"THE HOUSE OF THE PREGNANT WOMEN" PROGRAM: USERS' PROFILE AND MATERNAL AND PERINATAL HEALTH CARE RESULTS

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ABSTRACT: This is a cross-sectional, descriptive and exploratory study, which was aimed at characterizing the profile and results of health care delivery to 820 users of the "House of the Pregnant Women" at a philanthropic maternity in Belo Horizonte, Minas Gerais, Brazil, admitted from March 2008 till December 2009. Statistical analysis was based on absolute and relative frequencies. The most common obstetric diagnoses on admission were related to preterm labor and blood pressure. Most pregnant women were discharged (44.1%) or gave birth at the maternity after the stabilization of their clinical condition (45.5%); in 10.2% of cases, the clinical condition worsened and the women returned to the hospital. Among newborns, 2.8% had Apgar <7 at 5 minutes, and the frequencies of stillbirths and neonatal deaths were, respectively, 2.6% and 3.5%. Health care delivery at the "House of the Pregnant Women" promotes improvements in patients' clinical conditions and potentially prevents factors that contribute to increase maternal and perinatal mortality rates.

DESCRIPTORS: Pregnancy. Pregnancy, high-risk. Delivery of health care. Nursing.

PROGRAMA "CASA DAS GESTANTES": PERFIL DAS USUÁRIAS E RESULTADOS DA ASSISTÊNCIA À SAÚDE MATERNA E PERINATAL

RESUMO: Estudo transversal, descritivo-exploratório, cujo objetivo foi caracterizar o perfil e os resultados da assistência prestada a 820 usuárias da "Casa das Gestantes" de uma maternidade filantrópica de Belo Horizonte, Minas Gerais, Brasil, entre março/2008 e dezembro/2009. A análise estatística baseou-se na apresentação de frequências absolutas e relativas das variáveis. Os diagnósticos obstétricos mais frequentes à internação foram relacionados ao trabalho de parto prematuro e à pressão arterial. A maioria das gestantes recebeu alta (44,1%) ou teve parto na maternidade após a estabilização do quadro clínico (45,5%); 10,2% tiveram seu quadro clínico agravado e retornaram ao hospital. Dos recém-nascidos, 2,8% tiveram Apgar no 5º minuto <7 e as frequências de natimortos e de óbitos neonatais foram, respectivamente, 2,6% e 3,5%. A assistência prestada na "Casa das Gestantes" promove melhoria clínica do quadro de internação e, potencialmente, previne fatores que colaboram para o aumento dos índices de mortalidade materna e perinatal.

DESCRITORES: Gravidez. Gravidez de alto risco. Assistência à saúde. Enfermagem.

PROGRAMA "CASA DE EMBARAZADAS": PERFIL DE LAS USUARIAS Y RESULTADOS DE LA ASISTENCIA A LA SALUD MATERNA Y PERINATAL

RESUMEN: Estudio transversal, descriptivo-exploratorio que objetivó caracterizar el perfil y los resultados de atención de salud dada a 820 usuarias de la "Casa de Embarazadas" de una maternidad filantrópica en Belo Horizonte, Minas Gerais, Brasil, entre marzo/2008 y diciembre/2009. Análisis estadística fue basada en presentación de frecuencias absolutas y relativas de variables. Los diagnósticos obstétricos más frecuentes de ingreso fueron relacionados al trabajo de parto prematuro y presión arterial. La mayoría de embarazadas tuvieran alta (44,1%) o parto en maternidad tras estabilización de la condición clínica (45,5%); 10,2% agravaran la condición clínica y regresaron al hospital. De los niños, 2,8% tuvieron Apgar a los 5 minutos <7 y, las frecuencias de nacidos muertos y muertes neonatales fueron, respectivamente, 2,6% y 3,5%. Cuidados ofrecidos en la "Casa de Embarazadas" promueven mejora de la condición clínica a la internación y, potencialmente, previne factores que contribuyen para aumentar los índices de mortalidad materna y perinatal.

