5 other physicians. Many of these clinical conditions we manage collaboratively as a group.

I answered percentages based on my total patient population, not just on my pregnant ones. I see about half pregnant and half GYN.

Our practice is made up of 2 CNMs and 1 OB/GYN. We have protocols to follow for certain conditions so I know what is expected and if the outcome isn't that, the patient would see the OB at her next visit or as appropriate.

I practice on an Indian reservation. The nearest OB doctor is over 70 miles away. I do many things independently here that I never thought I would when I was a student. I am able to consult by phone, but travel is a problem for most of the population for whom I provide care.

For some of the questions, we inform the MD's in the practice and they write a note of recommendation, and if they are a VBAC candidate, they have to be present in the room, but we as CNM's manage all their OB care independently.

Some of these questions are unclear. 'Identify' or 'screen for' and 'manage' should be two questions. Also, I'm not sure whether this is asking about the percentage of your total patient population, or the percentage of patients to whom the interventions would be relevant.

I have privileges at a Level 2 hospital. Many conditions require transfer.

Most situations where I selected 'collaborate most of the time' refers to the fact that I work in a setting where midwives and physicians are constantly working literally side by side, and so collaboration frequently occurs due to the nature of the practice setting and not necessarily institutional policies.

I have a homebirth practice, so answers were based on that type of practice.

For #66 (Gestational Diabetes, A1), I was unable to choose the option of 'collaboratively manage most of the time.' For questions 1-37, I had difficulty deciding how to answer. I tried to assume that I was answering for the % of patients in a particular category. For instance, if my partner has already assessed for presumptive signs of pregnancy, I don't repeat that.

Some of these questions were difficult to answer. In our hospital based/public practice, midwives tend to refer high risk pregnancies out to the attending physicians but during the labor and delivery, midwives are involved with the labor and 'catch' the baby. Is this considered 'considered collaborative management?

Most of these tasks require some collaboration in our State.

I have a homebirth practice. Some of what I would manage and/or collaborate on depends upon the wishes of the family. I do not have many complications in my practice. The women that come to me are very healthy and most have excellent diets.

I have a homebirth practice. Some of what I would manage and/or collaborate on depends upon the wishes of the family. I do not have many complications in my practice, the women that come to me are very healthy and most have excellent diets.

Our physician group does not allow us to do VBACs. We typically refer at 28 weeks. We manage diet-controlled GDM, but transfer care if insulin-dependent.

I work with a solo practitioner OB/GYN and have for the past 17 years - even before I went back to school to be a midwife, so many of these things I end of discussing with him just to make sure I am on the right track as a new CNM. He does not yet do VBACs but I am hoping to offer those as soon as I get my hospital privileges.

I work with one OB/GYN who does high risk so I am almost always collaborating on any deviations from normal, even if I continue to take primary care of the woman. We share our patients, both high and low risk.

For women with prior cesarean, our practice will independently manage the AP care and then establish care with the MDs for pre-op visit and delivery. We do not offer VBAC at our facility.

I am assuming that when you ask how often I am performing something you are asking how often during my work day do I specifically do that task. I am not assuming 'you' refers to my practice at large....just specifically me during my average work day.

For many of the questions, I would really answer 'it depends.' For instance, I independently manage PUPPs, but not cholestasis.

During this time I am in the process of certifying my birth center; VBAC's are not accepted until after accreditation and applying for privileges to allow for VBAC.

We will often refer to Maternal Fetal Medicine for a plan. Many times this means maybe only one or two MFM visits and the rest of the patient's care is by a CNM.

Intrapartum Comments

For fetal heart rate, we use a doppler at home following the AWHONN recommended intervals of monitoring. We do not use continuous fetal monitoring.

I'm not sure I'm interpreting these percentages correctly. Is 100% my total patient load or is it 100% of the cases of chorio (for example)?

Practice is determined by protocols that were designed by an OB.

I provide home birth services. If hospital intervention is needed, I transfer care to a hospital based provider and accompany the woman and family to the hospital as a support person.

