

A STUDY OF MATERNAL HEALTH SERVICES BY PRIVATE MIDWIVES IN SURABAYA CITY, INDONESIA

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ABSTRACT

Maternal mortality in Indonesia increased but the coverage of antenatal care and birth attendants by health workers is high. The majority of antenatal care was by private midwives and the majority of birth attendants was by midwives. The study aims to determine the maternal health services by private midwives in maternal health services. It was a mixed study, carried out in Surabaya City because of the highest maternal deaths in East Java Province in 2016. The secondary data of maternal health services were collected from Surabaya City Health Office and Indonesian Midwives Association of Branch Surabaya City. The qualitative data were domain on internal and external problems of private practice midwives. There were 10 informants whom selected purposively. The data were collected by round table discussion. The secondary data were analyzed univariately and the qualitative data were analyzed descriptively. From about 250 private midwives in Surabaya City, 133 were 'Delima' midwives in which a program of the Indonesia Midwives Association. Maternal health services by private midwives enhance access. The 'Delima' midwives have requirements of knowledge, enhancing skill, reporting, infrastructure standards, and development. So, the quality of maternal health services by 'Delima' midwives was relatively better. However, private midwives' services, including the 'Delima' midwives in Surabaya city had not analyzed ANC results, pregnant women visiting private midwives should visit health centers for integrated ANC, midwives' duties beyond educational competencies, and lack of mentoring for apprentice midwives because of many midwives' duties. It suggests improving the knowledge and skill of private midwives.

Keywords: Private midwives, 'Delima' midwives, Access, Maternal health services

ABSTRAK

Angka kematian ibu di Indonesia meningkat tetapi cakupan perawatan antenatal dan penolong kelahiran oleh petugas kesehatan tinggi. Mayoritas perawatan antenatal adalah oleh bidan swasta dan mayoritas penolong kelahiran adalah oleh bidan. Penelitian ini bertujuan untuk mengetahui pelayanan kesehatan ibu oleh bidan swasta dalam pelayanan kesehatan ibu. Itu adalah penelitian campuran, dilakukan di Kota Surabaya karena kematian ibu tertinggi di Provinsi Jawa Timur pada tahun 2016. Data sekunder pelayanan kesehatan ibu dikumpulkan dari Dinas Kesehatan Kota Surabaya dan Ikatan Bidan Indonesia Cabang Kota Surabaya. Data kualitatif adalah domain pada masalah internal dan eksternal bidan praktik swasta. Ada 10 informan yang dipilih secara purposive. Data dikumpulkan dengan diskusi meja bundar. Data sekunder dianalisis secara univariat dan data kualitatif dianalisis secara deskriptif. Dari sekitar 250 bidan swasta di Kota Surabaya, 133 adalah bidan 'Delima' yang merupakan program dari Ikatan Bidan Indonesia. Layanan kesehatan ibu oleh bidan swasta meningkatkan akses. Bidan 'Delima' memiliki persyaratan pengetahuan, peningkatan keterampilan, pelaporan, standar infrastruktur, dan pengembangan. Sehingga, kualitas pelayanan kesehatan ibu oleh bidan 'Delima' relatif lebih baik. Namun, layanan bidan swasta, termasuk bidan 'Delima' di kota Surabaya belum menganalisis hasil ANC, ibu hamil yang mengunjungi bidan swasta harus mengunjungi puskesmas untuk ANC terpadu, tugas bidan di luar kompetensi pendidikan, dan kurangnya pendampingan bagi bidan magang karena banyak tugas bidan. Ini menyarankan peningkatan pengetahuan dan keterampilan bidan swasta.

Kata Kunci: Bidan Swasta, bidan 'Delima', Akses, Pelayanan Kesehatan Ibu

INTRODUCTION

Indonesia's Maternal Mortality Rate (MMR) is higher than other ASEAN countries. The Indonesian Health Demographic Survey (IDHS) in 2007 showed that the MMR was 228 per 100,000 live births (LB), which increased to 359 per 100,000 LB according to the IDHS in 2012^{1,2}. Based on the Indonesia population census in 2010, the MMR was 258 per 100,000 LB. Whereas, the Sustainable Development Goals (SDGs) target is an MMR of less than 70 per 100,000 LB in 2030. Meanwhile, maternal health services coverage for antenatal care (ANC) was more than 90%, and delivery assisted by health personnel, including obstetricians, medical doctors, and midwives, was 88%³.

