



Activity Report Ambulance Service

Quarter 1, 2023



Introduction

This document reports the activity of St John's ambulance service for the period of 01 January until 31 March 2023. Activities are described by their clinical, demography, and geographical characteristics in NCD, Central, East New Britain, Morobe and Simbu provinces.

Summary of this Period's key information

Incidents	Q1 2022	Q1 2023	% increase/decrease
Incidents responded to (CAD)	4,575	5,978	31% +
Patients assisted (eMR)	4,109	4,521	10% +
Distance travelled (kilometres)	205,867.7	302,140	47% +
Patient satisfaction score	97% (Q2 2022)	97.66%	0.66% +
Caller Satisfaction	85.5% (Q2, 2022)	88.1%	2.6% +

Case Timings and Targets

Category:	Priority 1A		Priority 1B & 1C		All other priorities P2, P3, P4, P5, P6	
Urgency:	C	ritical	U	rgent	Non-urgent	
Timing:	Target	Q1	Target	Q1	Target	Q1
Dispatch time (median)	3 minutes	2 mins 18 secs	3 minutes	8 mins 30 secs	Case dependent	21 mins 30 secs
Response time (median)	12 minutes	27 mins 22 secs	15 minutes	26 mins 21 secs	Case dependent	64 mins 36 secs
Scene time (average)	30 minutes	30 mins 17 secs	30 minutes	23 mins 29 secs	40 minutes	22 mins 23 secs
Overall Case time (average)	75 minutes	86 mins	120 minutes	118 mins	140 minutes	156 mins



We Save Lives – St John Ambulance



'Swift Response by St John Ambulance to Motor Vehicle Accident Saves Lives'

MORE needs to be done in creating awareness on what to do during medical emergencies in the communities but it is encouraging to see that in major incidents the public is calling 111.

A vehicle went off the road at 15-Mile outside Port Moresby on January 5 at around 3 pm resulting in five casualties.

These five patients were all male and in their 20s and 30s.

A bystander at the site of the motor vehicle accident called 111 confirming that it was a mass casualty incident and ambulance units were sent right away.

Four ambulance units were initially sent and another three units followed to assist. The car veered off the road down an embankment about 8 meters into the river. The occupants were assisted out of the vehicle by bystanders.

One of the bystanders was injured while assisting to rescue the people from the vehicle. Three casualties appeared to suffer serious injuries including possible fractures to their pelvis and lower limbs with potentially life-threatening injuries.

The other two passengers were severely injured as well.

The ambulance crew attended to all the patients at the scene of the incident where they were stabilised before transporting them to the Port Moresby General Hospital (PMGH).

An advance early notification was given to PMGH within ten minutes of St John receiving the call for emergency so they could prepare their emergency department and any other specialties that needed to be involved in the treatment of the patients.

There were a total of seven ambulances at the scene and around 10 ambulance personnel assisting in the treatment of the patient.

Mass casualty emergency cases like this require all hands on deck with effective command and control from the National Ambulance Operations Centre to the crew assigned to the case right through to the hospital.

The hand-over of the five patients to PMGH by the ambulance crew not only marks the success of the operation but sends a clear message to the community to call 111 in any medical emergency.



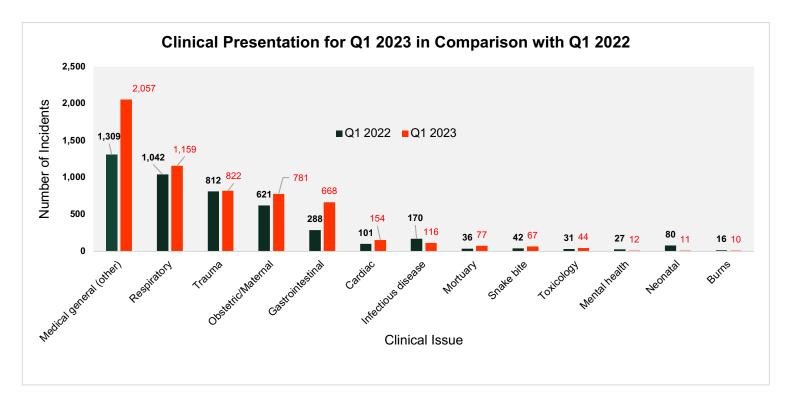
NATIONAL LEVEL PERFORMANCE





Incidents by Medical problem

During the reporting period, St John attended to 5,978 incidents. This is an **increase** of **1,403** incidents responded to compared to the same period last year.



Clinical Presentation	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	2023 YTD total
Burns	16	14	9	11	10	10
Cardiac	101	102	170	43	154	154
Gastrointestinal	288	423	699	70	668	668
Infectious disease	170	280	162	87	116	116
Medical general (other)	1,309	1,465	1,633	2,506	2,057	2,057
Mental health	27	47	21	10	12	12
Obstetric/maternal	621	843	665	755	781	781
Respiratory	1,042	967	1,055	1,033	1,159	1,159
Snake bite	42	54	60	60	67	67
Toxicology	31	33	69	69	44	44
Trauma	812	859	1,129	1,193	822	822
Neonatal	80	82	90	55	11	11
Mortuary	36	72	27	76	77	77
Total	4,575	5,241	5,789	5,968	5,978	5,978