All women aiming for a vaginal birth remain midwifery patients. Only women transferring to another facility or having a planned cesarean birth become physician patients at the time of transfer or delivery. Otherwise, we 'run the patient by' the doctor and the midwives continue to manage them. (IHS)

My patient population is young (average age 15-25 years old) and healthy; some of the more serious conditions are rarely seen in my practice.

Even if I don't perform the task itself, identifying the need for a task is always very important (ex: 4th degree repair).

Some of these questions and their wording are confusing. Yes, I perform AROM but I don't do it all the time. I think it's an important skill but I don't think it should be done all the time. Also with shoulder dystocia, I may do the initial maneuvers but I will certainly step aside and let the most experienced attending take over. Is that 'referring' or 'collaborative management'? It's confusing-- I am still in the room and will still manage her in the 3rd stage (depending on how bad the dystocia) and 4th stage.

Keep in mind there are procedures that are governed by the hospital facilities and the practice rules. For example, the practice I work with does not do breech deliveries (even if I want to do so), and the hospital does not have facilities for water births.

I am in the process of learning pudendal anesthesia as some women are not adequately anesthetized with lidocaine injection and there are no epidurals at this time in my facility. My answers are based on when a procedure is needed, i.e., not every patient gets an fetal scalp electrode, only if there is a difficulty tracing the baby and possible poor FHTs. I then perform the task 100% of the time. Furthermore not everyone do I manage with active management; rarely do I but I may choose to so with someone who has a history of bleeding/very low H&H/grandmultip, etc. When I do, I perform this task 100% of the time.

I collaboratively managed VBACS until the anesthesia department stopped letting us do them because of lack of staff and cost. These questions also do not address the fact that often I will consult with an OB but not collaborate. Also breastfeeding issues do not require collaborative management. Does refer to another provider also mean an IBCLC?

For #23 (Evaluates fetal condition following rupture of membranes by auscultation to determine FHT, and by vaginal exam to rule out a prolapsed cord): I always listen to FHR after SROM/AROM but never do a vaginal exam after SROM to feel for a cord unless there was a heart rate abnormality.

For #52 (Examines cervix, vagina and perineum for lacerations and/or episiotomy extensions and identifies need for repair): I do not examine the cervix for lacerations in the absence of excessive blood loss.

Questions are confusing. I ALWAYS evaluate for PP hemorrhage, etc. but that happens RARELY. Not sure how to answer with regards to personal experience HOWEVER the information and skills are ALWAYS important to have knowledge.

When answering questions about the importance of being competent in performing a task, my answers indicate how important I feel it is for a midwife in general to be competent in this task - not how important it is to be competent for only those midwives who are trained to perform the task. For example, I do not perform 4th degree repairs and I feel it is of little importance for midwives to be competent in this task, although I do feel that it is very important to be competent in this task for those midwives who are trained to perform this skill.

These questions are difficult to answer. if these situations present, I do them 100% of the time (i.e., if a pt is + Chlamydia, I treat her without back-up 100% of the time; however , 100% of my patients do not have Chlamydia).

I do not always do a vaginal exam with rupture of membranes if fetal heart tones are good.

In our hospital, we are not able to offer TOLAC/VBAC given restrictions from our legal department and not having 24-hr in-house surgical teams

I had trouble with some of the questions asking about importance. If you are going to do it, it is extremely important to be competent but if you are going to refer - not so much so. Frequency of vaginal examinations: I always do one but I do not do them frequently! For chorioamnionitis: I evaluate for but do not manage.

I have not encountered breech or face presentation so far and would collaborate with my backup physician if they occurred. However, I find it important to know how to handle these situations in case a delivery is about to happen. We first assist on all of our own patients for continuity of care.

The CNMs in our practice 1st assist with all Cesareans and perform all of the vaginal births - except when vacuum or forceps assistance is required, so there are very few conditions that would be referred completely to another provider.

VBAC is not available where I practice. I refer to other locations for those who desire VBAC. I work per diem for a birth center which offers water birth. The hospital where I practice does not have tubs, but they are VERY supportive of midwifery and the desires of my clients.

Many of my answers are due to my practice structure.

As stated earlier, we are not purely independent in any decisions we make in the hospital setting. We work with our attending physicians.