Some pregnant women's conditions affect maternal deaths, including three delays (i.e. too late to make a decision, too late to arrive at the service facilities, and too late to get adequate treatments) and four too late of pregnant women (i.e. too old, too young, too many children, too close spacing of births). In addition, geographical conditions and unprepared service facilities have exacerbated the problems⁴

A program to support the reduction of MMR, namely Making Pregnancy Safer, has been carried out since 2009 through 1) increasing delivery assisted by trained health personnel, 2) every obstetric complication receives adequate service, and 3) every woman of childbearing age must have access to prevention of unwanted pregnancies⁵.

Moreover, in 2013 the Ministry of Health issued a policy on the national action plan for the acceleration of reducing maternal and child mortality rates (RAN PP AKI). There were 4 (four) Basic Obstetric and Neonatal Health Centers in each district and Birth Preparedness and Complication Readiness. In 2014, the Ministry of Health's policy stated that deliveries should be assisted by health personnel and at health facilities^{5,6}.

Pregnant women should have minimum of four antenatal care, one time in the first trimester, one time in the second trimester, and two times in the third trimester⁷. one time in the first trimester, one time in the second trimester, and two times in the third trimester (9). The Basic Health Research (Riskesdas) in 2013 showed that the antenatal care coverage was 95.2% (First visit or K1 was 81.3% and Four visits or K4 was 70.0%), and iron tablets consumption for more than 90 days during pregnancy was 33.2%. The proportion of antenatal staff was 81.4% by midwives; 17.8% by obstetricians; 0.3% by medical doctors; 0.2% by nurses. Meanwhile, a study in 9 priority provinces stated that places of antenatal care were 2.3% at government hospitals; 5.3% at private hospitals; 2.5% at maternity hospitals; 14.6% at health centers; 3.6% at auxiliary health centers; 8.9% at village health post; 2.9% at private clinics; 11.3% at integrated health post; 4.8% at doctor practices; 40.5% at private midwives clinics, 0.3% at other places, and 3.1% had no antenatal care (10). For delivery assisted by health personnel in 2012 was 88.64%, mostly by midwives, whereas the target for Indonesia in 2014 was 90%^{8,9}.

Antenatal care was 81.4% by midwives, whereas 40.5% by private practice midwives. The For birth attendants were the majority of midwives. Because the majority of antenatal care by private

midwives but the decline of MMR in Indonesia is relatively slow ^{8,10}, this study aims to determine maternal health services by private practice midwives in Surabaya city.

METHOD

It was an observational study. The design of study was mixed method of secondary data and qualitative data. The study was carried out in Surabaya, Indonesia, in September 2017.

Secondary data on maternal health services consisted of antenatal care, deliveries, postpartum visit, early detection and management of obstetric complications. They were collected from Surabaya City Health Office and Indonesian Midwives Association of Branch Surabaya City. The available of private practice midwives data were from report by 'Delima' private practice midwives' to the Indonesian Midwives Association of Branch Surabaya City ¹¹. 'Delima' private practice midwives' is a program by the Indonesian Midwives Association.

The domains of qualitative data were internal and external problems of private practice midwives. The informants were selected purposively. They were 10 informants of 1) the Head of the Family Health Department at the East Java Provincial Health Office, 2) the Head of the Family Health Department at the Surabaya City Health Office, 3) Programmer of Maternal Health Program at the Surabaya City Health Office, 4) Chairperson of the Indonesian Midwives Association of Branch Surabaya City, 5) A coordinator midwife of health center with higher private practice midwives, 6) A midwife of primary health clinics in Surabaya, 7) Private practice midwife who had many deliveries, 8) A nurse from a district health office, 9) Maternal Health expert from a university in Surabaya, 10) Health Policy Expert from a university in Surabaya.

The qualitative data were collected by round table discussion with informants.

The secondary data were analyzed univariately. The qualitative data was analyzed descriptively.