DESCRIPTORES: Embarazo. Embarazo de alto riesgo. Prestación de atención de salud. Enfermería.

INTRODUCTION

Although pregnancy is a physiological process, in approximately 15% of cases, complications occur that demand qualified and specialized care.[1] The causes of complications in the pregnancy-puerperal cycle are the same all over the world but, nevertheless, their consequences vary significantly among countries and regions.[2]

The epidemiological maternal health situation in developing countries is severe, and the same is true for the weakness of health care delivery to this population.[3] Updated estimates show that, in 2005, about 533 thousand maternal deaths happened, corresponding to a Maternal Mortality Ratio (MMR) of 450 deaths for every 100 thousand live births (LB) in that group of countries.[4] In addition, for every woman who dies, every year, another 20, i.e. 10 million women are victims of diseases that result from pregnancy, birth and postpartum, with severe consequences for them, their children, families and society.[5] In Brazil, in 2005, 1,619 maternal deaths occurred (MMR 73.9/100 thousand LB), most of which were avoidable if timely and appropriate interventions had been used.[6]

The reduction of the death and morbidity risk for the mother improves the child's health perspectives, particularly the neonatal and postnatal components. In Brazil, since 1980, the neonatal component represents 70% of childhood mortality, with 25% of deaths happening on the first day of life.[7]

Improvements in maternal-infant healthcare quality have been discussed around the globe and are part of the Millennium Development Goals (MDG), which the United Nations Organization (UNO) set in 2000. Eight of the MDG have to be complied with by 2015; these include MGD 4 – Reduce childhood mortality and MDG 5 – Improve maternal health, whose main goal is to bring down maternal mortality by 75% between 1990 and 2015.[2] To reach these MDG, high-quality care delivery to women and newborns (NB) in the prenatal, delivery and postpartum phases is fundamental.[8]

In Brazil, in 1998, the Ministry of Health set up the State Hospital Referral Systems for High-Risk Pregnant Women. A hierarchized care network was created that was organized at different care complexity levels in all Brazilian states. One of the services proposed, optional for the tertiary care level, offers care support to high-risk pregnant women who need observation and extended monitoring, and is known as the "House of the Pregnant Women".[9]

The "House of the Pregnant Women" represents a strategy to revert hospital-centered care and furthers the construction of a new care logic, with a focus on problem prevention, health promotion and care humanization. In addition, the aim of this service is to reduce hospital costs and risks, as well as the broadening of health professionals' activity areas, particularly in nursing.[10]

Initiatives similar to the "House of the Pregnant Women" have been set up in other countries, including Malawi, Zimbabwe, Nigeria, Ethiopia, Mozambique, Bangladesh, Mongolia, Papua New Guinea, Indonesia, Cuba and Nicaragua. Each country has its care model, but the aim is common.[11-13] Nevertheless, although the existence of services like the "House of the Pregnant Women" indicates their acceptance and sustainability, little scientific evidence exists on their problem-solving ability and efficacy to bring down maternal and perinatal morbidity and mortality as, in some countries, these services are developed as a result of the precarious hospital network.[14]

Thus, the aim of this study was to characterize the profile of users and the results of care delivery at the "House of the Pregnant Women" at a philanthropic maternity hospital in Belo Horizonte, Minas Gerais, Brazil.

The present study results can add knowledge on the theme addressed, emphasizing the importance of further dissemination and scientific production about the efficacy and benefits of this type of service, a fact that can stimulate its establishment in other Brazilian states and in other countries. Also, the consolidation of the "House of the Pregnant Women" as a problem-solving and high-quality therapeutic environment directly benefits nursing, as many professionals work there, especially nurse-midwifes. Finally, the literature review revealed that no study on the topic has been published in Brazil.

METHODS

An epidemiological, cross-sectional, descriptive and exploratory study was developed, involving pregnant women hospitalized at the "House of the Pregnant Women" of a philanthropic maternity hospital in Belo Horizonte, Minas Gerais, Brazil.

