Obstetric Complications: The Health Care-Seeking Process before Admission at the Hospital in Rural Bangladesh

Thérèse Juncker
Parveen A. Khanum

International Centre for Diarrhoeal Disease Research, Bangladesh
Mohakhali, Dhaka 1212, Bangladesh

1997

ICDDR,B Working Paper No. 79

Editing: M. Shamsul Islam Khan

Layout Design and Desktop Publishing: Jatindra Nath Sarker
Manash Kumar Barua

ISBN: 984-551-101-5

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MCH-FP Extension Project (Rural) Working Paper No. 132
ICDDR,B Working Paper No. 79

Published by:
International Centre for Diarrhoeal Disease Research, Bangladesh
GPO Box 128, Dhaka 1000, Bangladesh
Telephone: 880-2-871751-60 (10 lines): Cable: CHOLERA DHAKA, Telex: 675612 ICDD BJ;
Fax: 880-2-871568 and 880-2-883116
E-mail: barkat@cholera.bangla.net

Printed by Adprint, Dhaka

ACKNOWLEDGMENTS

The MCH-FP Extension Project (Rural) is a collaborative effort of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) and the Ministry of Health and Family Welfare (MOHFW) of the Government of the People's Republic of Bangladesh, supported by the Population Council. Its purpose is to improve the delivery of maternal and child health and family planning services through the MOHFW programme.

This publication is funded by the United States Agency for International Development (USAID) under the Cooperative Agreement No. 388-0071-A-00-3016-00 with ICDDR,B. ICDDR,B is supported by the aid agencies of the Government of Australia, Bangladesh, Belgium, Canada, Japan, the Netherlands, Norway, Saudi Arabia, Sri Lanka, Sweden, Switzerland, the United Kingdom, and the United States; international organizations, including the Arab Gulf Fund, Asian Development Bank, European Union, the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), and the World Health Organization (WHO); private foundations including Aga Khan Foundation, Child Health Foundation (CHF), Ford Foundation, Population Council, Rockefeller Foundation, Thrasher Foundation and the George Mason Foundation; and private organizations, including, East West Inc., Helen Keller International, International Atomic Energy Centre, Lederle Praxis, New England Medical Centre, Procter Gamble, RAND Corporation, Social Development Center of Philippines, Swiss Red Cross, the Johns Hopkins University, the University of Alabama at Birmingham, UCB Sidac, Wander A.G. and others.

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ABSTRACT

Objectives: An exploratory study was designed to investigate the health-seeking process, satisfaction with hospital care, and transport and service costs for women admitted to hospital with obstetric complications.

Methods: Twenty-two women were randomly selected from the maternity register of a rural hospital for case study.

Results: In most cases, multiple home therapy was used before resorting to the hospital. The hospital seemed the last option in critical situations. Transport cost was nominal but expenditures for hospital care were hardly affordable for most families. Socio-cultural and financial factors and lack of knowledge about obstetric complications were the major reasons for resorting first to home services.

Conclusions: Larger qualitative studies, including users and non-users of Emergency Obstetric Care (EOC), should be conducted to fully understand the health-care seeking behaviour of women and their decision-makers in case of obstetric complications.

INTRODUCTION

According to the World Health Organization (WHO) estimates, the majority of approximately 500,000 maternal deaths per year occur in developing countries [1]. The predictability of the screening systems and the effectiveness of antenatal interventions to avert maternal deaths have been questioned in the recent literature [2-5]. Therefore, every pregnant woman is to be considered at risk of complications and obstetric services need to be made accessible [6-8].

