

## Hospital Ambulance Standardization in Jakarta: Narrative Review

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**Abstract.** Ambulance is one of the hospital infrastructures that must meet service standards, security, and occupational safety and health in hospital operations. Therefore, it is the obligation of every hospital to ensure the standard of ambulance service. In the DKI Jakarta area, every ambulance, including hospital ambulances, must meet the standards in accordance with regulations and have an ambulance operating license. Based on data until the end of 2021, there were 82 (34.9%) hospital ambulances in Jakarta that carried out the recommendation process for an ambulance operation license from a total of 235 hospital ambulances, meaning that most hospital ambulances in Jakarta did not meet service standards. DKI Jakarta Governor Regulation number 120 of 2016 concerning Ambulance Services and Hearse is a reference for hospitals in Jakarta in order to meet ambulance service standards. In conclusion, there are 3 (three) standards that must be met in standardizing hospital ambulance services in Jakarta, namely standardization of vehicle units, standardization of equipment and standardization of human resources.

**Keywords:** ambulance, Hospital, standardization

**Abstrak.** Ambulans merupakan salah satu prasarana Rumah sakit yang harus memenuhi standar pelayanan, keamanan, serta keselamatan dan kesehatan kerja penyelenggaraan Rumah Sakit. Oleh karena itu menjadi kewajiban setiap Rumah Sakit untuk memastikan standar pelayanan ambulans. Di wilayah DKI Jakarta setiap ambulans termasuk ambulans Rumah Sakit harus memenuhi standar sesuai dengan peraturan dan memiliki izin operasional ambulans. Berdasarkan data hingga akhir tahun 2021 terdapat 82 (34,9%) ambulans Rumah Sakit di Jakarta yang melakukan proses rekomendasi izin operasional ambulans dari total 235 ambulans Rumah Sakit yang ada, artinya sebagian besar ambulans Rumah Sakit di Jakarta belum memenuhi Standar pelayanan. Peraturan Gubernur DKI Jakarta nomor 120 tahun 2016 tentang Pelayanan Ambulans dan Mobil Jenazah menjadi acuan untuk Rumah Sakit di Jakarta agar dapat memenuhi standar pelayanan ambulans. Kesimpulannya ada 3 (tiga) standar yang harus dipenuhi dalam standarisasi pelayanan ambulans Rumah Sakit di Jakarta yaitu standarisasi unit kendaraan, Standarisasi Peralatan dan Standarisasi Sumber daya manusia.

**Kata Kunci:** Ambulans, Rumah Sakit, Standarisasi

## INTRODUCTION

Ambulance is a vehicle or transportation to come, pick up, carry, transfer living victims or patients in order to get help, treatment and medical action both emergency and non-emergency in nature.<sup>(1)</sup> Based on ownership, ambulances can be owned by

individuals, business entities and the government.<sup>(2)</sup>

In general, hospitals in the DKI Jakarta area have an ambulance as a means of supporting hospital health services.<sup>(3)</sup> Based on Jakarta provincial health profile data for 2021, there are 193 hospitals

in 6 administrative cities/regencies of DKI Jakarta with a total of 235 ambulance vehicles.(4)

In Law number 44 of 2009 concerning Hospitals in article 11 it is stated that an ambulance is one of the hospital infrastructures that must meet service standards, security, and occupational safety and health of hospital administrators. Hospital ambulances must be maintained and functioning properly, the operation and maintenance of hospital ambulances is carried out by officers who have competension in their fields. Therefore it is the duty of every hospital to ensure ambulance service standards.(5)

In the DKI Jakarta area, ambulances must meet standards according to applicable regulations and have an operational license. Based on the report on recommendations for operating license for ambulances from the DKI Jakarta Health Service Ambulance Technical Implementation Unit (UPT AGD), there were 82 (35.9%) hospital ambulances that carried out the process of recommending ambulance operating license to the UPT AGD DKI Jakarta Health Office's until December 2021, out of a total 235 hospital ambulances in the DKI Jakarta area. This means that most hospital ambulances in Jakarta do not meet service standards and have ambulance operating license.(4)