The "House of the Pregnant Women" under analysis offers 15 beds for the monitoring of pregnant women by a multidisciplinary team (obstetrician, nurse-midwife, nursing technician, nutritionist, physical educator, occupational therapist, social work and psychologist), with care based on institutional protocols. Initially, the pregnant woman is admitted to the hospital and, after the obstetric diagnosis, if there is no need for constant surveillance in this environment, but the clinical situation does not permit the return home, she is transferred to the "House of the Pregnant Women". In this sector, the pregnant woman continues until discharge after her clinical condition improves or returns to the hospital for two reasons: 1) normal evolution of the pregnancy to give birth; and 2) worsening of the condition that caused her hospitalization.

The place of study was chosen for its convenience, because of the easy access to data, as one of the researchers was a resident at the "House of the Pregnant Women".

The study population included all pregnant women hospitalized between 03/01/2008 (first record in the institution's register) and 12/31/2009 (last day registered in 2009), totaling 820 pregnant women, who lived in the state of Minas Gerais and whose data were recorded in the institution's register.

The research received approval from the institution's Research Ethics Committee (Opinion CAAE: 0003.0.439.000.10) and complies with National Health Council Resolution 196/96.[15]

The following variables were used: maternal age, parity, gestational age when hospitalized, hospitalization diagnosis, origin, date of hospitalization, date of transfer to the program, date of hospital transfer, date of discharge, reason for discharge/transfer, type of delivery, health conditions of NB (destiny at birth, weight at birth and Apgar).

The information recorded in the institution's register were transcribed to a data collection form and then included in the database, constructed with the help of statistical software Epi-Info (version 3.5.1).

Statistical analysis was based on the description of the study population's characteristics, using absolute and relative frequencies. Also, the association was estimated between maternal age and gestational age when hospitalized, hospitalization diagnosis, reason for transfer from the "House of the Pregnant Women", delivery type and newborn's health conditions. Finally, the evaluate the results of care delivery at the "House of the Pregnant Women", the most frequent hospitalization diagnoses were compared with the reasons for discharge/transfer and maternal-perinatal health conditions. Statistical differences were evaluated using Pearson's chi-square test. Significance was set at 5% (p-value < 0.05).

RESULTS

Most of the pregnant women under analysis came from cities in the interior of Minas Gerais (39.1%) and other cities in metropolitan Belo Horizonte (33.2%). In terms of age, 19% of these women were between 12 and 18 years of age, 72.2% between 19 and 34 years and 8.8% 35 years and older.

Table 1 displays other data on the hospitalized women's obstetric characteristics and the hospitalization diagnoses. Multiple pregnancies were diagnosed in most of the pregnant women (60.7%) and the majority did not mention any abortion (79.1%). The gestational age was less than 37 weeks (95.1%). The most frequent obstetric diagnoses when the pregnant women were hospitalized in the program were related to premature labor (62.6%) and blood pressure (20.4%).

Among the hospitalized pregnant women, in 44.1% of cases, the clinical condition improved and the women were discharged from the "House of the Pregnant Women", 45.5% gave birth at the maternity after the clinical condition had been stabilized and, in 10.4%, the clinical condition worsened and the women were attended at the hospital. Among the pregnant women who evolved to delivery at the maternity, 53.4% of deliveries were vaginal and, in 46.6%, C-section was needed.

As for the newborns' health conditions, 62.8% were forwarded to the Intensive Care Unit (ICU) or Intermediary Care Unit, 31.1% to the rooming-in unit, 2.6% were stillborn and 3.5% evolved to death after birth. The majority obtained an Apgar score ≥ 7 (97.2%) at five minutes and the weight at birth was less than 2,500 grams (80.7%). Also, the proportion of very low-weight (25.9%) and extremely low-weight (12.6%) newborns is highlighted.