In Bangladesh, where the maternal mortality ratio is around 5 per 1,000 live-births [9-10], more than 70 per cent of the maternal deaths are due to direct obstetric complications [9,11]. Services to pregnant women are delivered in both the public and private sectors. In rural areas, the government services are provided at the household, clinic and hospital levels. Female community workers visit pregnant women at their house once every two months. They question women to detect some risk factors for obstetric complications and motivate them to go to the MCH-FP clinic for antenatal check-ups and tetanus toxoid immunization. At the MCH-FP clinics (1 clinic per 25,000 inhabitants), female paramedics perform obstetric examination and treat minor ailments. Women with obstetric complications are referred to the sub-district hospital (1 hospital for about 200,000 inhabitants). Due to poor equipment, absence and/or inexperience of the medical staff, basic obstetric care only is provided at the sub-district hospital. The majority of patients with complications are referred to a higher level of care. The government services are officially free of charge, but due to non-availability of drugs, the majority of patients admitted to public hospitals have to buy their medicines from local pharmacies. One Traditional Birth Attendant (TBA) per village has been trained by the government on safe-delivery practices and identification of obstetric complications. In the private sector, there is a wide range of health care practioners and healers who provide services to pregnant women: qualified doctors, *dais* (untrained traditional birth attendants), *palli chikitshoks* (village doctors), quacks, homeopaths, *kobirajs* (traditional healers), and religious healers. Most of these practioners deliver home services if required. *Palli chikitshoks* have

received one-year training to be able to provide basic treatment for the most common diseases. Quacks have received either a very short or no formal training; they mostly acquire their experience while helping a doctor or another health service provider. Commonly, quacks and *kobirajs* respectively provide allopathic and herbal treatments, and religious healers recommend rituals. However, apart from the qualified doctors, many private health-care providers offer various types of treatments. Combinations of treatments are very common [12,13].

Over 90 per cent of the Bangladeshi women deliver at home [14,15] and approximately 75 per cent of the women, who die from a pregnancy-related complication, die at home without any professional assistance [16,17]. However, a small proportion of women go to hospital when a pregnancy or delivery problem occurs, but little is known about the health seeking behaviour of these patients. This study was undertaken to explore the health care-seeking process in case of obstetric complications referring to the sequence of events prior to admission to hospital, and to assess the transportation cost to hospital and the clients' satisfaction with hospital care.

MATERIALS AND METHODS

Study Site

The study was conducted in Abhoynagar thana, a rural sub-district of Southwest Bangladesh including about 210,000 inhabitants. In the study area, 75 per cent of the population are Muslims and 25 per cent are Hindus; the literacy rate is 47 per cent for males and 30 per cent for females [18]. As in the rest of Bangladesh, most women live in *purdah* (seclusion) and require permission from their decision-makers, namely their husband or mother-in-law, to move outside the *bari* (household). Eighty-eight per cent of the deliveries are attended by dais and relatives, 8 per cent by trained TBAs, and 3 per cent by doctors and nurse-midwives [18]. The obstetric services provided at Abhoynagar thana hospital are much better than those offered in most other thana hospitals. A doctor is always present, and services are usually provided for complications that do not require blood transfusion or caesarian section. Medical facilities providing surgical treatment and blood transfusion are located about 50 kilometres from the thana hospital and are easily accessible. Communications from the villages to the thana hospital are good all year round. The most remote villages are about two hours away from the hospital.

Study Subjects

Every fifth woman recorded in the maternity register of the thana hospital was selected for a case study, provided she was admitted with an obstetric complication. When the hospital record showed that the patient had a delivery without problem, then the first following patient with a complication was selected for interview. Twenty-two of the 199 women, admitted to the maternity unit between January and August 1993, were included in the study.

A Bengali female social scientist conducted an indepth interview at the respondent's residence within four weeks after hospital discharge. Privacy and confidentiality were maintained throughout the interviews. The

respondent was first invited to speak freely about her pregnancy or delivery problem, then the researcher used an open questionnaire to check and complete the accounts of the interviewee. The questionnaire was divided into three sections. The first section included questions to investigate the obstetrical complications and the health care- seeking process. At this stage of the interview, the interviewer attempted to recall the sequence of events from the onset of the symptoms until the decision was made to go to hospital. The same questions were often asked in various ways to prompt more details. The second section of the questionnaire was related to the perception of hospital care, and the third section included questions on the types of transport used for reaching the hospital, and the expenditures incurred for services and transportation. At the end of the interview, the respondent's husband or, in his absence, a close adult relative was questioned about his/her perception of the services provided at the hospital. Eight husbands, one mother, and one brother could be contacted.

After completing all the interviews, we questioned four quacks and five *palli chikitshoks* about the treatments they prescribed for eclampsia, hemorrhage, and prolonged labour. In the main city and two large villages of the thana, we went to the market place and asked the community members to indicate names of quacks or *palli chikitshoks* working in the area. Without following any selective procedure, we visited the persons whose names were given to us. We interviewed one quack and one *palli chikitshok* in the city; two quacks and two *palli chikitshoks* in one village; one quack and two *palli chikitshoks* in the other village. All these service providers had been practising for several years; they were, however, not the only quacks and *palli chikitshoks* in their area.