Ethical clearance was from the Ethics Committee of the National Institute of Health Research and Development No. LB. 02.01/2/KE.334/2017.

RESULTS AND DISCUSSION

The Maternal Mortality Rate (MMR) in East Java Province in 2016 was 91.00 per 100,000 Live Births (LB), and based on the Population Census in 2010 was 258 per 100,000 LB. The number of maternal deaths in Surabaya City, the capital of East Java Province in 2016, namely 37 maternal deaths is the highest in the province. In 2017, maternal deaths in Surabaya City were decreasing

Table 1. Maternal Mortality Determinants in Surabaya City until September 2017

Determinants	Details						Total
Age	<20 yrs	20-34 yrs	≥ 35 yrs	-	-	-	27 people
	1 people	15 people	11 people				

Time	<i>Pregnancy</i> 5 people	<i>Childbirth</i> 6 people	<i>Postpartum</i> 16 people	-	-	-	27 people
Gravida	<i>Primi-grav</i> 8 people	<i>2nd gravida</i> 11 people	<i>3rd gravida</i> 4 people	<i>4th gravida</i> 3 people	<i>5th gravida</i> 1 person	-	27 people
Causes	<i>Pre-Eclampsia /Eclampsia</i> 6 people	<i>Bleeding</i> 1 person	<i>Infection</i> 1 person	<i>Heart diseases</i> 6 people	<i>Emboli</i> 3 people	<i>Others</i> 10people	27 people
Places	<i>Tertiary hospital</i> 20 people	<i>General hospitals</i> 3 people	<i>Private hospitals</i> 4 people	-	-	-	27 people
Number of referral processes	<i>1 time</i> 14 people	<i>2 times</i> 12 people	<i>3 times</i> 1 person	-	-	-	27 people

Table 2 shows data on the number of pregnant women in the Surabaya City area spreading across 31 sub-districts in 2016 from the Maternal Health Section of the Surabaya City Health Office in 2016 was 47,480 pregnant women. More than 95% have carried out antenatal care, the first visit (K1) which is one time in the first trimester of pregnancy, and four visits of antenatal care (K4) which is a minimum of 4-time visit consisting of one time in the first trimester, one time in the second trimester, and two times in the third trimester of pregnancy. The trend for K4 in Surabaya city increased compared to K1, from K1 of 45,872 (96.61%) pregnant women to K4 of 46,760 (98.48%) pregnant women. The data showed differences from trends from other regions, and even nationally that K4 is relatively decreasing compared to K1.

The number of women who gave birth was 45,322 people. As for delivery assisted by health workers were 43,909 (96.88%) women, and those who had postpartum visits were 42,548 (93.88%) women. There were still deliveries (3.12%) not assisted by health personnel, and training higher (6.12%) who did not have postpartum visits.

Table 2. Coverage of Moternal Health Services in Surabaya City, 2016

Number of pregnant women	Number of ANC	Number of labor	Total post-partum visit	Note
47,480	K1: 45,872 (96.61%) K4: 46,760 (98.48%)	Total: 45,322 43,909 (96.88%) were assisted by health workers	42,548	Data from 31 subdistrict

Table 3 shows the obstetric management among pregnant women in Surabaya City year 2016.

Table 3. Managing of Obstetric Complications in Surabaya City, 2016

Number of pregnant women	Estimation of pregnant women with obstetric complications	Management of obstetric complications	Reported live births
47,480	9,496 (20%)	8,569 (90.24%)	43,1645

Table 4 shows the estimated number of pregnant women with obstetric complications, as many as 9,496 (20%) mothers. While the management of obstetric complications reached 8,569 pregnant women from the estimated of pregnant women with complications of 90 per cent.

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Table 4. Management of Obstetric Complications in Surabaya City, 2016

Number of Pregnant Women	Estimation of Pregnant Women with Obstetric Complication	Management of Obstetric Complications
47,480	9,496 (20%)	8,569 (90.24%)

Table 5 shows that about a quarter, 12,123 pregnant women had the first trimester of antenatal care or K1. However, it was about 60% (7,188) of pregnant women's deliveries assisted by midwives. For the first postpartum visit (KF1), it slightly increased to 7,343 women, then decreased to 7,209 women for the second postpartum visit (KF2), and 6,933 women for the third postpartum visit (KF3).