In DKI Jakarta Governor Regulation Number 120 of 2016 concerning Ambulance Services and Hearse service it is stated that every person, legal entity and government agency is prohibited from providing ambulance services without a license. if proven violating will be subject to sanctions in the form of a written warning, license suspension and license revocation.(2)

To ensure that ambulance service providers continue to provide quality services to the community, there must be a legal protection, sanctions and system that regulates them.(6) The health office as the regulator is obliged to ensure the standard of all health services to the community, including ambulance services.(8)

With the background above, the researcher wants to see how ambulance standards apply in Jakarta and what regulations can be used as a reference for hospitals in Jakarta, to ensure standardized ambulance services.

## METHODS

This research is an observational study with a This study uses a narrative review method by conducting an in-depth study of regulations, guidelines and literature governing the standardization of ambulance services, especially

hospital ambulances in the DKI Jakarta Province area and comparing them with regulations that apply nationally and internationally, then draws conclusions. This research was conducted in March 2022.(8)

## Measurement Models

The measurement model or outer model shows how the observed variable represents the latent variable to be measured. The assessment of the outer model in data analysis is carried out by testing the validity and reliability tests on each variable and the existing variable indicators.(14)

The validity test was carried out to find out how good the value of an instrument is for measuring in a study and to ensure that there is a correlation between each indicator and the constructed variable and that there are differences between one construct variable and another. The validity test consists of a convergent validity test and a discriminant validity test.(14)

In the convergent validity test, outer loading on each indicator already has a value of  $> 0.70$  and the Average Variance Extracted (AVE) for each variable already has a value of  $> 0.50$  so that it can be stated that it meets the requirements. After that, a discriminant validity test was performed using the Fornell Larcker Criterion test. Based on the results of the Fornell Larcker Criterion test, all variables have a correlation value with itself that is higher than the correlation value of these variables with other variables. Therefore, it can be concluded that the instrument meets the requirements and is valid.

After carrying out the validity test, a reliability test is carried out to ensure that each variable indicator can be trusted and represents the constructed variable. Based on the results of the composite reliability test, it is known that the composite reliability value for each variable meets the requirements, namely  $> 0.70$ . So it can be concluded that all variables have met the requirements and are reliable.

## RESULTS AND DISCUSSION

Hospital is a health service institution that provides complete individual health services, which provides inpatient, outpatient and emergency services. In administering health services, hospitals are required to provide services in accordance with standards, including ambulance service, hospital is responsible for ensuring that its ambulance unit complies with service standards, security, safety, occupational health and has an ambulance operational license.(5)

There are 64.1% of hospital ambulances in Jakarta that are not standardized and have license (4), this has an impact on the quality of health services provided by hospitals to the public, especially emergency services for pre-hospital and referrals between health facilities, with low quality (9). Hospitals cannot play much of a role in an integrated emergency response system because they do not have adequate infrastructure.(10) In accordance with regulations, a hospital's operational license can be revoked if it organizes an ambulance service without a license (2.7), in this case the government encourages all ambulance business actors including hospitals to meet ambulance standards and have license.

The problem of ambulance standardization is also experienced by developing countries in Europe (11), Japan (12) to Australia (6), causal factors such as high financing to meet standard ambulances, lack of supervision from the government which causes ambulance businesses to provide ambulans services below standards and an emergency system that has not been integrated. The provincial government of DKI Jakarta has not been optimal in carrying out the functions of fostering, supervising and controlling ambulance services in Jakarta.(4)

The results of a search for regulations, guidelines and literature on standardization of hospital ambulance services in Jakarta, found at least 3 regulations, guidelines and literature that are used as references for standardization of hospital ambulance services in Jakarta, 1) Law number 44 of 2009 about Hospitals; 2) 2019 Ministry of Health Ambulance Technical Guidelines; and 3) Regulation of the Governor of DKI Jakarta number 120 of 2016 concerning Ambulance and Hearse Services, applicable used as a regulation to standardize hospital ambulance services in the DKI Jakarta area is Regulation of the Governor of DKI Jakarta Number 120 of 2016.