FINDINGS

Characteristics of the Respondents

The main characteristics of the respondents are presented in Table 1. All women were married except one who was divorced. Two women were involved in some small income-generating activities at home. The husbands were: cultivators (9); labourers (7); businessmen (3); *palli chikitshok* (1). One husband was unemployed. The monthly salary of the labourers ranged from US$25.00 to US$67.00. Income from other occupations was irregular and not easy to measure. The time required to reach the thana hospital by *rickshaw* (tricycle) ranged from 15 to 90 minutes depending on the location of the respondents' residence. The complications which affected the respondents were haemorrhage including, spontaneous abortions (3), induced abortion (1), antepartum haemorrhage (2) and postpartum haemorrhage (2); prolonged labour (5); premature rupture of membranes (4); eclampsia (2); induced septic abortion (1); premature labour (1); and obstructed labour due to breech presentation (1). Regarding prolonged labour, we estimated the duration of labour between the onset of strong or regular pains and the departure from the house based on the respondent's accounts. All women with prolonged labour had pains for more than two days when they went to the hospital except a secondpara woman who was in labour for approximately 48 hours. The two women with an induced abortion were 33 and 35 years old, and had five children each. These women and their husbands had no education.

Table 1. Characteristics of the respondents (n = 22)

Characteristics	Number
Age in years (median):	24
Women's education (in years):	
0	8
1-5	6
>5	82
Husbands' education (n = 21):	
0	6
1-5	5
>5	10
Religion:	
Muslim	20
Hindu	2
Gravidity:	
1	10
2-3	6
>3	6
Antenatal care at clinic or hospital	14
Adverse outcome in previous pregnancies:	
Still-birth	1
Abortion	3
Complication during last pregnancy:	
Haemorrhage	8
Prolonged labour	5
Premature rupture of membranes	4
Eclampsia	2
Septic abortion	1
Premature labour	1
Obstructed labour	1
Last pregnancy outcome:	
Abortion	5
Still-birth (including one delivery of triplets)	6
Live-birth(including one death with 24 hours)	13

Health care-seeking process prior to admission to hospital

> Case report: Antepartum haemorrhage
>
> A... had four years of education and was expecting her sixth child. In her seventh month of pregnancy, she had a mild vaginal haemorrhage, but she did nothing about it. She started bleeding again with labour pains. She took herbal treatment from a *kobiraj*. After six days of pains a dai was called in. The dai tied a piece of cloth around her abdomen to bring the baby down. Later on, a qualified doctor was called in, but A... felt so bad that she requested to be brought to the hospital. From the thana hospital she was referred to the district hospital where she delivered a dead baby.

In 17 cases, services were sought from one or several providers before recourse to the thana hospital (Table 2). In cases of multiple providers, one person was usually called after another. However, in some instances, different providers attended the patient simultaneously. This happened when family members wished to combine several types of treatments or when some providers required collaboration from others. Usually the quacks and the *palli chikitshoks* rely on the examination performed by the dais to give injections or other medicines, because they, as males, do not perform physical check-ups.

Table 2. Resort to home service providers before admission to hospital

Number of Service providers used	Number
None	5
1 service provider	3
2 service providers	3
3 service providers	4
4 service providers	5
>4 service providers	2

In total, the service providers were consulted 51 times prior to the patients' admission to hospital (Table 3). The quacks, *palli chikitshoks*, and dais were by far the most frequently consulted. They are easily accessible, are well known in the community, and their services are cheap. The paramedics, medical doctors, or trained TBAs, who have received training to recognize and, to an extent, deal with obstetric complications were called in only nine times. Two relatives, one sister-in-law, and one uncle were involved in providing services.