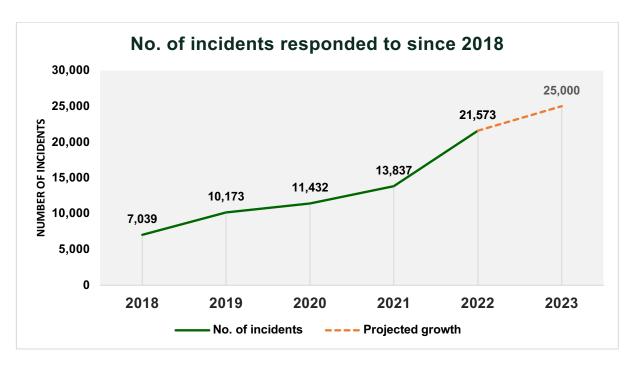
CEO's Analysis of Clinical Presentation Variances

When comparing 2023 Q1 to 2022 Q4, St John has seen a significant increase in emergency incidents. Most clinical presentations for this period are classified as medical general issues. Since the first quarter of 2022, general medical issues have steadily increased. In terms of categorizing incidents into clinical presentations, most of the medical general issues attended to are subcategorised as "sick person", diabetic, headache, seizure, stroke, unconscious and back pain.

Gastrointestinal cases have increased by more than 8x in percentage since the same quarter 4 last year. Respiratory and shortness of breath (SOB) cases have also increased by 11% since quarter 4 last year. On the same note, obstetric/maternal increased by 3%, and infectious diseases 33%.

Neonatal cases decreased by 80% while toxicology 32% (decrease) and trauma by (31% decrease).

EMERGENCY INCIDENT GROWTH SINCE 2018



The graph above indicates the total incidents responded to since 2018.

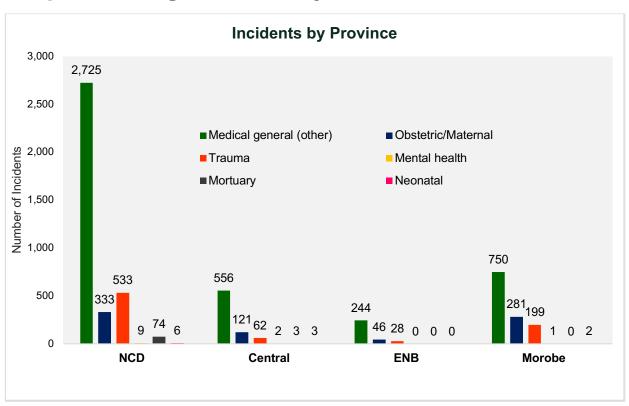
In Quarter 2 of 2020, St John Ambulance commenced regional expansion, beginning with a station opening in East New Britain. This expansion is reflected in the increase in incidents and is expected to continue into 2023.



Incidents by Province

Clinical Presentation	NCD	Central	ENB	Morobe	Total
Burns	5	1	1	3	10
Cardiac	109	19	6	20	154
Gastrointestinal	388	89	35	156	668
Infectious disease	63	17	6	30	116
Medical general (other)	1,323	297	139	298	2057
Mental health	9	2	0	1	12
Obstetric/maternal	333	121	46	281	781
Respiratory	770	107	55	227	1159
Snake bite	36	24	1	6	67
Toxicology	31	2	1	10	44
Trauma	533	62	28	199	822
Neonatal	6	3	0	2	11
Mortuary	74	3	0	0	77
Total Incidents	3,680	747	318	1,233	5,978

Graph showing incidents by Province





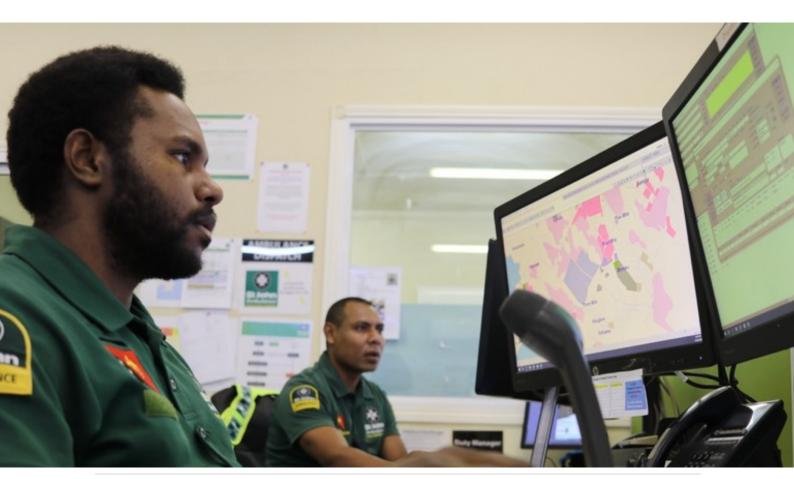
Response Performance by Priority (Median)

The response time of the ambulance services is an elemental factor for prehospital care to be successful and, therefore, must be controlled to increase the chances of survival.

Calls to 111 are assessed and triaged by St John call-takers. The call-taker uses a computer-aided dispatch system to ask scripted questions. The computer automatically determines the priority based on the answers the caller gives to the scripted questions. Higher priority is automatically given according to the patients' level of consciousness and respiratory status.

Incidents are responded in order of priority and availability of ambulances. Category 1A is the highest priority and category 8 is the lowest.