### **Regulation of the Governor of DKI Jakarta Number 120 of 2016**

This Governor regulation is intended as a guideline and reference for individuals, legal entities and government agencies in administering ambulance services, including hospitals. This policy aims to reduce the number of disability and death of emergency patients in daily situations as well as during a disaster, help emergency patients pre-hospitally and between health care facilities, speed up patient handling at the scene (response time), transport emergency patients. from location to place of action or hospital and as a means of referral transportation.(2)

In providing services, ambulances are divided into 3 types, 1) city/land ambulances; 2) water ambulance; and 3) air ambulance. The City Ambulance consists of a basic ambulance and an advanced ambulance.(2)

A basic ambulance is a means of transportation on land that is used to transport patients and is ready to carry out basic life support measures, a basic ambulance must meet complete equipment and human resources that can handle airway, breathing, blood circulation system disorders accompanied by bleeding control (circulation), neurological status (disability) and environmental control (exposure).(2)

An Advance ambulance is a means of transportation on land that is used to transport patients with special equipment and are ready to carry out further life support measures. Advanced ambulances must meet the completeness of equipment and human resources that can handle airway, breathing, blood circulation system accompanied by bleeding control (circulation), neurological status (disability) and environmental control (exposure) and there is a patient monitor , defibrillator/AED, syringe pump and portable ventilator.(2)

Each ambulance involves at least an ambulance officer which includes 1 nurse and 1 driver, the nurse must have basic medical emergency skills (trauma and cardiac) as evidenced by a certificate issued by an accredited institution, the driver must have a license as a driver, the minimum skills of basic life support (first aid) and defensive driving training for drivers are proven by certificates issued by an accredited institution.(2)

Every person, legal entity and government agency that organizes city ambulance services is required to have an ambulance operating license from BPTSP. An ambulance operation license is valid for 3 (three) years and can be extended by first recertifying. Certification issued by the Ambulance Service Unit. The applicant must make a written application to BPTSP accompanied by administrative requirements and technical documents and in accordance with the technical specifications.(2)

Every person, legal entity and government agency is prohibited from providing ambulance services without a license, because sanctions can be imposed in the form of a written warning, license ban and license revocation.(2)

In the attachment to the governor's regulation, the ambulance service standard is explained in detail, which includes technical specifications for

vehicles, medical devices and the minimum requirement of human resources in an ambulance.(2)

The following is a comparison table between the regulations that apply to the DKI Jakarta area compared to the national ministry of health ambulance guidelines and the ambulance regulations that apply to America.

**Tabel 1.** Ambulance Vehicle Specifications

Criteria	Regulation of the Governor of Jakarta number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	<i>Federal Specification for the Star-of-Life Ambulance U.S</i>
<b>Ambulance type</b>	1. Basic 2. Advance	1. Transport 2. Emergency	1. Basic 2. Advance
<b>Model</b>	Modifications that can accommodate equipment and enable health workers to carry out medical procedures, with a certificate of type test and runway for passenger cars from the competent authority	Passenger car or bus car made into an ambulance, can accommodate equipment, allows health workers to carry out medical actions, Has a type test certificate	Ambulance must be equipped with operating accessories, vehicle design and must allow accessibility for servicing, replacement and adjustment of component parts and accessories with minimal interference with other components and systems
<b>Vehicle age</b>	Maximum 10 Years	Maximum 10 years or following local regulations	following local regulations
<b>Color</b>	White base color, can include logo, name, characteristics	The basic color of the ambulance is white and the writing of the name of the ambulance follows the applicable laws and regulations.	FSAM's standard gloss white, Star of Life logo is blue in American national standard Z535.1
<b>Ground clearance</b>	Minimum 18 cm	-	-
<b>steering system</b>	-	Power steering	Manufacturer's standard, must be equipped with power assisted steering
<b>engine volume</b>	Minimum 1500 cc	-	Compliant with vehicle standards
<b>Front seat</b>	Equipped with a seatbelt	The seat material is adapted to the body, equipped with seat belts for passengers and driver.	Equipped with <i>safety restraint</i>
<b>Rear seats</b>	At least 1 nurse seat is equipped with <i>seatbelt</i> , flexible material, easy to clean, anti-germ and comfortable at least	-	Has 2 seats, equipped with <i>safety restraint</i>