Table 3. Types of service providers used before admission to hospital

Type of service providers	1st call	2nd	3rd	4th	5th	Total
Palli chikitshok or Quack	3	5	4	4	2	18
Untrained TBA	9	2	1	1	0	13
Imam, Fakir	2	1	2	0	0	5
Kobiraj	1	2	1	0	0	4
Paramedic	1	1	1	1	0	4
Trained TBA	1	0	2	0	0	3
Qualified doctor	0	1	0	1	0	2
Relative	0	2	0	0	0	2

Two of the five women, who did not receive any home services prior to their admission to hospital, had eclamptic fits and were brought directly to hospital once they developed seizures. The mother and the mother-in-law of these cases recognized eclampsia as a complication requiring immediate hospital treatment. The third woman, a primipara with no education, had a haemorrhage five days after having delivered at the hospital. Considering the severity of the bleeding she went back to the hospital within a few hours. The fourth case, a 33-year-old woman without education, developed sepsis after an abortion was induced by inserting a root into the cervix.

Approximately 12 hours after she attempted to abort, this woman went to the hospital due to unbearable pains. The fifth woman, a secondpara with ten years of education, decided to go to the hospital after two days of labour pains without progress. In conclusion, it appears that these women went directly to the hospital because the seriousness of their condition was recognized either by themselves or by their close relatives.

Interventions prior to admission to hospital

> Case report: Obstructed labour
>
> M..., a 20-year old divorced woman was expecting her first child. One morning, at her due time for delivery, she started having labour pains. Her sister-in-law called an aunt who was dai. After vaginal examination, the dai said that there would be no problem. In the afternoon, a quack came to see M... He gave her three injections. Later on, since there was no progress of labour, a trained TBA was called in. She diagnosed a breech presentation and immediately referred M... to the hospital. M.... arrived at the thana hospital at 7:30 pm with obstructed labour, but the fetal heart sounds were still normal. The doctor wanted to refer M... to the district hospital, but her brother refused, although money was not a problem. Finally, the foetal heart sounds disappeared, and an embryotomy had to be performed to deliver the dead baby.

For each of the providers whose services were required, we attempted to investigate what type of intervention was applied. We grouped the interventions into seven broad categories: allopathic treatments without injections; injectable treatments; rituals and traditional practices; homeopathic and herbal treatments; obstetric maneuvers; and other practices. Although the respondents were unable to tell which drugs were given to them, they could clearly inform us about the number of injections they had received. In Bangladesh, a very common practice to prepare for the delivery is to rub the abdomen and the vagina of the labouring woman with mustard oil. We did not consider this practice a specific intervention for obstetric complications.

We identified 31 interventions between the onset of the complications and admission to hospital (Table 4). Allopathic treatments were applied nine times. Injectable treatments - each treatment included one or several injections - were administered seven times; it is to be mentioned that one woman was given two injectable treatments. The six cases for whom injections were prescribed ended up in hospital with the following diagnoses: prolonged labour (2 cases who received 4 injections each), obstructed labour with breech presentation (4 injections), antepartum haemorrhage (3 injections), premature rupture of membranes (2 injections), retained placenta (1 injection).

Table 4. Types of interventions before admission to hospital

Type of intervention	1st call	2nd	3rd	4th	Total
Allopathic treatments (excluding injections)	3	1	3	2	9
Injectable treatments	2	3	0	2	7
Rituals, traditional practices	6	1	0	0	7
Herbal, homeopathic treatments	2	2	1	0	5
Obstetrical maneuvers	1	1	0	0	2
Pressure on abdomen	0	1	0	0	1

The injections were provided by *palli chikitshoks,* quacks, and paramedics. According to the information received from the *palli chikitshoks* and the quacks whom we questioned, the drugs that are most commonly injected in case of obstetric complications are ergometrine, oxytocin, antibiotics. Ergometrine is given mainly for postpartum haemorrhage but also sometimes for antepartum haemorrhage. Oxytocin is prescribed in case of weak pains or prolonged labour. Some providers mentioned that they inject oxytocin only when the dai finds that the baby's presentation is normal. The drug is usually given through an intravenous perfusion, but sometimes the first dose is injected directly. It is expected

that the woman will deliver within a definite period of time after the injection (15 minutes for some providers, 30 minutes to one hour for others). If the patient does not deliver within the expected time, the provider may administer some more oxytocin or may refer the woman to hospital. Some providers said that they use up to four ampoules of oxytocin per case. They did not give any indication about watching the patient for detecting signs of uterine rupture. Antibiotics are given for all types of complications usually in addition to other drugs.