The time to reach a patient can be affected by many factors. Some factors are relatively within St John's control, such as how long it takes to handle the call (call handling time) and how long it takes an ambulance crew to go from station to their ambulance. Other times cannot easily be controlled by St John, such as the distance from the station to the patient's location, and the difficulty of the terrain.





Dispatch Time

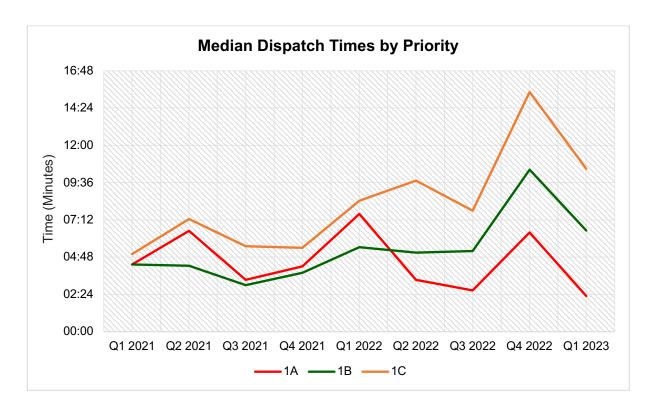
'Dispatch time' is defined as the time between when the call-taker first receives the call about a case and the dispatcher tasks an ambulance crew to attend the case by sending a message to crew (usually by radio or pager).

This quarter's median dispatch time in minutes and seconds

Category:	Priority 1A		Priority 1B & 1C		All other priorities P2, P3, P4, P5, P6	
Urgency:	Critic	cal	Urge	nt	Non-urgent	
Timing:	Target	Q1	Target	Q1	Target	Q1
NCD	3 minutes	2 mins 48 secs	3 minutes	5 mins 22 secs	Case dependent	20 mins 21 secs
Central	3 minutes	3 mins 13 secs	3 minutes	8 mins 11 secs	Case dependent	27 mins 35 secs
Lae City	3 minutes	2 mins 12 secs	3 minutes	8 mins 37 secs	30 minutes	14 mins 44 secs
Morobe	3 minutes	-	3 minutes	15 mins 48 secs	30 minutes	23 mins 47 secs
Kokopo Town	3 minutes	-	3 minutes	4 mins 23 seconds	Case dependent	26 mins 14 secs
East New Britain	3 minutes	1 min 1 sec	3 minutes	8 mins 39 secs	Case dependent	14 mins 30 secs
National Median	3 minutes	2 mins 18 secs	3 minutes	8 mins 30 secs	30 minutes	21 mins 32 secs



Line graph showing median dispatch time by quarter for 1A, 1B, and 1C, from 2021 to this quarter







Response Time

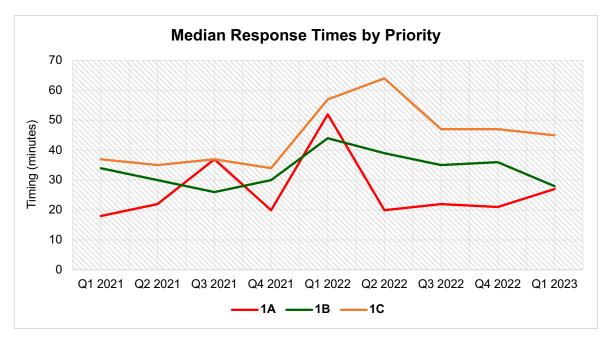
Response time is the time between notification of an occurrence and the ambulance arrival at the scene. According to the WHO, an ideal response time is equivalent to less than 8 minutes¹. St John targets 12 minutes in urban areas.

This quarter's median response time in minutes and seconds.

Category:	Priority 1A		Priority 1B	& 1C	All other priorities P2, P3, P4, 108P5, P6	
Urgency:	Crit	ical	Urger	nt	Non-urg	gent
Timing:	Target	Q1	Target	Q1	Target	Q1
NCD	12 minutes	12 mins 12 secs	15 minutes	22 mins 17 secs	Case dependent	44 mins 24 secs
Central	12 minutes	47 mins 9 secs	15 minutes	58 mins 35 secs	Case dependent	108 mins 42 secs
Lae City	12 minutes	17 mins 51 secs	15 minutes	28 mins 19 secs	90 minutes	48 mins 36 secs
Morobe	12 minutes	-	15 minutes	40 mins 38 secs	90 minutes	43 mins 52 secs
Kokopo Town	12 minutes	-	15 minutes	22 mins 7 secs	Case dependent	103 mins 37 secs
East New Britain	12 minutes	32 mins 15 secs	15 minutes	50 mins 12 secs	Case dependent	57 mins 25 secs
National Median	12 minutes	27 mins 22 secs	15 minutes	36 mins 18 secs	90 minutes	64 mins 36 secs



Line graph showing median response time by quarter for 1A, 1B, and 1C, from 2021 to this quarter







Scene Time

Scene time is the time between when the first ambulance arrives at the incident to when it departs the scene.

This quarter's average scene time in minutes and seconds.