Criteria	Regulation of the Governor of Jakarta number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of-Life Ambulance U.S
	plywood with foam and coated with synthetic leather		
<b>Multifunctional seating for attendants and escorts</b>	Multifunctional seat for attendant/companion next to patient <i>stretcher</i> , size adjust	Multi-function seat for the attendant / companion next to the patient size adjusts, the model can be a rotating captain seat equipped with a material safety belt adjusted to the body	-
<b>Air Conditioner</b>	Double blower	Double blower	Air conditioning system with sufficient capacity to maintain patient temperature at a maximum temperature of 78°F
<b>Light bar</b>	Red Rotary/flash light bar with speakers	Rotary/ flash light bar (red color) including loudspeakers	The ambulance's standard emergency warning light system consists of twelve red lights, one clear light and one amber light. This light will work in a dual mode system
<b>Bumper guard</b>	Made of stainless steel customized size	made of stainless steel customized size	Stainless steel material according to standards
<b>Glass</b>	Tempered min 3 mm	Tempered glass min 3 mm	Manufacturer-compliant
<b>Cabin window film</b>	Dark 80%	Dark (80%)	Dark according to standards
<b>Driver's left right windshield and side</b>	Transparent or window film maximum 40%	Transparent or window film maximum 40%	Manufacturer-compliant
<b>Equipment and Medicine Cabinets</b>	Placement on the right side of the patient cabin, the size is adjusted to the vehicle interior media made of non-corrosive material and easy to clean, at least 15 mm thick plywood and coated with acrylic sliding doors made of mica and locked, accommodating central oxygen, supporting equipment and medicines.	Placement on the right side of the cabin, the size is adjusted to the interior media of the vehicle made of non-porous material and easy to clean. At least 15 mm thick plywood and coated with acrylic, mica sliding doors can hold central oxygen, supporting equipment and medicines	The sliding door is easy to open, transparent, impact resistant, automatically locking or equipped with friction arresting device when in closed position, the main oxygen cylinder storage should be accessible for replacement from the outside position, the oxygen cylinder should be installed with a restraint device.
<b>Platform stretcher</b>	Made of stainless steel with gurney lock, there is space to	Made of <i>stainless steel</i> with gurney lock, there is space for storage of <i>long spine</i>	Made of <i>stainless steel</i> with gurney lock, there is space for storage of <i>long</i>

Criteria	Regulation of the Governor of Jakarta number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of-Life Ambulance U.S
	store the spineboard and scoop stretcher.	boards and/or stretcher scoops	spine boards and/or stretcher scoops
<b>Amplify sirene</b>	One type of sound "Two tone", compression sound level: $\geq 90 - 118$ dB (equivalent to 200-10,000 Hz) there is a microphone.	One type of high-low sound "Two Tone", compression sound level: $\geq 90-118$ dB (200 – 10,000 Hz equivalent) there is a microphone	The "Horn/Siren" min 123 dB
<b>Infusion hangers</b>	The infusion hanger above the patient, right on the ceiling, is 90 cm away from stretcher	The infusion hanger above the patient is precisely installed on the ceiling, can be shifted according to needs, equipped with a fastener, stainless steel material is at least 90 cm away from the stretcher	Infusion hangers are mounted on the ceiling specifically designed to hold IV containers including Velcro type fasteners to adequately secure IV bags.
<b>Lighting lamps</b>	It is located on the ceiling and is well lit	Provided lighting on the ceiling, TL / LED with a minimum output of 200 lux, halogen / LED check lamp: at least 1650 lux measured from the lowest position of the main thrust stretcher from a distance of 750 mm, mounted on the ceiling and can be shifted as needed The color of the lighting beam is selected which does not affect the patient's medical judgment while in the ambulance	Basic interior lighting configurations are designed to minimize electrical load including ceiling lights, driver lights, instrument panel lights, main switch lights and console lights. The lighting should be designed and placed in such a way that nothing is reflected to the driver
<b>Spotlight</b>	The spotlight model is mounted on the rear patient cabin and can rotate	The spotlight model is mounted on the rear patient cab and can rotate	There is a spotlight model spotlight of at least 100,000 CP
<b>Oxygen portable</b>	Minimum 1 tube minimum capacity 0.5 m3, flowmeter equipped with 1 piece regulator, given Fastener	-	-
<b>Oxygen central</b>	At least 2 tubes with a minimum capacity of 1 m3, 1 pressure regulator, can be operated manually, 1 set flowmeter and humidifier installed on the wall outlet, equipped with the words OXYGEN, the storage of	Minimum 2 tubes, minimum size 1 m3, there is a minimum of 2 high pressure regulators, can be operated with an On/Off valve manually and it is recommended that there is an alarm / indicator when oxygen will run out, high pressure oxygen hose with 1	The ambulance must have a medical oxygen pipeline system capable of storing and supplying a minimum of 3,000 liters of medical oxygen.