Sounds like all we do is collaborate...but have to say that most of our ladies are low risk and healthy and this stuff only comes up rarely.

It is difficult to know on the tasks if you are asking what percentage of client's experience the condition, or what percentage of clients experiencing the item would I manage. For example, TASK: Initiates maneuvers to resolve shoulder dystocia. Are you asking what percent of my clients is it necessary to intervene? Or asking what percent of those with shoulder dystocia would I initiate interventions?

Some questions such as 48 are difficult to answer. I cut episiotomies >90% of the time when indicated but find them to be indicated <5% of the time. Question regarding prolapsed umbilical cord, I independently manage until I can safely transport the woman to the hospital and then refer to another provider

Where I say 'collaboratively manage,' most of the time I'm just notifying my back-up physician of my plan of care.

Assumed conditions like fever were intrapartum.

These response selections are cumbersome, unclear and imprecise.

All scenarios are different and my comfort level regarding each task may be different given the entire clinical picture and my comfort.

Postpartum Comments

For postpartum immunizations, we only give Rhogam if necessary. If other immunizations are necessary, we recommend that the mother receive them but do not offer them. For breastfeeding referrals, we often refer to a lactation counselor/consultant. For post-op C-section care, we do not manage these clients because we do not have hospital privileges. However, we still like to see these clients in the office once they are home from the hospital.

In a home birth practice, post-hospital-intervention in immediate PP period is often managed by hospital staff, with me providing more case mgmt and emotional support during this time. I continue PP care through 6 weeks or longer, if indicated.

Again, the vast majority of my patients are young and healthy. I am answering these questions based on the guesstimated percentage of my patients that have these conditions.

I will independently manage PPD through a history, referrals, medications, and follow-up. I'm not sure if the referring to another provider means my back-up docs or another provider entirely such as a psychologist. Same goes for lactation difficulties and referral to a CLC.

Title X family planning clinic - we see no one before 6 wks postpartum and these are less than 10% of our patient visits. Very, very few of our patients choose to breastfeed.

Re: postpartum immunization- the only ones we offer is MMR. We should offer Tdap and flu, etc in the postpartum unit but that's it!

Often 'collaboration' for these issues is collaborating with a midwife colleague with more experience.

Most breast problems - if not resolved in the office - I refer to a lactation consultant.

Refer to another provider for lactation issues means refer to a Lactation Consultant Collaborate with another provider for depression is because in my State we are required to notify collaborating OB if we order antidepressants.

I am currently working only in the outpatient/office setting.

Epidurals are not available in the setting where I work so I do not manage anesthetized patients. (I work in a birth center in a US territory).

I am a very new provider, so some of the things done at my practice may come with time/change as I am there longer.

I work in a clinic only. I do see postpartum women, but usually after their 6 week appointment with their birth attendant. I am an IBCLC clinician so I do manage mastitis and other lactation problems in my practice. My patients come back to me for routine women's health care or other postpartum issues once they are delivered. I do not have a physician in my area who is willing to work with a midwife for antepartum, intrapartum and immediate postpartum care.

With #29 (postpartum depression), I would collaborate with counselor not with MD and we would set up counseling and start medication independently.

Many of these are not applicable to clinic providers who see their patients at 4-6 weeks out.

The physicians in our practice typically round on the patients who have had Cesarean births and the CNM's round on those who have had vaginal births.

Some of the questions in the first three sections (demographics, antepartum, intrapartum) were confusing. I always assess my patients for GDM, epidural complications, etc - but I don't have > 90% of my patients with the condition.

I do not yet have hospital privileges so I am not able to do some of the immediate postpartum care.

Some depend on severity. Mastitis requiring hospitalization-- I refer; I manage outpatient cases independently.

Imprecise response options – unclear. Also unclear with whom I would be collaborating: behavioral health vs OB/GYN.

Newborn Conditions

In our practice, we allow the clients to become informed about erythromycin eye ointment and vitamin K prophylaxis and they may choose to consent to or decline these measures. We recommend that the baby see the pediatrician within 72 hours of the homebirth and the pediatrician would be their primary care provider, although we do see the baby for well baby visits at 2 and 6 weeks.