Category:	Priority 1A		Priority 1B & 1C		All other priorities P2, P3, P4, P5, P6	
Urgency:	Critic	al	Urger	nt	Non-ur	gent
Timing:	Target	Q1	Target	Q1	Target	Q1
NCD	30 minutes	32 mins 11 secs	30 minutes	19 mins 34 secs	Case dependent	19 mins 25 secs
Central	30 minutes	56 mins 41 secs	30 minutes	31 mins 13 secs	Case dependent	28 mins 31 secs
Lae City	30 minutes	16 minutes	30 minutes	19 mins 20 secs	40 minutes	17 mins 23 secs
Morobe	30 minutes	17 mins 20 secs	30 minutes	19 mins 54 secs	40 minutes	15 mins 27 secs
Kokopo Town	30 minutes	-	30 minutes	27 mins 23 secs	Case dependent	21 mins 6 secs
East New Britain	30 minutes	-	30 minutes	24 mins 28 secs	Case dependent	28 mins 28 secs
National Median	30 minutes	13 mins 17 secs	30 minutes	23 mins 29 secs	40 minutes	22 mins 23 secs



Overall case time

Overall case time is the time between when the emergency call is received by SJA to when the ambulance arrives back at station, (other is tasked to another emergency)

This quarter's average case time in hours and minutes.

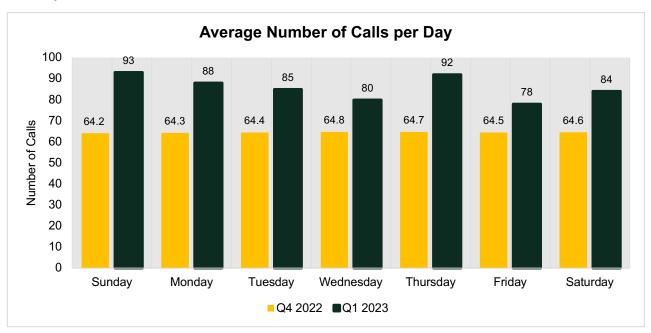
Category:	Priority 1A		Priority 1	B & 1C	All other priorities P2, P3, P4, P5, P6	
Urgency:	_	Critical		Urgent	Non-urgent	
Timing:	Target	Q1	Target	Q1	Target	Q1
NCD	1 hr 15 mins	1 hr 20 mins	2 hours	2 hrs 18 mins	Case dependent	2 hours
Central	1 hr 15 mins	2 hrs 59 mins	2 hours	3 hrs 25 mins	Case dependent	4 hrs 5 mins
Lae City	1 hr 15 mins	50 minutes	2 hours	1 hr 23 mins	2 hrs 50 mins	1 hr 49 mins
Morobe	1 hr 15 mins	41 minutes	2 hours	1 hr 50 mins	2 hrs 50 mins	2 hrs 3 mins
Kokopo Town	1 hr 15 mins	-	2 hours	1 hr 14 mins	Case dependent	2 hrs 21 mins
East New Britain	1 hr 15 mins	1 hr 19 mins	2 hours	2 hrs 19 mins	Case dependent	2 hrs 45 mins
National Median	1 hr 15 mins	1 hr 26 mins	2 hours	1 hr 19 mins	2 hrs 50 mins	2 hrs 36 mins



Average calls per day in the reporting period

The graph below indicates the average number of incidents responded to per day in Q1 2023 in comparison with the previous quart

The busiest day during this quarter is Sunday and the quietest day is Friday. For the previous quarter, the busiest day is Wednesday, whereas the quietest day is Sunday.

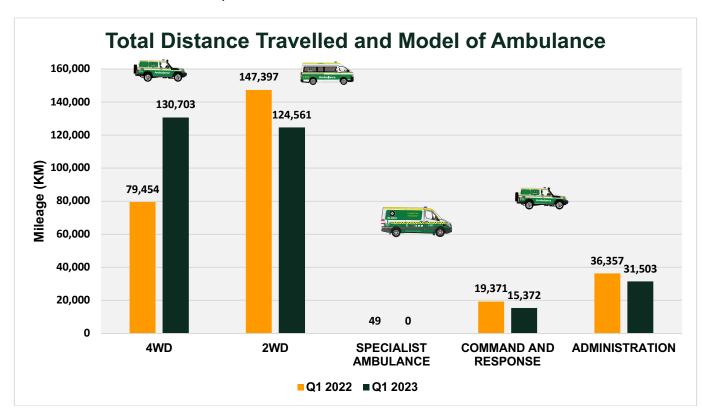






Distance Travelled (Nationally)

A total distance of **302,140 kilometres** was travelled this year. The total distance travelled in Q1 2022 was **205,868** kilometres.

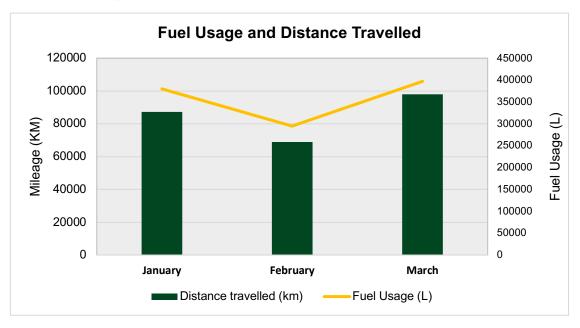


Vehicle Class	Q1 2022	Q1 2023	YTD Total
4WD	79,454	130,703	130,703
2WD	70,636	124,561	124,561
SPECIALIST			
AMBULANCE	49	-	-
COMMAND AND RESPONSE	19,371	15,372	15,372
ADMINISTRATION	36,357	31,503	31,503
Total kilometers	205,868	302,140	302,140