Criteria	Regulation of the Governor of Jakarta number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of-Life Ambulance U.S
	oxygen cylinders is located in a cabinet equipped with a door and fastened with a belt so that it does not move when the vehicle is running	set press system connector, flowmeter and humidifier 1 set, installed on the wall outlet, equipped with the words "OXYGEN". storage of oxygen cylinders is located in cabinets equipped with doors and fastened with belts, white color tube	
<b>Floor</b>	Floor material from non-corrosive, anti-bacterial and easy to clean	Non-porosity (non-porous) floor material and easy to clean	Easy to clean, sanitize and harmonize with interior design color, anti-corrosion
<b>Ceiling</b>	Ceiling made of non-corrosive, anti-bacterial and easy to clean	Standard body ceiling, non-porosity material and easy to clean	Made from anti-corrosion, the color adjusts to the interior design
<b>Inverter</b>	Minimum capacity 1300 VA	Minimum capacity 1000 VA for transport ambulance, minimum capacity 1300 VA for emergency ambulance equipped with overload alarm, battery low shutdown	Ambulance low voltage power supply system
<b>GPS</b>	Real time GPS Tracking	Used to monitor the actual position of ambulances	-
<b>Fire extinguishers</b>	Minimum 1 kg, light type of <i>water mist</i> made from <i>foam</i> . affixed to the rear medicine cabinet near the rear door of the vehicle	At least 1 kg, a mild type of <i>dry chemical</i> or Carbon dioxide (CO <sub>2</sub> ) is affixed to the rear medicine cabinet near the rear door of the vehicle	Minimum 2 capacities of 2.5 kg, light dry <i>chemical</i> or Carbon dioxide (CO <sub>2</sub> ) types, 1 placed in the front cabin, 1 placed in the back
<b>Waste management system</b>	-	Medical waste container (In accordance with applicable laws and regulations)	Plastic bins with covers for general waste feature single-use plastic lining, OSHA-compliant sharps containers.
<b>Uninterruptable power supply</b>	-	According to ambulance needs	-
<b>Communication system</b>	-	The frequency used in accordance with applicable laws and regulations is connected to SPGDT	Two-way radio communication
<b>Outlet Antena Coaxial</b>	-	In accordance with the communication system used.	Coaxial Antenna regulation compliant
<b>Closed Circuit Television</b>	-	A set	-

Criteria	Regulation of the Governor of Jakarta number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of-Life Ambulance U.S
(CCTV)			
<b>Parking sensors and/or rear mirrors</b>	-	Factory built in vehicle mirrors, <i>parking</i> sensor (optional)	Manufacturer-compliant
<b>Front cab and rear cabin</b>	-	The front cabin and rear cabin are separated, there is a minimum window for communication between the cabins	-
<b>Hazard Auxiliary Lights</b>	-	Factory / body mounted hazard lights around the car body	Hazard vehicle stopped on right-of-way
<b>Tire</b>	-	Standard tubeless radial tires	Standard manufacturer tubeless, steel belted radials
<b>Temperature condition</b>	-	-	Exterior between 0°F-95°F, interior at least 50°F
<b>Vehicle performance</b>	-	-	The ambulance must provide a smooth and stable ride, equipped with vehicle stability control devices
<b>Speed</b>	-	-	The vehicle must be able to travel at a speed of not less than 65 mph over dry, hard, flat road surfaces