In the hospital setting, once the baby is born, the pediatrician is responsible for making all of the management decisions. I provide initial suctioning and sometimes oxygenation, but I work in a hospital where we have 24 hr neonatal nurse practitioners, so they are called to manage any of the above situations.

We have no role in the management of the newborn.

I have answered all questions for the frequency of occurrence in my practice. My clients are exclusively low risk healthy women electing birth in out of hospital setting. I am always evaluating for complications - which might provide more of an 'always' answer for some of the questions.

I provide my baby-catching services in a large, urban hospital. I provide almost no infant care except in the immediate post-partum period or as it related to breast feeding.

Midwives do not manage newborn care in my facility (a hospital).

Peds is always available and manages the infants.

I think that all of the above are very site specific. Home birth/birth center births as well as Level 1 and 2 tertiary care centers would need to have more skills as midwives than I do at a Level 3 hospital with access to 24/7 respiratory therapy and neonatology.

In-house pediatricians are responsible for all infant care.

Although I would love to manage newborns, it is not allowed in my practice.

Most of the newborn care is done by peds in our facility but immediate referral and resuscitation is done in our practice as we are also acting as newborn nurses for our own midwives and some private doctors. However newborn care is important to teach as there are midwives that manage newborns in their practices.

In our setting, CNMs are responsible for the immediate stabilization of the newborn but all follow up, immunizations, assessment, etc. are the responsibility of the pediatrician.

Many of these tasks are performed by nursing and pediatric staff at my hospital. If they were done in my hospital, I would consider them all necessary skills to have, and even now consider them important.

I am hospital based and therefore have providers available 24/7 to handle newborn problems. If birth center based or providing home birth my answers would differ.

Our practice does not care for babies at all. If someone should be caring for babies, then these skills would be very important but in our practice, it is not.

In my practice we are not encouraged to have interaction with the newborns after delivery. There is a nursery nurse in attendance of the deliveries and if there is a concern with the baby we are to consult a pediatrician. The pediatricians place all orders for the neonates.

Thank goodness for the pediatrician.

I do not do any newborn care either after delivery in hospital or afterward in office.

In my practice, newborn care beyond immediate assessments of transition and assessments related to maternal-infant relationship are carried out by our pediatricians.

CNMs do not care for newborns at our facility.

Some of these tasks are independently managed due to lack of access to other resources. Where I was working there was no other option than to provide the services and be competent.

For most of our infants, we do the immediate care but care is then taken over by the pediatricians.

Our facility is a very low resource setting. Many labs and pathology tests are unavailable. The pediatrician is responsible for assessing and treating newborns.

I do not take care of infants. We have Peds present at all deliveries.

I work in a hospital, and CNM's have little to do with newborn care beyond the immediate postpartum period, other than evaluation of mom's bonding/feeding/adjustment to the newborn. Newborns are managed by Pediatrics and Family Practice physicians.

The nursing staff in our hospital performs many of the immediate newborn evaluations. Pediatrics assumes care of the newborn ASAP after the birth.

Newborns are completely managed by Peds at my facility.

I work in a hospital setting and the pediatrician manages the baby after the immediate PP period.

Located in a very rural area often collaboration is via consults and referral means a flight to a larger tertiary hospital.

We have full-time Peds. Midwives do not provide newborn care at our facility.

Provide postpartum care/orders for mother but do not manage infant care postpartum. I do feel the listed skills are important to have as background for coordinating care, educating the family and interacting with pediatric care providers.

Previous page on postpartum care did not let me finish tried twice to return and finish.

We have pediatricians and excellent Neonatal Nurse Practitioners who do most of the care of the neonate. I typically hand off the infant to qualified personnel and have to attend only to the mother.

We do not do infant care, Newborn nurse and RT care for the infant.

I do not do newborn care.

The pediatric department performs all newborn care after birth.

Response selections are unclear & imprecise.

Many of these items that I never do are done by a Pediatrician

In my facility I am not credentialed to care for newborns, the nurses and pediatricians do most of these activities.