Fuel Usage and Distance Travelled



Q1 2023	Fuel Usage (L)	Distance travelled (km)
January	379,617	87,268
February	294,772	68,872
March	397,058	98,038





PROVINCIAL LEVEL PERFORMANCE

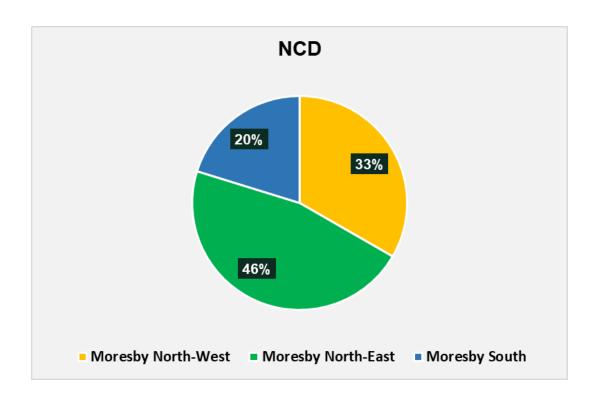




National Capital District

Incidents by Electorate

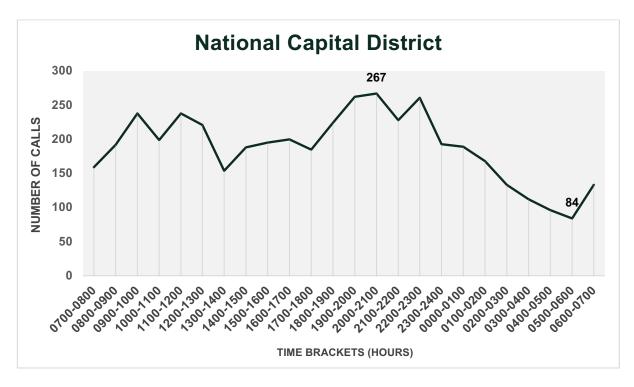
ELECTORATE	Q1 2022	%	Q1 2023	%	Variance	Total YTD
Moresby North- West	1,200	34	1,220	33	20+	1,220
Moresby North- East	1,568	45	1,707	46	139+	1,707
Moresby South	740	21	754	20	14+	754
Total	3,508	100	3,681	100	173+	3,681



Peak call periods for NCD

We keep track of the times at which calls for help are received. For NCD, the majority of the calls come in between 20:00 - 21:00 hours during the night and the least number of calls come in at 05:00 AM - 06:00 AM.





Distance Travelled

Vehicle Class	Q1 2022	Q1 2023	YTD Total
4WD	36,042	55,507	55,507
2WD	55,601	120,996	120,996
SPECIALIST AMBULANCE	49	-	1
COMMAND AND RESPONSE	12,158	15,372	15,372
ADMINISTRATION	36,357	31,503	31,503
Total kilometers	140,208	223,378	223,378

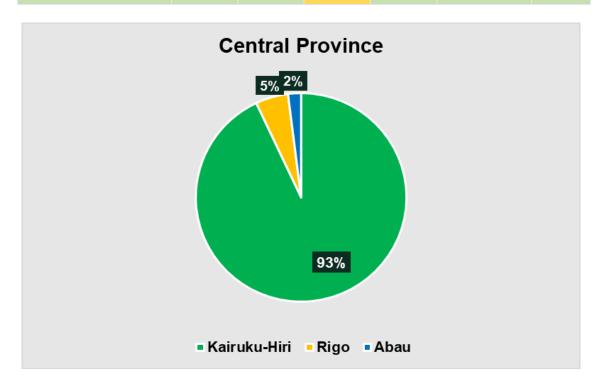




Central Province

Incidents by Electorate

ELECTORATE	Q1 2022	%	Q1 2023	%	Variance	Total YTD
Kairuku-Hiri	450	99	696	93	246+	696
Rigo	8	2	36	5	28+	36
Abau	0	0	15	2	15+	15
Total	458	100	747	100	289+	747





Peak Call Periods for Central

We keep track of the times at which calls for help are received. For Central Province, the majority of the calls are received between 10:00 – 11:00 hours during the day while the least number of calls are received between 03:00 AM –04:00 AM.



Distance travelled

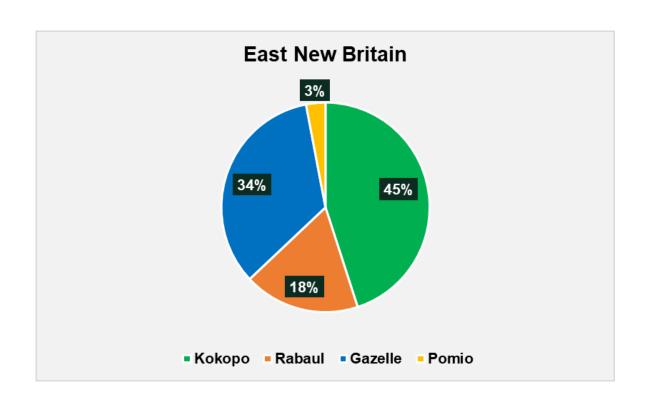
Vehicle Class	Q1 2022	Q1 2023	YTD Total
LAND CRUISER	660	10,893	10,893
Total kilometers	660	10,893	10,893