Table 1 - Individual characteristics of pregnant women studied and obstetric diagnoses upon hospitalization, "House of the Pregnant Women", Belo Horizonte-MG, 2008/2009

Variables	Total	
	n	%
Pregnancy		
Single pregnancy	320	39.3
Multiple pregnancies	495	60.7
Delivery		
0	376	46.2
1	215	26.4
>1	223	27.4
Abortion		
0	644	79.1
1	131	16.1
>1	39	4.8
Gestational age upon hospitalization (weeks)		
< 30	213	26.1
30 – 33 weeks and 6 days	382	46.8
34 – 36 weeks and 6 days	181	22.2
37 – 41	40	4.9
Obstetric diagnosis upon hospitalization		
Premature labor	513	62.6
Related to blood pressure	167	20.4
Related to amniotic fluid	41	5.0
Related to the fetus	28	3.4
Metabolic disorders	22	2.7
Others	22	2.7
Related to labor and delivery	15	1.8
Related to hemorrhagic events	11	1.4

The relations between maternal age and maternal-perinatal health conditions are displayed in table 2.

As observed, the main obstetric diagnoses among women of advanced age (35 years and older) were conditions related to blood pressure, higher levels of worsening in the clinical condition with return to the hospital environment, and higher levels of Caesarean delivery, besides higher frequencies for children with appropriate weight at birth in comparison with children in other age ranges. Also, premature labor was proportionally more frequent among pregnant adolescents.

Regarding the fifth-minute Apgar data, most infants scored between 7 and 10 (97.2%), without statistical differences with regard to the woman's age range.

Table 2 - Association between maternal age and maternal-perinatal health conditions, "House of the Pregnant Women", Belo Horizonte-MG, 2008/2009

Variables	Maternal age (years)						p-value
	12-18		19-34		35-44		
	n	%	n	%	n	%	
Gestational age (weeks)							0.206
10 – 29 weeks and 6 days	38	24.5	158	26.8	17	23.6	
30 – 33 weeks and 6 days	78	50.3	275	46.7	29	40.3	
34 – 36 weeks and 6 days	34	21.9	129	21.9	18	25.0	
37 – 41	5	3.3	27	4.6	8	11.1	
Obstetric diagnosis when hospitalized							0.003
Premature labor	114	73.1	373	63.1	26	36.1	
Related to blood pressure	21	13.5	115	19.5	31	43.0	
Related to amniotic fluid	7	4.5	31	5.2	3	4.2	
Related to the fetus	5	3.2	20	3.4	3	4.2	
Metabolic disorders	1	0.6	18	3.0	3	4.2	

Others	6	3.8	14	2.4	2	2.7	
Related to labor and delivery	2	1.3	12	2.0	1	1.4	
Related to hemorrhagic events	-	-	8	1.4	3	4.2	
Reasons for transfer							< 0.001
Discharge	75	49.4	252	44.6	18	26.9	
Delivery	65	42.7	258	45.7	34	50.7	
Worsening of clinical situation	12	7.9	55	9.7	15	22.4	
Delivery type							0.006
Normal	48	64.9	155	53.3	17	36.2	
C-section	26	35.1	136	46.7	30	63.8	
Destiny of NB at birth							0.073
Intensive/Intermediary Care	35	57.4	162	66.9	21	47.7	
Rooming-In	26	42.6	65	26.9	17	38.7	
Stillborn	-	-	5	2.1	4	9.1	
Death	-	-	10	4.1	2	4.5	
Weight at birth (grams)							0.009
400 – 999	2	4.4	27	13.9	5	16.1	
1,000 – 1,499	9	20	56	28.9	5	16.1	
1,500 – 2,499	27	60	77	39.7	10	32.3	
2,500 – 4,490	7	15.6	34	17.5	11	35.5	

The association between delivery type and the children' birth conditions and the main obstetric diagnoses upon hospitalization is displayed in table 3.