Well-Woman/GYN Comments

CNMs in our State are not allowed to write prescriptions for men, therefore we have to have male partners go the local health department for treatment of STIs. Most of our patients have Medicaid and for awhile we got around that by just writing for an extra refill, but Medicaid will no longer pay for a refill within a certain time period.

Our clients tend to like more non-hormonal options for contraception. We mostly do pregnancy care and only some well-woman, we really don't do any postmenopausal care, but we are not

opposed to accepting those clients. Since we do not have hospital privileges, we refer for things like ectopic pregnancy.

I'm a bit confused by some of the questions where you have to pick a frequency. For example, I would say that only about 10% of my patient population is menopausal, so that's the answer that I picked for those questions. However, I would say that I assess for menopausal symptoms on 100% of patients of menopausal age...I'm not sure if I answered those correctly or not.

Title X Family Planning clinic - protocols place limits on what we can and cannot do.

The last page had a typo- the top of the page said newborn services (which I said 'no' to) but the question asks if you provide postpartum which is a repeat of the following page.

Concerning sexual assault exams - I am a SANE. In addition to my full time job as a CNM, I take call at a sexual assault center. I think sexual assault exams are best done by trained personnel that have taken a SANE training course.

Again, many of these things that I do not do are because I am a new provider.

When I answer 90% of patients, I mean that when necessary I manage all the time. More than 90% of my patients do not need a colposcopy but I perform 90% of the time when they do.

In our practice, CNM's unfortunately do very little GYN care other than postpartum and annual exams for childbearing aged women. However, I feel it very important to have strong GYN skills, as every practice varies and I would love to have more GYN involvement.

Ancillary services are very available and I am expected to utilize them. I have not yet completed a colposcopy course or an ultrasound course for midwives. Information on availablilty would be useful.

I was not aware that I could perform some tasks such as lancing a thrombosed hemorrhoid.

I am in a limited role of infectious disease research in a university/hospital setting. My scope of practice is fairly limited to what is within the protocols of my studies.

I am assuming that when you ask how often I am performing something you are asking how often during my work day do I specifically do that task. I am not assuming 'you' refers to my practice at large....just specifically me during my average work day.

Response selections are unclear & imprecise.

<u>Primary Care Comments</u>

Independent management or referral often depends on severity of s/s, if new onset or early s/s some of these conditions can be treated with basic steps, then if the condition persists or does not resolve then collaborative care for consultation or referral is appropriate.

Some of these conditions I have not yet encountered in my practice; so, my answers reflect a guess rather than a certainty.

We are considered a specialty clinic and therefore do not see non-pregnant primary care.

In this section, as in others, I am not always sure what you are asking. For example in question 2, regarding the assess and refer for domestic violence or sexual abuse, are you asking how often I am asking questions regarding sexual abuse/domestic violence of the total number of primary care patients I am seeing, or are you asking me of the patients I see, how often do I have to refer them? Questions aren't always clear. I interpreted this question to be asking me how often I am screening for domestic violence/sexual abuse. But in other areas of the survey I may have interpreted the questions differently.

Our practice only does primary care for pregnant women and women who present for annual well woman exams. Most chronic conditions would be managed by PCP.

Many of these conditions are not presented in my practice. They are sent to the Family Practice before I see them.

We have very few resources for abused women in my community.

We do a limited amount of primary care in my office but I am interested in incorporating more as my practice and skills grow.

Unclear who the collaborating provider is: behavioral health providers are widely integrated into my practice.

APPENDIX F. RESPONDENT OPINIONS REGARDING TASKS THAT SHOULD BE ADDED TO FUTURE TASK ANALYSES

Professionalism and ethics

More on the drug addicted pregnant woman, pre-eclampsia, common medications

Availability of professional OBs to collaborate with - available or not at all.

First assist cesarean section

Midwifery model of care.

What about professional issues? Just curious why these were not included.

IUFDs, understanding needs of vulnerable populations, and policy and legal implications of practice.

Variations in practice based on setting (home, birth center, hospital).

Documenting, follow up billing and coding are the difficult parts of my job!

Administrative issues - insurance, collaborative agreements, billing coding.

CHTN and pre-eclampsia evaluation/treatment.