EAST NEW BRITAIN

Incidents by Electorate

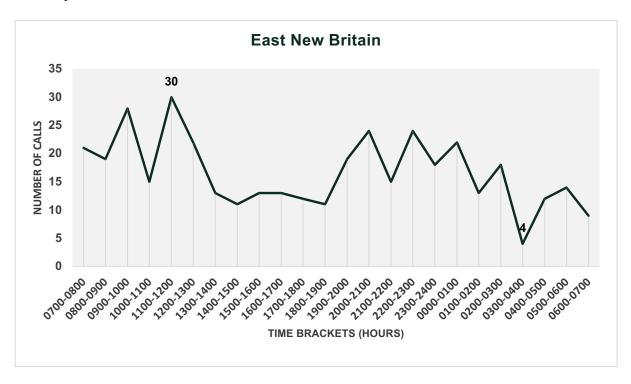
ELECTORATE	Q1 2022	%	Q1 2023	%	Variance	Total YTD
Kokopo	53	26	142	45	89+	142
Rabaul	102	49	56	18	46-	56
Gazelle	27	13	109	34	82+	109
Pomio	6	3	11	3	5+	11
Others	18	9	0	0	18-	0
Total	206	100	318	100	112+	318





Peak Call Periods for ENB

We keep track of the times at which calls for help are received. For East New Britain Province, the majority of the calls are received between 11:00 – 12:00 hours during the day whilst the least number of calls are received between 03:00 AM – 04:00 AM.



Distance Travelled

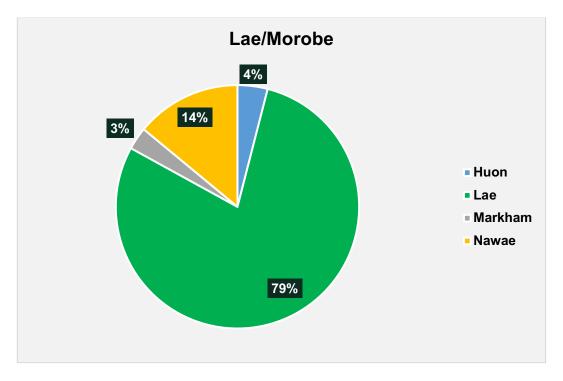
Vehicle Class	Q1 2022	Q1 2023	YTD Total
LAND CRUISER	5,009	6,777	6,777
OTHER AMBULANCE	7,447	337	337
COMMAND VEHICLE	3,582	0	0
Total kilometers	16,038	7,114	7,114



Lae City & Morobe Province

Incidents by Electorate

ELECTORATE	Q1 2022	%	Q1 2023	%	Variance	Total YTD
Huon	7	3	53	4	46+	53
Lae	250	91	969	79	719+	969
Markham	0	0	40	3	40+	40
Nawae	18	6	171	14	153+	171
Total	275	100	1,233	100	958+	1,233





Peak Call Periods for Morobe

We keep track of the times at which calls for help are received. For Morobe Province, the majority of the calls received are between 20:00 - 21:00 hours during the night and the least number of calls come at 04:00 AM - 05:00 AM.



Distance Travelled

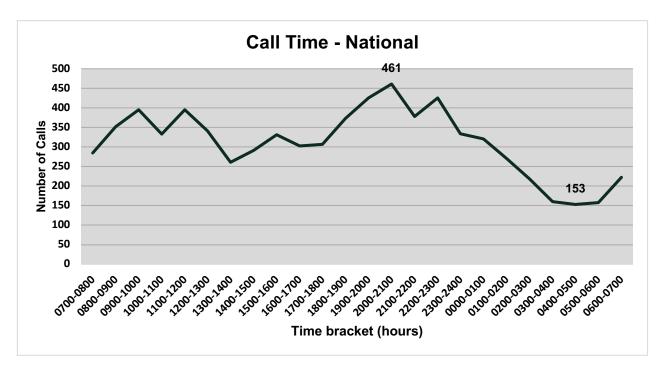
Vehicle Class	Q1 2022	Q1 2023	YTD Total
LAND CRUISER	27,107	9,098	9,098
OTHER AMBULANCE	7,588	3,565	3,565
COMMAND VEHICLE	3,632	9	9
Total kilometers	38,327	12,672	12,672



National Peak Call Periods

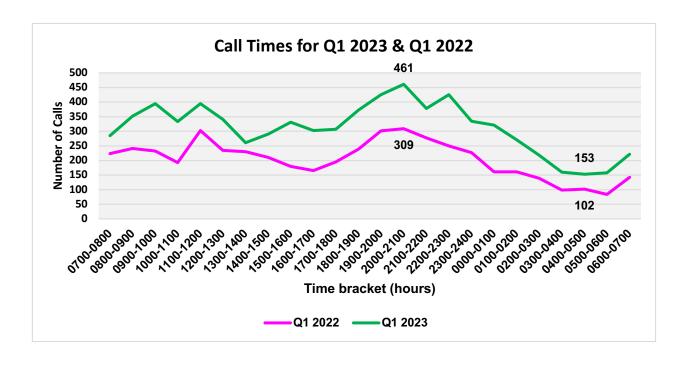
We keep track of the times in which calls for help are received.

For this quarter, the highest number of calls for help were received between 20:00 - 21:00 PM with a total of 461 calls. The least number of calls during the quarter was received between 04:00 - 05:00 hours.