Table 5. Data on ANC, Labor and Postpartum Visits of Indonesian Midwifery Association Branch Surabaya City, 2016

Total of antenatal care	Number of labors	Number of postpartum visits	Note
K1: 12,123	7,188 (59%)	KF1: 7,343 KF2: 7,209 KF3: 6,933	Report from the total of 133 'Delima' midwives

Table 6 shows the types of complications for women reported from 'Delima' private practice midwives in 2016. There were mainly 253 (19%) pre-eclampsia, 199 (15%) post-section caesarian, 187 (14%) prolonged rupture of membranes, and 170 (13%) other causes. The least was no icteric case, and one (0.8%) in each case, namely shock and umbilical cord prolapse, and 5 (0.4%) multiple presentations.

Table 6. Types of Pregnant Women Complications based on Indonesian Midwifery Association Branch Surabaya City, 2016

No	Types of complications	n	(%)	No	Types of complications	n	(%)
1	Section caesarea histories	199	(15%)	11	Fundus Uteri \geq 40 cm	25	(2%)
2	Vaginal bleeding	109	(8%)	12	Fetal distress	40	(3%)
3	Preterm labor (< 37 weeks)	59	(4%)	13	Primipara's active phase of labor with head palpation is still 5/5	48	(4%)
4	Amniotic fluid with meconium	32	(2%)	14	Non head down presentation	85	(6%)

No	Types of complications	n	(%)	No	Types of complications	n	(%)
5	Prolonged Rupture Membranes	187	(14%)	15	Multiple presentations	5	(0.4%)
6	Ruptured membranes of labor<	59	(4%)	16	Gemelli's pregnancy	22	(1.8%)
7	Icterus	0	0	17	Umbilical cord prolaps	1	(0.8%o)
8	Severe anemia	15	(1%)	18	Shock	1	(0.8%o)
9	Infection signs	6	(0.6%)	19	Others	170	(13%)
10	Pre-Eclampsia	253	(19%)				

Private practice midwives are one of the spearheads of maternal and child health services, besides health centers. Access to maternal and child health services from these two health service institutions is relatively easy to reach, especially for private practice midwives. The existence of private practice midwives is adequate for access of health services by the community.

Increasing access to adequate maternal health services will reduce maternal and infant mortality rates. It is felt that the benefits of private practice midwives are providing essential maternal health services such as antenatal care (ANC), recording the first visit of antenatal care (K1), and a minimum of four visits of antenatal care (K4) in the Maternal and Child Health (MCH) handbooks, and early detection of obstetric complications. Especially when the midwives are geographically relatively close and easily accessible to the public. Private practice midwives make midwives the easiest place to have maternal and child health services for the community.

It seems that access to maternal and child health services is no longer a significant problem in Surabaya City, both from a geographical and economic standpoint. However, adequate access to maternal and child health services has not significantly reduced maternal mortality. The high number of maternal deaths is not only influenced by access to health services. The data show that maternal deaths have access to health services. The occurrence of maternal death has shown a new trend, namely in the hospital.

Changes in the place of maternal deaths in hospitals show that there is something less than optimal regarding maternal health services. This condition occurs because pregnant women have access to health facilities, even though most are at tertiary referral hospitals. It means that access to maternal health services is no longer a locus of problems in maternal health services.

The shift in the locus of problems from access to maternal health services, to being in the process of health services indicates that there are problems in delivering health services. Several possibilities have resulted in the relatively high occurrence of maternal deaths, even though they have been treated at referral health facilities. Firstly, the problem of managing delays. Second, the capacity

and capability of medical personnel. Third, the problem of ineffective referral patterns. Fourth, the availability of supporting facilities and infrastructure.

Some aspects underlying the problem of delays in treatment are early detection patterns that could be more optimal if adequate equipment is available and health workers' skills in managing obstetric complication cases. An indication of the lack of optimal early detection efforts can be seen in how the K1 and K4 data are high, and the time for early detection of complications in pregnant women. However, in practice, there are impure first visits (K1) and a minimum of four visits to antenatal care (K4).