Sonohistogram.

Community involvment - initiating/teaching prenatal classes, lactation support, working with local agencies, etc.

Professional issues, scope of practice, and how to stay certified.

Counseling patients after miscarriage or fetal/neonatal loss.

APPENDIX G. OVERALL SURVEY COMMENTS

Unsure whether the percentages were supposed to reflect the percentage of times I performed that task in the appropriate patient or the percentage out of my total practice, so it may have affected my answers.

Some questions are depending on your practice, but overall, things were covered well.

The survey ran really slow and kept freezing my computer. The questions were confusing as to how many patients of the percent of patients I see or the percent of what I care for.

I appreciated that the survey inquired about approaches to the intrapartum period that would be more common in a birth center or homebirth, such as using hydrotherapy, use of herbs, or birthing in an alternative position.

I strongly feel that CNM training should automatically include first assist for cesareans and basic GYN surgeries, basic ultrasonography, circumcisions, vacuum extractions, and colposcopy. There should be no reason that additional certifications are needed for these. It definitely limits practice options. It also limits the respect we garner from physicians and the public at large when we have to constantly refer clients for these things.

This was somewhat of a difficult survey for me to complete since my practice is a very small, independent home birth midwifery practice that is less than one year old. I do primarily 2 - 4 birth/month and most clients come to me for home birth. I am just starting to build my GYN practice.

The format of this survey made it difficult to portray how care is delivered: many conditions are rarely seen, but essential to treat every time they arise, and this was difficult to explain given the options. Thanks!

Uncertain how to answer/confused about the survey questions, e.g., Do you always do a procedure...for ALL patients with this problem or do you mean how many patients at your clinic have this problem, i.e., do you assess and treat 100% patients that you find with this problem or do you evaluate everyone for having this issue?

My practice is inner city, mostly young, disadvantaged women - my responses to the practice questions are going to be very different from midwives who practice in other settings, especially more affluent, homogeneous settings - this is a problem when trying to design something like a accreditation exam. For example, I see very few older patients, and very few older primips - this makes me somewhat biased towards what I see most often (i.e., young, minority women who are pregnant, need birth control and/or have an STD). I also feel strongly that this trend towards encouraging (nay, requiring?!) midwives to provide more primary care to their patients is a mistake - there are NPs for that very function. Midwives need to make OB their primary focus with gynecology and family planning second.

I answered as though you were asking me about on how many of our total pts do we complete X task. Or, were you asking me about how on how many of our eligible/relevant pts do we complete X task? Please clarify next time. Thanks!

This survey is too lengthy at difficult to understand. I see a mix of patients and did not understand whether the 100% in any of these 100s of questions referred to the patients I see with this condition or all of my patients.

Not always sure what the questions were asking. The wording often made it difficult to understand what you were evaluating.

You did not have the state of Alaska as a choice for practice location.

The phrasing of the questions was somewhat unclear as to whether in my practice (overall patient population) I treat these conditions frequently, or how often I treat patients specifically with the conditions; for example: treatment of STIs: is the question about how often I see patients with that in my practice or how often I treat people with known STIs?

Very cumbersome survey! Any way to lessen the length of the survey?

Too many primary care conditions that are not appropriate for CNMs to be managing.

Survey difficult to understand on when to mark 'all the time.' Did it mean all the patients with that condition that I discussed all the time. This is how I took it instead of my population as a whole.

Some of the tasks listed like colposcopy I would like to add to my practice. Other tasks like newborn care I would like to add, but I am limited by my practice environment. Excellent survey. I do believe that the midwife should be able to care for the needs of the family and primary care is an important component of what we do.

This survey takes much longer to complete than the one hour estimated.

Rather lengthy. Consider condensing to make the survey length more feasible.

The wording of the questions made it very hard to decide how to score the questions. There were many things that come up only occasionally, so I didn't know whether to put 'rarely' because they are rare, or 'always' because I manage them when they come up (though that is rarely). Thus, my scorings and others' are probably inconsistent and may not reflect how well we manage them WHEN THEY ARISE, but more how often we see them. This could be quite problematic in interpreting results.

Please create a better study guide, and please create more study aids.