During the reporting period, the busiest time for St John Ambulance was between 09:00-10:00 hours 11:00-12:00 hours during the day and 20:00-21:00 hours during the night. (Daytime period: 06:00 to 18:00); Night-time period: 18:01 to 05:59)





CEO's Analysis

There has been a significant increase in incidents overall for East New Britain, specifically in Rabaul district with 2x increase compared to other districts in the province.

In Central, Kairuku Hiri, the largest district accounted for the most incidents attended with 98% this quarter. Moving forward, the Kairuku-Hiri district will be separated into Hiri Koiari and Kairuku.

Lae district in Morobe Province accounts for 79% of the total incidents for the province this quarter.

In NCD, North-East accounted for most of the incidents with 46% compared to other electorates. The incidents were attended to within the city area due to road conditions and distance.



Air Ambulance

Missions

Helicopter	Q1 2022	Q1 2023	YTD Average
Southern	1	1	1
Momase	0	0	0
NGI	0	0	0
Highlands	0	0	0
International	0	0	0
Total	1	1	0

Fixed Wing	Q1 2022	Q1 2023	YTD Average
Southern	4	3	3
Momase	1	2	2
NGI	7	3	3
Highlands	1	2	2
Australia	2	2	2
International (other)	0	0	0
Total	15	12	12

Flight Hours

The total hours flown by air to provide care during this period are shown below.

Helicopter	Q1 2022	Q1 2023	YTD Average
Southern	2	1.2	1.2
Momase	0	0	0
NGI	0	0	0
Highlands	0	0	0
International	0	0	0
Total hours	2	1.2	1.2

Fixed Wing	Q1 2022	Q1 2023	YTD Average
Southern	6	10	10
Momase	2	3	3
NGI	25	10	10
Highlands	2	5	5
Australia	12	10	10
International (other)	0	0	0
Total hours	47	38.7	38.7



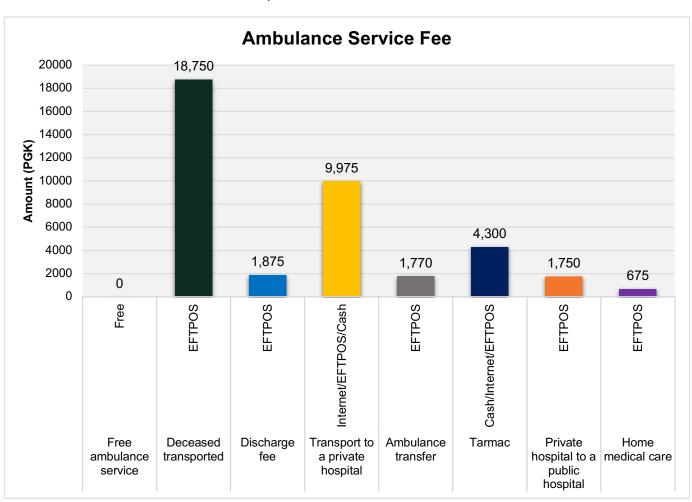
Private patient transport fees

All emergency services provided to Papua New Guineans and PNG Residents are entirely free if the patient is seeking emergency transport to a public hospital.

The average 'real' expenses incurred helping one patient is estimated at PGK 800. However over 98% of patients are public patients, so SJA provide the service to them entirely free.

Sometimes patients request St John to transport a patient to a private hospital, or request services that are not for an emergency, such as transport from a hospital to home (patient discharge), to an airport for overseas treatment, or where a family requests mortuary transport. St John charges a fee for these services on a cost-recovery basis, and to ensure sufficient operating revenue.

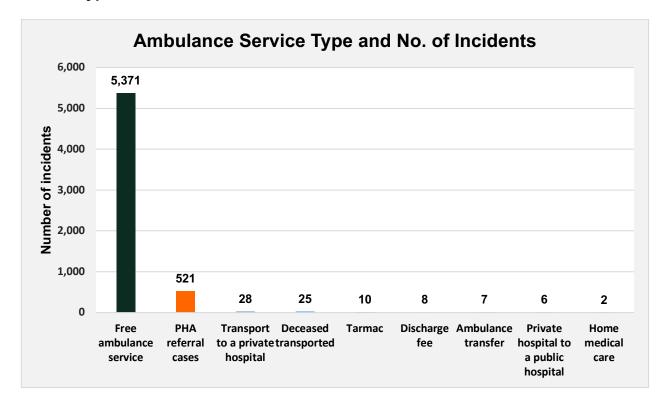
St John Ambulance has a "no cash policy", so all payments were received through EFTPOS or bank transfer from quarter two of 2022 onwards.



The total private patient fees collected in this quarter amounted to PGK39,295.00. This helped subsidise the free public ambulance service.



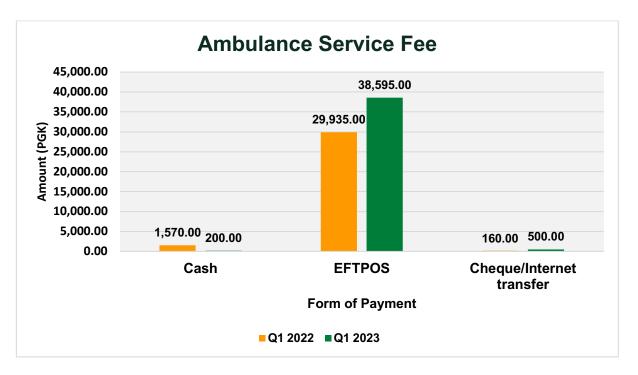
In addition to the above information on ambulance service fees, the graph below shows the number of incidents attended to as per the ambulance service type.