While the above regulations have many similarities in the specifications of ambulance vehicles, especially the regulations of the Governor of DKI Jakarta with ambulance guidelines from the Ministry of Health, but ambulance regulations that apply in America have many details on each part of the ambulance vehicle.

Vehicle specifications are the largest physical part of the entire ambulance, in these vehicles modifications are made that are tailored to the needs of patient handling and the ergonomic position of medical personnel in performing actions .(13) Vehicle performance is an important part considering that emergency handling is closely related to the speed and toughness of the vehicle to be able to arrive at the scene as soon as possible, with these conditions, a vehicle with a minimum engine cylinder of 1,500 cc with a maximum age of 10 years is needed to get optimal vehicle

performance, with a minimum ground clearance of 18 cm so that the balance of the vehicle is maintained.(2)

In accordance with traffic regulations, ambulances have red rotator lights equipped with speakers and two-tone sound type siren amplifiers as a sign to other road users audiovisually in order to make way for ambulances as vehicles that acquire the main right to take precedence after fire fighting vehicles.(14)

In the interior of the ambulance vehicle there are tool cabinets, ceilings and floors that are coated with anti-corrosive, anti-bacterial materials and easy to clean so that they are durable and do not cause infection for patients or officers.(2) In ambulance vehicles there are many medical devices that require electric power (15), for that ambulances must have an inverter device with a minimum power capacity of 1300 VA and prepare a fire extinguisher to anticipate if an electrical short



circuit occurs. Good lighting is also an important factor to facilitate officers in taking action on patients (16), besides that the interior of the ambulance is also equipped with officer seats, rear seats, Stretcher runways, infusion poles, portable oxygen and central oxygen.(2)

Ambulance vehicles in Jakarta must be equipped with a Global Positioning System so that their position and movement can be monitored by the Health Office and in disaster conditions can be integrated in the integrated emergency management system.(2,10)

**Tabel 2.** Specifications for Medical Devices and Medicines

Criteria	Jakarta Governor Regulation number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of-Life Ambulance U.S
<b>General Examination</b>	Tensimeter, stetoskop, reflex hammer, penlight, thermometer, Glukometer	Tensimeter, stetoskop, reflex hammer, GDS, penlight, thermometer digital	It is not explained, referring to state policy
<b>Airway Set</b>	Neck Collar Rigid, Oropharyngeal  Airway set, Endotracheal Tube  Airway set, Forcep Magill, Tongue Spatel, Mouth gauge, Laryngoscope set, Canule Suction, Stillet/mandrain, NGT  Suction Electric manual	Neck Collar Rigid, Oropharyngeal  Airway set, Endotracheal Tube  Airway set, Forcep Magill, Tongue Spatel, Mouth gauge, Laryngoscope set, Canule Suction, Stillet/mandrain, NGT  Suction Electric	It is not explained, referring to state policy
<b>Breathing Set</b>	Bag Valve Mask + Reservoir  Cannula bag  Nasal Cannula  Simple Mask  Rebreathing Mask  Non-Rebreathing Mask  Portable oxygen cylinder size 0.2 m3  Ventilator portable  Patient Monitor  Pulse Oxymetri	Bag Valve Mask + Reservoir  Ventilator portable  Cannula bag  Nasal Cannula  Simple Mask  Rebreathing Mask  Non-Rebreathing Mask  Portable oxygen cylinder	It is not explained, referring to state policy
<b>Circulation Set</b>	Infusion set  IV catheter  Infusion fluids  Folley Kateter + urine	Pulse Oximetry portable  Automated External Defibrillator (AED)  Infusion set	It is not explained, referring to state policy