The rituals and traditional practices that were applied included common practices, such as drinking *pani pora* (water that has been blessed and blown upon), reciting prayers, wearing amulets or charms, and providing *jhar phuk* (blowing over some parts of the body). An unusual magic practice was performed in a Muslim family for a woman with prolonged labour. The *fakir* who was called in closed a *kouta* (box) while pronouncing some *mantras* and required a banana tree to be fixed near the house with a thread linking the tree and the delivery room. The tree had to be chopped down, then the *kouta* was to be opened and the baby would be born.

An obstetric maneuver was performed on two occasions. One *dai* pulled on a retained placenta; another *dai*, in a case of prolonged labour, tried to pull the fetus down, but the umbilical cord came out first. One *dai* applied pressure on the abdomen by tying a piece of cloth around the woman's waist to expedite the delivery because of an haemorrhage.

Resort to Hospital Care

Ten women reached the hospital within one day after the onset of the complications, five within two or three days, and eight after four days or more. Non-recognition of the problem by the attendants and resort to home services were the main reasons for late referral to hospital. Difficulty in finding transport and travelling at night were reported by some respondents as factors for delay.

Half the women were brought to hospital on the advice of one of the service providers. The decision to go to hospital was made by relatives in eight cases and by the respondent herself in three cases. The relatives who made the decision included mothers (3), husbands (2), mother-in-law (2), and uncle (1). Except for the two cases of eclampsia, the relatives decided to resort to hospital care when home treatments failed. Two of the three women, who decided themselves to go to hospital, were in great suffering. One of them reported as follows: *"I felt that if I remained at home I would die, so I went to the hospital with my husband."* The other one said, *"I could not bear it any more... The people of the house understood the problem and listened to my demand of getting me to the hospital."* Women probably feel the need to go to hospital, but they do not express themselves. One respondent said, *"Actually, I thought it was necessary (to go to hospital), but I didn't say it to anyone."*

Cost of Services and Transport

Ten of the 17 patients who received home services had to pay for it. On an average, the expenses for the services amounted to US$2.62 (US$0.87 to US$7.50). Payment was made mainly to the quacks and the *palli chikitshoks*. The paramedics and most TBAs did not receive money.

All patients had to pay at the thana hospital. The average cost for services at the thana hospital was US$16.00 (US$ 2.00 to US$35.00). The expense included the cost of medicines and, in some cases, retribution to the staff. Three women were transferred to a comprehensive obstetric care unit in another government hospital. The average cost for services at the referral hospital was US$92.00, although none of these cases had surgery or blood transfusion. It is known that the patients usually pay around US$200.00 for a caesarian section and US$10.00 for a blood transfusion.

From home to hospital, all women but one were transported by rickshaw, the most common local transport. Additionally, six women had to take a boat to cross a river. The mean cost for transport to reach the thana hospital was US$0.72 (US$0.10 to US$2.00). For two of the referred cases,

the expenses for the transport by ambulance from the thana to the district hospital amounted to US$10.00 and US$15.00.

Five respondents only had the required amount of money available; the others had to borrow money or sell some of their possessions to obtain the cash.

Satisfaction with Hospital Services

Fifteen women expressed satisfaction with the services they received at the thana hospital even though almost all of them had to buy medicines from outside. This is reflected by such comments: "*They (the doctors) tried to help me, they examined me well.*" A woman who had a very difficult delivery and a still-born baby said, "*They saved my life... they always took care of me.*"

Seven women were discontent or expressed mixed feelings about the hospital care. The main reasons of dissatisfaction were: poor quality of attendance, being referred to the district hospital, and incorrect diagnosis. Complaints about poor quality of care were as follows: "*There wasn't anyone to take care of me.... Ayahs (helpers) do most of the work. I thought that if I gave money to the nurses, then they would assist.*" and "*When you call them (the nurses and helpers), they ignore you..... The doctors are good. The others... are most uncooperative.*"

Nine women were referred to the district hospital. Only three patients accepted the referral; many others expressed their reluctance to being referred. One woman said, "*We did not want to go elsewhere, but they (the doctors) did not listen to us and repeatedly said that my baby and I would die if we were not transferred.*" Some families were concerned about the financial burden in case of referral to another hospital: "*My husband told them (the doctors) that we are poor and requested them to help as much as possible [to deliver at the thana hospital].*" A woman with prolonged labour was advised to go to the district hospital, but she finally delivered a healthy baby at the thana hospital after an artificial rupture of membranes was performed. This woman angrily said, "*They (the doctors) did not give*

me anything. They did not want to keep me in the hospital and referred me [to the district hospital].... They said that the baby was dead in my womb and I needed an operation."