A small percentage of worsening in the clinical condition and return to the hospital environment was found among pregnant women hospitalized with a diagnosis of premature labor (5.4%), while rates for discharge from the program and delivery at the maternity were identical (47.3%). Sixty-eight percent of the women who evolved to delivery gave vaginal birth. Regarding the newborns, 90.7% had low weight at birth. Nevertheless, 96.4% showed a fifth-minute Apgar score between seven and ten and a small proportion of perinatal deaths was found, with only 3.4%. Among the pregnant women hospitalized with obstetric diagnoses related to blood pressure, rates of return to hospital were high (38.6% of hospitalization for delivery and 37.3% of worsening in the woman's clinical condition). In that group, abdominal birth was more frequent than vaginal birth, with a C-section rate of 75.7%. As for the infants, 68.9% were low-weight. Nevertheless, no records of fifth-minute Apgar score <7 were found. Also, the proportion of perinatal deaths was small, with only 1.1%.

Table 3 - Association between most frequent obstetric diagnoses upon hospitalization, delivery type and birth conditions, "House of the Pregnant Women", Belo Horizonte-MG, 2008-2009*

Variables	Obstetric diagnosis upon hospitalization			
	Premature labor		Related to blood pressure	
	n	%	n	%
Delivery type				
Normal	166	68.0	27	24.3
C-section	78	32.0	84	75.7
Birth weight of NB				
Intensive/Intermediary care	144	68.9	53	58.2
Rooming-In	52	24.9	35	38.5
Stillborn	6	2.8	2	2.2
Death	7	3.4	1	1.1
Fifth-minute Apgar				
1 to 6	6	3.6	-	-
7 to 10	162	96.4	81	100
Birth weight (grams)				
400 – 999	25	15.5	6	8.1
1,000 – 1,499	48	29.8	18	24.3
1,500 – 2,499	73	45.4	27	36.5
2,500 – 4,490	15	9.3	23	31.1

* The pregnant women who were discharged from the program were not included in this analysis.

DISCUSSION

This study was undertaken at a philanthropic maternity hospital in Belo Horizonte, which not only was a referral institution for care delivery to pregnant women in the habitual risk category, but also delivers care to the high-risk group.[16] Thus, this characteristic could partially explain the fact that most women hospitalized at the "House of the Pregnant Women" came from cities in the interior of Minas Gerais or other cities in metropolitan Belo Horizonte. It is important to highlight, however, that the most complex health services are concentrated in large cities, while service levels in areas distant from urban centers are low, due to investment issues in the economic and social structure. In addition, no regular health services are offered in large regions of the country, despite strategies and public policies to encourage health work in poorer areas.[17] Thus, these conditions lead to an exodus of patients to care services in large cities.

The analysis of maternal age in this study revealed that 19% of the pregnant women were adolescents and that 8.8% were 35 years or older. These results are similar to the results observed for the entire state of Minas Gerais in 2008, when 17.9% of the mothers were less than 18 years old and 11.2% were of advanced age.[18] The particularly of the women evaluated in this research should be highlighted, who were diagnosed with high-risk pregnancy, while no distinctions in this respect existed in data for the state.

In this study, the main obstetric diagnoses upon hospitalization at the "House of the Pregnant Women" were premature labor, followed by causes related to blood pressure, similar to findings evidenced in a study that involved high-risk pregnant women at a maternity hospital in São Paulo city, São Paulo, Brazil.[19] In another study in Porto Alegre, Rio Grande do Sul, Brazil, on the other hand, it was evidenced that high-risk pregnant women were more frequently referred to hospital care due to arterial hypertension, followed by diabetes, fetal causes, hemorrhages and obstetric antecedents.[20]

Concerning the delivery route, in this research, the frequency of C-section was 46.6%, bordering on the frequency found for the entire country (43.8%) in 2006.[21] The group under analysis, however, comprised high-risk pregnant women and the high percentage of C-sections may reflect these women's obstetric health conditions. High elective C-section rates reveal the severity of the underlying obstetric conditions and the need to interrupt high-risk pregnancies early. Thus, the abdominal delivery route is associated with maternal morbidity and mortality causes in comparison with vaginal birth; when well indicated, however, C-section can contribute to reduce the risk of maternal-perinatal death.[22]