The pattern of reporting antenatal care on K1 and K4 is good. Still, it turns out that the data quality is not optimal, making the early detection of complications in pregnant women encounter obstacles. Like the health workers at the health centers, private practice midwives do the same thing. Referring to this, the health workers at the health centers and private practice midwives who are the government's spearhead should be able to early detect for pregnant women complications.

The matter capacity and capability of a health worker, a midwife, to carry out midwifery examinations correlate with K1 and K4 optimization. It is undeniable that the number of graduate of health workers, especially midwives, is indeed very adequate and even tends to be excessive. The large number of tertiary institutions providing midwifery education contributed to the increased number of graduates. Nevertheless, the increase in the number of graduates is not directly proportional to the increase in graduates' quality. Instead of increasing the quality of graduates from year to year, the capacity and capability of the graduates in health services are being questioned.

Control over health worker graduates, especially in midwifery, is difficult because it is not the domain of those in charge of providing health services. The lack of control over the quality of graduates is due to the logical difference between higher education providers and health service providers. This difference makes vocational education, which should provide provisions for delivering health services, in the end, turn away from that goal. Another problem that becomes a barrier is an ineffective health referral system. Here, the meaning of ineffectiveness is the disorganization of each health facility in viewing the stages and referral process, especially for patients with the national health insurance scheme. For example, the referral scheme is always viewed differently when a private practice midwife has referred them because they think they can no longer manage the pregnant woman due to complications. Still, they are asked to wait or even refer back during referring to hospitals. The condition causes delays in managing obstetric complications that risks to maternal death.

The last factor that increases maternal and child mortality in referral health facilities is the availability of supporting facilities and infrastructure¹². There is a limitation of NICU or PICU rooms in health facilities, which sometimes are considered sufficient. Some cases show referral rejection because of a lack of facilities and infrastructure. The refusal causes patients to have to go around from one health facility to another, and in the end, it wastes time and narrows space for efforts to deal with

obstetric complications. This delay leads to more significant maternal mortality during labor and after childbirth. Availability of health facilities and infrastructure is the government's next challenge after providing access to maternal health services.

The four problems related to obstetric complications, namely, the problem of delays in treatment are the capacity and capability of medical staff, ineffective referral patterns, and the availability of supporting facilities and infrastructure, indicating that the locus of the main problems in the delivery of maternal health services has changed. The problem is more than just a matter of access to health services, private practice midwives have an essential role in minimizing maternal and child mortality. Still, the performance of maternal health services is influenced by both internal factors from the midwives concerned and the health service system.

The study highlights several problems faced by private practice midwives, both internal and external. Internally, midwives face challenges related to competence, facilities, infrastructure, and workload. Externally, they encounter issues with referral systems, education, and governance. To overcome these problems, collaboration between the government and related health workers is essential^{13,14}. Furthermore, private practice midwives' participation in professional organizations and networks can provide support, advocacy, and opportunities to share knowledge and experiences with colleagues.

The competence of private practice midwives should be supported by education on theoretical and practical curriculum with providing applied knowledge to address practical problems in maternal health services. A study in Africa developed midwifery education with theoretical and practical curriculum to improve midwifery skills¹⁵. There is not a significant improvement in midwifery academics to scale up graduates' competence recently. Some studies showed that the implementation and evaluation of the midwifery care curriculum are still stuck in methods and theory, rather than how to give students more practical schemes to practice and applied their knowledge in real condition¹⁶⁻¹⁸. The conditions result in a lack of applied knowledge before getting involved and being part of the actual health services.

Due to the large number of midwifery academies that affect the pattern of selection, for example, for midwifery academies, it becomes less stringent, so some students may not be suitable for health services. The selection of midwifery schools should include recruiting potential students, namely those who have an interest and talent in midwifery. Because if the student lacks interest and talent in midwifery services, it will affect their ability to absorb and understand midwifery and its application in health services. Considering that students' ability is not limited to theory, and in practice, it requires abilities, skills, and competencies in maternal health services^{19,20}. These affect the skills and competencies of private practice midwives in dealing with maternal and child health problems when they are in private practice.