On questioning about any future deliveries at the thana hospital, three women were positive, three were negative, and nine said that they would go only if they have a problem. The feelings of the majority of the women have been reflected by these words: *"We always try to deliver at home,"* and *"It is better to be at home, because I can supervise the housework... Besides, at the hospital, I need to spend money."*

Eight husbands, one mother and one brother provided their views about the services provided at the thana hospital. Four relatives were satisfied with hospital care, and the six other were either dissatisfied or partly satisfied, because they had to buy the medicines and/or pay the doctors, appropriate care was not provided, their relative was examined by male doctors or she was referred to the district hospital.

DISCUSSION

Qualitative studies have been conducted on belief about child-birth and home-delivery practices in Bangladesh [18-22], but the health care-seeking process for obstetric problems has not been fully explored. Women receiving hospital care represent about 5-10 per cent of those having obstetric complications in the community. Our study may have some weakness since we interviewed only women who attended the hospital. Although our findings may not be generalized, valuable information is provided on the profile and the health care-seeking process of the women who are seeking hospital care, on the users' perception about hospital care and on transport and medical care expenditures.

About two-third of the women and the husbands had some degree of education. About half of the respondents were primigravida, and 63 per cent had had some antenatal care.

We found that when a complication occurred, most families sought help from several service providers at home. They mainly resorted to unqualified practitioners, such as traditional birth attendants, quacks, *palli chikitshoks*, traditional or religious healers who lived in the neighbourhood and were known to them. For the majority of the cases, referral to hospital was envisaged in the following situations: the home treatments had failed, the situation had become unbearable or one of the service providers advised it. Several explanations may account for preference for home services in Bangladesh. Most delivering women and their attendants lack the knowledge in the community about emergency obstetric problems with the exception of eclampsia. Therefore, unaware about the need to go to hospital for appropriate treatment, families opt for easily accessible home services. It is also commonly believed that the outcome of the pregnancy depends on external power and that complications are caused by physical and supernatural factors that cannot be treated by medical doctors [18,20,22,23]. In these circumstances, rituals and traditional treatments are probably felt to be the most appropriate types of interventions. Financial constraint is another reason for primarily seeking home services. Poor families may hope

to solve the problem at a lower cost at home than at the hospital, therefore recourse to hospital appears as the last option. It was indeed found that expenditures for home services were 13 times lower than for hospital care. Moreover, in the event that TBA fails to deliver the baby, the family does not pay her. Finally, poor quality of hospital care, fear of being referred to the district hospital, and prevailing community disapproval of women being examined by a male doctor may restrain some women or decision-makers from resorting to hospital services.

It should be pointed out that once they had reached the thana hospital, many families refused to be referred to another, yet better equipped, facility. Reasons for refusing were not exclusively financial. The thana hospital seemed to be considered the ultimate place of referral by most patients and their relatives who, understandably, expected that their problems would be solved at that level.

A recent community survey in urban and rural Bangladesh reveals that the major barriers to the use of EOC are the lack of knowledge, expensive services, and non-availability of services and counselling [15]. However, larger qualitative studies should be conducted among users and non-users of EOC to fully understand the decisional process in case of obstetric complications.

Some medicines and practices prescribed at home by unqualified attendants are potentially harmful for the patients. Oxytocin injected without adequate medical knowledge and appropriate patient surveillance is particularly risky. Ergometrine may save lives in case of uterine inertia, but it is ineffective in case of antepartum haemorrhage, retained placenta, or incomplete abortion. Maneuvers which are commonly performed by untrained TBAs may result in fatal conditions [18, 21-22].

Further research is needed to explore in details the treatments administered to pregnant women by various categories of unqualified practitioners. Meanwhile, it is necessary to build linkage with TBAs and other home service providers to inform them about the conditions that require prompt referral to the hospital.

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