With regard to the mother's age, in this study, lower frequencies were evidenced for surgical births in adolescents and higher frequencies for C-sections in patients of advanced aged, supporting findings from a study of high-risk pregnant women attended at an obstetric and gynecology service of a teaching hospital in São Luiz, Maranhão, Brazil. In this respect, conflicts exist in the literature about the impact of extreme reproductive conditions on maternal-perinatal health, as risks may be associated with unfavorable socioeconomic conditions as well as with biological and physiological factors. Some maternal conditions can lead to fetal problems and are more present in advanced ages, increasing the number of C-sections among women in this age range.[23]

In addition, considering the impact of advanced age on maternal-perinatal health, in this study, the main obstetric diagnoses for hospitalization among pregnant women over 35 years of age were blood pressure-related problems, following by premature birth. These results were similar to the findings from a study in São Luiz do Maranhão, Brazil, in which women in this age group showed a four times higher risk of preeclampsia and nine times higher fore premature membrane rupture.[23] In addition, in this study, it was demonstrated that worsened clinical conditions were proportionately more frequent among pregnant women of advanced age and that, therefore, they were attended in the hospital environment, a fact that can bring about higher demands for surgical interruption of pregnancy.

Regarding the infants' results, in this study, low birth-weight rates were higher among children of adolescent women in comparison to mothers of advanced age. In a study in Rio Grande do Sul, Brazil, similar frequencies of low birth weight were found in extreme age groups. This condition may be more related with the study population's low socioeconomic level and deficient nutritional intake than with obstetric issues.[24] Pregnancy in extreme age groups, however, is recognized as a risk factor for adverse perinatal results, associated with perinatal mortality, including prematurity and low birth weight.[25]

Considering the results of care delivery to users in the "House of the Pregnant Women"

program, in this study, high rates were observed for discharge and forwarding for delivery at the maternity after the clinical condition had been stabilized, besides very favorable perinatal ratios, such as low frequencies of stillbirth, neonatal death and fifth-minute Apgar < 7. These findings demonstrate the quality of care delivery at this new health care service, in view of clinical improvements in the cause of hospitalization and the potential prevention of factors associated with the increase in maternal and perinatal mortality rates. A study developed in 2010 at a neonatal referral ICU in the South of Brazil related appropriate and high-quality care to pregnant women with favorable perinatal results, including a possible reduction of problems like low birth weight and premature birth.[26]

Some underdeveloped countries propose the use of care models similar to that of the "House of the Pregnant Women", known as Maternity Waiting Homes (MWH). High-risk pregnant women can stay at these services and be forwarded to a hospital nearby in case of problems. According to the Pan American Health and Education Foundation (PAHEF), the implantation of MWH can end up reducing maternal mortality rates in vulnerable populations. In two studies developed on the African continent, the effectiveness of MWH on the reduction of maternal and perinatal morbidity and mortality was observed. In the first, undertaken in Zambia, the obstetric outcomes of high-risk pregnant women who used MWH and normal-risk pregnant women who did not use MWH and were attended in hospital services were similar. Therefore, the authors concluded that this service can contribute to reduce maternal and perinatal mortality.[12] In another research developed in Eritrea, hospitalization in MWH increased the number of deliveries without maternal death by 56%, demonstrating the efficacy of this care strategy to reduce maternal and perinatal mortality rates. In addition, the community gave unrestricted support to the service. Thus, the authors recommended the large-scale expansion of MWH due to its efficacy to improve maternal and perinatal indicators and reduce care costs and its social acceptability.[13]

Care delivery in extra-hospital care services for high-risk pregnant women, like the "House of the Pregnant Women" and MWH, demonstrates actions to improve maternal health and, consequently, to reduce childhood mortality, a fact directly related to the United Nations Organization's Millennium Development Goals, specifically goals four and five.[2] These assertions should be better proven for the "House of the Pregnant Women" program though, by means of longitudinal research designs that compare care results at this service with care results in the hospital context, like in the abovementioned studies on MWH. This hypothesis could not be explained in this study due to limitations related to the cross-sectional, descriptive and exploratory design.

Another limitation found in this study was the high levels of missing information for some study variables, mainly variables related to the newborn. This can be explained by the fact that the register used was not an instrument for research, but for internal control. Also, various professionals record the data and, sometimes, due to service demands, completion is delayed and some information is lost.