Moreover, the regulation of the Minister of Health No. 28 of 2017 concerns on permits and implementation of private midwife practice, where midwives are required to be professional with service standards. Technical requirements, facilities, and infrastructure that are pretty detailed, such as facilities of private practice midwives at specific road widths, aim to increase the capacity and capability of practice for midwives. On the other hand, the efforts raise problems when most private practice midwives do not have the completeness required by the regulation, which is enforced with a grace period of 2 years after promulgation; that is burdensome for midwives, which the holding of private practice midwives is because it requires quite a hefty cost ²¹.

Standardizing facilities and infrastructure in the practice of private practice midwives aims to improve the quality of maternal and child health services (health system). Therefore, standardization by the government is relatively high and requires high costs; without government assistance, it can result in the closure of private practice midwives. So, access to maternal and child health services will reduce and indirectly impact to overcome maternal and child health services problems ^{22,23}.

Even for the standardization is the government's effort to boost capabilities and skills during field practice in private practice midwives because so far, prospective midwives in private practice midwives tend to lack competence, opportunities to practice are limited in some cases, and the infrastructure needs to be improved to develop skills during the apprenticeship period. In addition, private practice midwives often need to fully assist, control, and transfer adequate knowledge and experience. The workload of private practice midwives is very high. They must carry out their duties as midwives, manage their private practice, and care for administration duties as practice owners. Besides, they also have to report activities such as those carried out by midwives at health centers. These responsibilities require a significant amount of time, energy, and dedication from private practice midwives. This burden requires them to maintain optimal quality of health services and ensure patient safety remains a top priority ^{24,25}. In addition to being burdened with service duties, midwives at health centers are burdened with many administrative and management responsibilities. Apart from facilities and infrastructure, the workload of private practice midwives indirectly affects the quality of maternal and child health services ²⁶.

External problems include referral systems, education, and governance. The referral system for about 270 private practice midwives in Surabaya City is an essential factor in efforts to improve maternal and child health services. And especially, about 30% of pregnant women access midwife services, like in Surabaya city ²⁷.

The ratio of health workers to the population in Surabaya City is sufficient, but this is a lever for reducing maternal and child health problems. Although, access to maternal health services, as the first visit (K1) and a minimum of four visits of antenatal care (K4), and the availability of health workers and infrastructure is sufficient, the number of maternal deaths in Surabaya City in 2016 was the first rank in East Java Province ²⁸. The fact shows a further problem, such as how a health system runs

maternal health services. One of the concerns is the referral pattern in the era of the National Social Security Agency (BPJS Kesehatan) program.

The referral pattern is health screening at primary health facilities. It aims to prevent the accumulation of patients in hospitals with MOU to the National Social Security Agency (BPJS Kesehatan). Private practice midwives' readiness is for providing quality primary maternal health services. This helps to reduce the burden of hospitals with MOU to the National Social Security Agency (BPJS Kesehatan) focusing on patients with complex and serious conditions. Private practice midwives play critical roles in preventing bottlenecks in hospitals²⁶. This anticipation is because people tend to choose health services in hospitals compared to health centers and other first-level health facilities. Most people perceive hospitals and specialists as places to get more comprehensive health services²⁹

Referrals are an effort to improve the efficiency and effectiveness of health services from a health service system to reduce the burden of financing health services and the accumulation of patients²⁶. Over time, it turns out that in the case of managing maternal and child health services, especially when obstetric complications occur, it becomes a source of problems in itself. In practice, the referral process becomes a bit of a hindrance. This situation is because referrals for complications often do not go smoothly and are rejected by referral health facilities for lack of adequate treatment rooms or equipment. Thus, delays in managing complicated cases, especially obstetric emergencies, can lead to mothers or children³⁰.

Hospitals often make this refusal for patients with national health schemes. Maybe, because the claim process to the National Social Security Agency (BPJS Kesehatan) was rather complicated and burdened the operational costs of the hospital concerned. So, hospitals tend to minimize patients with national health schemes. The problem of paying hospital claims by the National Social Security Agency (BPJS Kesehatan) has resulted in delays in referral patterns to referral health facilities. In the case of Surabaya City, the sluggish referral pattern got support from the city health office in arranging referral constraints on the availability of treatment rooms. However, this is a temporary solution that only sometimes can be done^{30,31}.