Ambulance service fee form of payment for quarter one 2023 in comparison to quarter one 2022 last year.

Form of Payment	Q1 2022	Q1 2023	2023 YTD Total
Cash	1,570.00	200.00	200.00
EFTPOS	29,935.00	38,595.00	38,595.00
Cheque/Internet			
transfer	160.00	500.00	500.00
Total (PGK)	31,665.00	39,295.00	39,295.00







Key Performance Indicators

Ambulance Service

Title	Target	Indicator	Q4 2022	Q1 2023
CALL ANSWERING TIME	Calls to 111 are answered by the telephonist within 90 seconds on average	PABX call-logs	16 seconds	14 seconds.
DISPATCH TIME (NCD)	An ambulance is dispatched to life- threatening medical emergencies within 5 minutes on average of the call being received by St John in Port Moresby.	CAD Dispatch logs	2 minutes 42 seconds	2 minutes 48 seconds
DISPATCH TIME (Regional)	An ambulance is dispatched to life- threatening medical emergencies within 10 minutes on average of the call being received by St John in rural areas	CAD Dispatch logs	8 minutes 18 seconds	2 minutes 9 seconds
RESPONSE TIME (NCD)	An ambulance arrives on scene within 12 minutes from the time of call for 1A cases, \geq 90% of the time	CAD Dispatch logs	13 minutes 21 seconds	12 minutes 12 seconds
RESPONSE TIME (Regional)	An ambulance arrives on scene within 20 minutes from the time of call for 1A and 1B cases, > 90% of the time	CAD Dispatch logs	28 minutes 15 seconds	32 minutes 25 seconds
PATIENT SATISFACTION	≥ 90% of patients report being satisfied or very satisfied with St John's service	Patient Experience Survey	95% patient satisfaction	97.66% Satisfaction
CALLER SATISFACTION	≥ 90% of callers report that the 111 call-taker was helpful	Patient Experience Survey	85.5% caller satisfaction	88.81% caller satisfaction



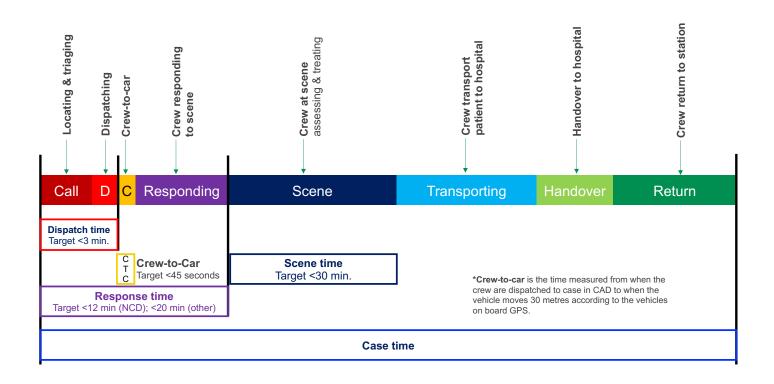
Definitions & Terminology

Terminology

These definitions match that of the Council of Ambulance Authorities Australasia's Report on Government Services.

For information on response priorities see Annexe B

Term	Definition	Comment		
Incident	An event that results in a demand for ambulance resources to respond.	Incidents are logged in CAD as a case. Incidents are measured using CAD data.		
Response	An ambulance response is a vehicle sent to an incident.	There may be multiple responses to one incident if several units are dispatched to a single incident		
	A patient is someone assessed,	Patients are counted by the number of episodes. Patients may be the subject of more than one (1) episode per year.		
Patient	treated, or transported by the ambulance service.	The ambulance worker completes an individual 'patient care report' for each patient. The patient care report is documented either on a paper sheet or using St John's eMR system.		





Key Incident Time Intervals

Definitions of response priorities

Response Code	Problem	Degree of urgency	Lights & Sirens	Recommended number of ambulances to send	Target Time to patient location from time of call (median)
1 A	Immediately life- threatening problem e.g., cardiac arrest, ineffective breathing	Immediate Highest priority response. Closest ambulances to respond.	Yes	Minimum 3, preferably 4.	Within 10 minutes (Ideally less than 8 minutes)
1B	Potentially life- threatening problem e.g., unconscious Possible life-	Immediate High priority	Yes	1 – 2	Within 15 minutes
1C	threatening emergency e.g., breathing problem or chest injury, or serious bleeding	Priority	Yes	1 - 2	Within 15 minutes
2A	Unlikely threat to life. e.g., abdominal pain	Urgent	No	1	Within 30 minutes
2B	No threat to life e.g., unwell for days, limb injury	Mobilise when sufficient resources available	No	1	Within 60 minutes
3	medical response requested by a doctor or nurse. often referral case	Within requested timeframe	No	1	Usually within 90 minutes
4 – 9	Non-emergency	Routine transport	No	1	



Papua New Guinea Since 1957

St John is a statutory incorporation operating in accordance with the *St John Council Incorporation* Act of *1976*.

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