CONCLUSION

Care delivery at the "House of the Pregnant Women", an extra-hospital health unit affiliated with a tertiary-care referral service, indicates favorable maternal-perinatal results, and demonstrates that this is an important strategy to reduce maternal and child mortality, o goal that is on the global agenda.

In this study, care delivery to the high-risk pregnant women at this kind of service favors women living in metropolitan regions or in the interior of the state, who need observation and monitoring and have difficult access to referral health institutions near their home. This evidences the importance of access and equity, as well as the articulation and governance of care network points to improve maternal and perinatal health indicators. Equally important are the proportion of normal births, even in a group of high-risk pregnant women, high Apgar scores and low frequencies of stillbirth or perinatal death.

Therefore, the implementation of the "House of the Pregnant Women" represents an advance in maternal-infant care. Thus, investments in this program can benefit both mothers and children, through a possible reduction of risks like hospital infections, unnecessary interventions, anxiety provoked by the environment, among other, due to the longer stay of high-risk pregnant women in hospital wards. In that sense, health managers need to be alerted about the potential results of this new care model.

Also, research on the theme is needed, particularly with longitudinal designs, mainly com-

paring maternal-infant outcomes with outcomes reached at other services, mainly in hospitals.

REFERENCES

1. World Health Organization (WHO). Managing complications in pregnancy and childbirth: a guide for midwives and doctors. Geneva (CH): World Health Organization; 2000 [acesso 20 Dez 2010]. Disponível em: http://www.iawg.net/resources/RH%20Kit%2011%20-%20Complications%20of%20pregnancy%20and%20childbirth_midwives%20and%20doctors.pdf
2. United Nations (UN). The Millennium development goals report. New York (US): United Nations; 2010 [acesso 20 Dez 2010]. Disponível em: http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf#page=28
3. Merighi MAB, Gualda DMR. O cuidado à saúde materna no Brasil e o resgate do ensino de obstetrizes. Rev Latino-am Enfermagem. 2009 Mar-Apr; 17(2):265-70.
4. Shah I, Say L. Mortalidade materna e atenção à maternidade de 1990 a 2005: conquistas desiguais, porém importantes. Quest Saúde Reprod. 2008 Ago; 3(3):22-34.
5. United Nations Children's Fund (UNICEF). Situação mundial da infância 2009: saúde maternal e neonatal. New York (US): United Nations Children's Fund; 2009 [acesso 20 Dez 2010]. Disponível em: http://www.unicef.pt/docs/situacao_mundial_da_infancia_2009.pdf
6. Ministério da Saúde (BR). Nota técnica sobre a vigilância de morte materna. 2008 [acesso 20 Dez 2010]. Disponível em: http://www.saude.sc.gov.br/inf_saude/sim_informacoes/Nota_tecnica_CIT_Portaria1119_materna.pdf
7. Rede Interagencial de Informações para a Saúde. Demografia e saúde: contribuição para análise de situação e tendências. Brasília (BR): Organização Pan-Americana da Saúde; 2009 [acesso 18 Dez 2010]. Disponível em: http://www.opas.org.br/informacao/UploadArq/LIVRO_DEMOGRAFIA_E_SA%C359ADE_WEB.pdf
8. Marziale MHP, Mendes IAC. Pobreza e desenvolvimento humano: estratégias globais. Rev Latino-am Enfermagem. 2007; 15(Esp):709-12.
9. Ministério da Saúde (BR). Gestante de alto risco: sistema estadual de referência hospitalar à gestante de alto risco. Brasília (DF): Ministério da Saúde; 2001.