Again if you are doing a task it is important to be competent. What tasks you do varies much between practices. It is hard to test for all circumstances.

Tasks well covered.

The length of the question sets were a disincentive to answering them.

Some of the questions asked, I answered that one should know but I am also an FNP. Perhaps a midwife may not manage the same amount as I do.

When I was asked 'how frequent do you do 'X' in your practice, it was difficult to answer because if it was needed I would do in ALL the time, but it may only be needed in 10% of the

people I see. It would be clearer if you added to each question, or most questions... 'if needed, how frequently do you perform 'x' in your practice'. So I feel that some of my answers may be wrong because I was not sure if I was to speak to how frequently I did them in my entire practice, or how frequently I did them if they were needed by the patient.

Good way of evaluating the practice I work in and what kind of work I actually do.

The wording of many of the questions made them hard to answer - was I supposed to answer what % of the time I perform a certain task with a population in which it is indicated (i.e. bimanual compression in the setting of postpartum hemorrhage), or was it supposed to be with what % of my TOTAL patient population do I perform the task?

This survey program runs super slowly

Thanks for your support! :)

The current board exam is based in hospital practice. It should also consider home birth/birthing center practice in some questions.

It was not clear how to answer if you never perform an item. It is very important to perform any procedure/assessment well. However, it may not be important to me to perform it well, if I never do it. Also when asking how often I perform something do you mean how often (number of patients) I do it, or do you mean how often I would perform the item if I think it is necessary in this assessment.

Slightly confusing when you say percentages of patients. Does this include the whole practice each time or just the women's health portion, or pregnancy portion? A little clarification could be made or this could just be me.

When asked about ethnicity there was not multi cultural option. Please include this in the future.

Inform user how long survey will take. Questions not clear.

It was unclear to me as to how to answer the questions regarding percentages. For example, newborn Apgars...how often do I assess/evaluate this in my practice? Well, when I deliver babies, I always assess Apgars. But I don't deliver ALL the babies in my practice. So is my answer 'Always?' or 'Sometimes?' or 'often?' I was confused as to how to approach the answer in almost all the questions of this nature. I generally went with the former thought process when answering.

I deliver in the hospital setting only, neonatal management is handed over to the pediatric team and then to the pediatrician. Primary care is not managed in my practice.

Not sure I answered the 'how important to safe midwifery care' items correctly. e.g. I may never perform that task in my practice but I think it's important to know how to do it.

Please take out the 'how important is the task to midwifery'. All tasks that we do as professionals are important. If I cut off skin tags all day long, it's important to do it right. The ones that have the most impact on life and livelihood are obviously most important. It just prolongs the survey and contributes to survey fatigue.

1. I was unsure how to answer the collaborate/refer questions. I work with 2 OBs and we collaboratively manage all the patients during the antepartum period. During the intrapartum I independently manage labor when I'm OC and collaborate with the OBs only if there are problems like non-reassuring FH or FTP. 2. I was unsure also how to answer the 'how important' questions. Even if you rarely perform a procedure, isn't it VERY important that you are competent in that procedure? (It sure is to that one patient!) I assume you meant, for example, if you don't do the procedure in your own practice, it's not essential that you are competent in that area.

It is hard to assess the importance of each area of practice in midwifery as a whole when you do not practice full-scope. As a primarily well-woman provider, that makes up the majority of what I personally consider most important although I do give a lot of credit to the areas in which I practice very little.

These questions were extremely difficult to answer because of the response options, as they were largely unclear or imprecise.

I practice midwifery in Hawaii, this was not listed as an option.

Don't forget us West Virginia gals on the 1st page (there are 42 of us!!).

Also I practice in Delaware and that was not one of the choices to check off on the first page.

Odd wording of questions.

The federal government is the largest employer of CNMs in the US, with the IHS utilizing a majority of federally employed midwives. This should be reflected in the options listed under 'employer type.'

Tasks regarding out of hospital management should be included in the survey.

It would be important to know place of birth (home, birth center, hospital) to evaluate why certain interventions and tasks are never or rarely completed.

So glad I am receiving $60 credit for doing this long survey!