Criteria	Jakarta Governor Regulation number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of- Life Ambulance U.S
	bag  Bandaging set  Disposable Syringe  Syringe Pump  Defibrillator/AED	Intravenous catheter  Intraosseous Access  Infusion fluids  Set alat bandaging  Disposable Syringe  Antiseptic	
<b>Set Stabilization and Extrication Tools</b>	Long Spine Board  Scoop Stretcher  Head Immobilizer  Wound toilet set  Splint  Safety belt  Extrication Device	Long Spine Board  Scoop Stretcher  Extrication device  Head Immobilizer  Wound toilet set  Splint  Safety belt	It is not explained, referring to state policy
<b>Evacuation Transport</b>	Stretcher/ Brankard  Emergency bag	Stretcher/ Brankard  Emergency bag	It is not explained, referring to state policy
<b>Obstetric Set</b>	Partus Set  Baby mucus sucker  Glove  Towel  Sheet	Partus Set  Baby mucus sucker  Glove  Towel  Sheet	It is not explained, referring to state policy
<b>Other</b>	Wrench  Personal protective equipment  Minor set	Wrench  Personal protective equipment  Rescue tools  Urinal container	It is not explained, referring to state policy

As an emergency that can occur anytime, anywhere with any type of case.(16) ambulances must be equipped with medical devices and medicines that can provide basic and advanced assistance to patients with airway disorders, breathing disorders, blood circulation system disorders accompanied by bleeding control (circulation), neurological status disorders (disability) and exposure control.(1,2)

Limited space in ambulances makes the availability of medical devices and medicines also limited, so it is important to choose which medical devices and medicines are prioritized.(6) This selection is based on data recapitulation of the use of equipment and drugs in previous years, case studies of emergencies that have been handled and standards for the availability of medical devices and emergency medicines for ambulances.(2,17)

**Tabel 3.** Human Resources

Types of officers	Jakarta Governor or Regulation number 120 of 2016	Ministry of Health Ambulance Technical Guidelines 2019	Federal Specification for the Star-of-Life Ambulance U.S
<b>Doctor</b>	Advanced Trauma Life support (ATLS)  Advanced Cardiac Life support (ACLS)	Not explained	Not explained
<b>Nurse</b>	Basic Trauma Cardiac Life support (BTCLS)	Not explained	Not explained
<b>Driver</b>	SIM-A  Basic Life Support  Defensive Driving	Not explained	Not explained

In the human resource criteria, only the Jakarta Governor's regulation regulates the competence of ambulance officers in ambulance service standards.(2) Good ambulance vehicles and equipment are not optimal if their human resources are not competent.(18) Therefore ambulance officers, both doctors, nurses and drivers, must have basic emergency management skills in accordance with their profession, evidenced by an accredited and valid emergency training certificate.(2)

Doctors on duty in ambulances must have training certificates of advanced trauma life support and advanced cardiac life support, ambulance nurses must have basic trauma cardiac life support

certificates and for drivers to have a category A driving license, basic life support skills and skills to drive ambulance vehicles as evidenced by having a certificate of defensive driving training.(2)

## CONCLUSION

There are 3 (three) standards that must be met in standardizing hospital ambulance services in Jakarta, namely standardization of vehicle units, standardization of equipment and standardization of human resources. Every hospital in the DKI Jakarta area must ensure that its ambulance services are in accordance with the standards set out in Governor Regulation number 120 of 2016 and have an ambulance operational permit issued by the Jakarta One-Stop Integrated Service Agency.

## RECOMMENDATIONS

The health office as a regulator must socialize about ambulance service standards, as a function of coaching, supervising and controlling hospital ambulances in Jakarta in accordance with Governor Regulation number 120 of 2016 so that hospital ambulance services in Jakarta are in accordance with applicable standards. All hospitals in Jakarta are required to ensure that their ambulance services are in accordance with the standards set out in Governor Regulation number 120 of 2016 and have an ambulance operational permit issued by the Jakarta One-Stop Integrated Service Agency.

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