10. Silva KL, Sena RR, Leite JCA, Seixas CT, Gonçalves AM. Internação domiciliar no Sistema Único de Saúde. Rev Saúde Pública. 2005 Jun; 39(3):391-7.
11. Pan American Health and Education Foundation (PAHEF). Maternity Waiting Homes. Success Stories. 2010 [acesso 15 Dez 2010]. Disponível em: http://www.pahef.org/en/successstories/39/23-maternity-waiting-homes-.html
12. Van Lonkhuijzen L, Stegeman M, Nyirongo R, van Roosmalen J. Use of maternity waiting home in rural Zambia. Afr J Reprod Health. 2003 Apr; 7(1):32-6.
13. Andemichael G, Haile B, Kosia A, Mufunda J. Maternity waiting homes: a panacea for maternal/neonatal conundrums in Eritrean. J Eritrean Med Assoc. 2009; 4(1):18-21.
14. World Health Organization (WHO). Working with individuals, families and communities to improve maternal and newborn health. Geneva (CH): World Health Organization; 2010. [acesso 20 Dez 2010]. Disponível em: http://whqlibdoc.who.int/hq/2010/WHO_MPS_09.04_eng.pdf
15. Resolução 96, de 10 de outubro de 1996 (BR). Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. 1996. [acesso 11 Nov 2010]. Disponível em: http://conselho.saude.gov.br/resolucoes/reso_96.htm
16. Hospital Sofia Feldman. Guia de práticas clínicas do Hospital Sofia Feldman; ruptura prematura de membranas. Belo Horizonte (BR): Hospital Sofia Feldman; 2008.
17. Castro JL, Vilar RLA. Relatórios de grupos: desafios e estratégias para interiorização do trabalho em saúde. In: Ministério da Saúde (BR). Políticas de recursos humanos em saúde. Brasília (DF): Ministério da Saúde; 2002. p. 179-84.
18. Ministério da Saúde (BR). Tipo de parto segundo a idade materna no Estado de Minas Gerais [internet]. Brasília (DF): MS; 2008 [acesso 11 Nov 2010]. Disponível em: http://tabnet.datasus.gov.br/cgi/tabcgi.exe?sinasc/cnv/nvmg.def
19. Gouveia HG, Lopes MHBM. Diagnósticos de enfermagem e problemas colaborativos mais comuns na gestação de risco. Rev Latino-am Enfermagem 2004 Mar-Abr;12(2):175-82.
20. Buchabqui JA, Capp E, Ferreira J. Adequação dos encaminhamentos de gestações de alto-risco na rede básica de atenção à saúde de Porto Alegre, Rio Grande do Sul, Brasil. Rev Bras Saúde Mater Infant. 2006 Jan-Mar;6(1):23-9.
21. Ministério da Saúde (BR). Pesquisa Nacional de Demografia e Saúde da Criança e da Mulher – PNDS 2006: dimensões do processo reprodutivo e da saúde da criança. Brasília (DF): Ministério da Saúde; 2009. [acesso 22 Nov 2010]. Disponível em: http://bvsms.saude.gov.br/bvs/publicacoes/pnds_crianca_mulher.pdf
22. Viggiano MB, Viggiano MGC, Souza E, Camano L. Necessidade de cuidados intensivos em maternidade pública terciária. Rev Bras Ginecol Obstet. 2004 Mar; 26(4):317-23.
23. Andrade PC, Linhares JJ, Martinelli S, Antonini M, Lippi GU, Baracat FF. Resultados perinatais em grávidas com mais de 35 anos: estudo controlado. Rev Bras Ginecol Obstet. 2004 Out; 26(9):697-701.

24. Azevedo GD, Freitas RAO Jr, Freitas AKMSO, Araújo ACPF, Soares EMM, Maranhão TMO. Efeito da idade materna sobre os resultados perinatais. Rev Bras Ginecol Obstet. 2002; 24(3):181-5.

25. Martins EF. Mortalidade perinatal e avaliação da assistência ao pré-natal, ao parto e ao recém-nascido em Belo Horizonte, Minas Gerais [tese]. Belo Horizonte (MG): Escola de Enfermagem da Universidade Federal de Minas Gerais; 2010.

26. Basso CG, Neves ET, Silveira A. Associação entre realização de pré-natal e morbidade neonatal. Texto Contexto Enferm. 2012 Jun; 21(2):269-276.

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