In addition, to the referral problem regarding the availability of rooms and financing, the referral process is especially nuanced with emergency referrals, namely when the patient is already in an emergency. This pattern does not allow optimal treatment of referral health facilities because the patient's condition is often critical enough so that limited time for treatment. On the other hand, if the referral pattern is for complicated conditions, it will allow referral health facilities to manage complicated deliveries optimally. Early detection of obstetric complications is expected to reduce maternal and child mortality. However, women with obstetric complications about to give birth are often referred back because they have not shown signs of a significant emergency based on the national health scheme procedures³².

Differences in perceptions of this referral make the process of managing obstetric complications result in patients can not be treated immediately. Moreover, it makes private practice midwives confused about what steps to take because they have limited authority and competence in treating obstetric complications. The occurrence of maternal deaths, especially in hospitals, shows the limited time for treatment in which patients arrive in critical conditions so that the treatments do not provide maximum results³³.

The Education system, as input for health workers. Midwifery educational institutions currently do not produce qualified graduates who can work directly in the community as spearheads. The round table discussions revealed that the quality of midwifery graduates could be more apprehensive. The provision of skills acquired during midwifery education is insufficient to meet the challenges of today's maternal and child health services

In fact, in some cases, the standards of capacity and capability have decreased in practice. Practitioners from midwifery professional organizations also expressed the same thing. Midwifery graduates in recent years cannot be directly deployed to provide maternal and child health services. The decline in the competence of midwifery graduates is due to several factors³⁴.

The decline of midwifery graduates' competence indirectly affects the quality of maternal and child health services. Maternal and child health services cannot minimize obstacles to improving the quality of maternal and child health services optimally. The situation is because, firstly, the orientation of midwifery education in the theoretical aspect is different from practical abilities and skills, so they cannot be directly involved in maternal health services. Second, the problem with midwifery academy education, especially the private sector under the Ministry of Research and Technology and Higher Education, requires limited skills and practice skills. So, midwifery graduates can only be absorbed indirectly into maternal health services. Because the learning process that coincides with the role of a health worker will be precarious when faced with conditions that are not encountered in theory during the study due to a lack of practical lectures³⁵.

Midwife education is expected to produce midwives who can provide quality midwifery services. However, with so much tertiary midwifery education, we need more space for prospective midwives to get internships in health services because there are too many students. So, this affects the capacity and capability of midwifery college or institute graduates' readiness for midwives in providing health services²⁵. Possible ways to address the issue of limited internship opportunities for midwifery students are by establishing partnerships between midwifery colleges and various healthcare facilities^{36,37}, and collaborating³⁸, delivering maternal health services under the supervision of experienced health workers^{39,40}. In addition, these are creating partnerships, and enhancing the capacity and capability of midwifery graduates to emphasize the importance of continuous professional development^{41,42}. Professional organizations and regulatory bodies can be crucial in supporting and promoting ongoing professional development for midwives^{43,44}, such as by offering regular training and

workshops⁴⁵. The programs can cover a wide range of topics, such as advanced clinical skills, evidence-based practices, and emerging trends in midwifery care so that midwives can enhance their knowledge and stay abreast of the latest advancements in their field^{46,47}. Moreover, professional organizations and regulatory bodies can collaborate with educational institutions and health facilities to provide training programs, and ensure that midwives have access to quality continuing education throughout their careers^{48,49}.

The promotion of continuous professional midwives' development through regular training and workshops^{50,51} is such in Swedish and New Zealand^{46,49,52}. By participating in these educational opportunities, midwives can acquire advanced clinical skills, learn evidence-based practices, familiarize themselves with emerging trends in their field⁵³, and be updated on new technologies, procedures, and guidelines that improve the overall quality of care they provide^{54,55}. It is essential to facilitate these training initiatives, and collaboration between professional organizations, regulatory bodies, educational institutions, and healthcare facilities^{56,57}. Professional organizations and regulatory bodies can work together with educational institutions to develop comprehensive training curricula that address the evolving needs of midwives. Meanwhile, healthcare facilities can also play a role by hosting training sessions and workshops and providing practical hands-on experiences to complement theoretical knowledge^{58,59}.

The limited facilities and infrastructure for field practice for midwifery students have become complex in Surabaya City because it is an urban area. There are an increasing number of midwifery educational institutions every year that require practice places. In contrast, the number of health services that can accommodate them remains relatively low. This fact shows that midwifery higher education is becoming less prominent, especially in terms of capacity and capability in practice. Professional organizations, regulatory bodies, educational institutions, and healthcare facilities should work together to facilitate training initiatives and ensure that midwives have access to high-quality continuing education^{60,61}. By pooling their resources and expertise, the stakeholders can develop comprehensive training curricula that meet the evolving needs of midwives. This collaborative effort aims to bridge the gap caused by limited infrastructure and facilities, ultimately enhancing the skills and knowledge of midwifery students in Surabaya⁶².

Surabaya City Government supports through the Surabaya City Health Office has made every effort to minimize the possibility of maternal and child deaths. The health centers carry out programs, and its network (including private practice midwives) such as early detection of obstetric complications. This effort is to improve K1 and K4 through health centers' networks to develop an early warning pattern in detecting the occurrence of obstetric complications³⁵.

Referral with the principle of early detection is recommended so that the treatment is appropriate to reduce the risk of complications that result in maternal or child deaths. The local

government support is quite strong, although, in terms of financing, it often collides with the referral to the national health scheme. The referral pattern based on emergencies still implemented by hospitals makes an effective referral pattern for early detection of complications likely not realized. The challenge of this pattern of referrals has been anticipated with communication between the health office, referral hospitals, health centers' doctors, and coordinating midwives. With this common communication pattern, the government, through the city health office, can detect every case that indicates complications and referral barriers that can be facilitated. However, communication is limited to hospitals that are under supervision or have cooperated with the municipality. Outside those hospitals, problems with refusing referrals, especially for patients with national health schemes, are still common.

The experience of Surabaya City shows that the problem in managing early detection of obstetric complications to reduce maternal and child mortality is not only by the city government. The problem of referrals from hospitals to health scheme financing is also an obstacle to improving maternal and child health services, especially in dealing with obstetric complications. The efforts of the city and provincial health offices will be successful if they have full authority in coordinating the health service system. It will be difficult for aspects of the health care system outside their authority to determine the necessary policies^{27,63}.

CONCLUSION AND SUGGESTIONS

Maternal health services by private practice midwives, including 'Delima' private midwives in Surabaya, have increased access to services. The quality of maternal health services by 'Delima' private midwives is relatively better due to the competence of midwives, standard conditions of facilities and infrastructure, guidance by the Indonesian Midwifery Association of Branch Surabaya city, and training.

Weaknesses of private practice midwives, including 'Delima' private midwives in Surabaya city are not being able to present K4, failure to analyze the results of antenatal care in the Maternal and Child Health (MCH) handbooks, need time to have integrated antenatal care (ANC) at health centers, and the midwives' duties beyond competence during education. There is also a lack of assistance to field practicing midwives at their practice places due to their busy schedules, resulting in a relatively insufficient transfer of midwifery knowledge and skills. Besides, in the era of the National Social Security Agency (BPJS Kesehatan), there are partnership opportunities of primary health clinics that have MOU.

The Indonesian Midwifery Association of Branch Surabaya City, in collaboration with the Surabaya City Health Office, needs to undertake efforts such as training or workshop to enhance knowledge and skills as well as fostering collaboration between private practice midwives (including 'Delima' private midwives) on recording antenatal care (K4), motivating pregnant women for integrated ANC at health centers. The integrated ANC that optimizing the MCH handbook and analyzing the results of pregnant women's examinations are to enable early detection and effective referral of obstetric

complications. In addition, it is necessary to prioritize the transfer of midwifery knowledge and skills by directly assisting the field practicing midwives in their practice locations.

It suggests for City/District Health Offices, the Ministry of Health to improve maternal health services by midwives to accelerate the reduction of maternal mortality. For academics are to develop strategies to improve maternal health services by private practice midwives.

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