

Perth County Paramedic Services 101

February 13, 2018





Quick Facts

- 24 hour a day, 365 days a year
- Perth County is the designated operator
- Perth County Paramedic Services (PCPS) responded to 12,415 requests for service or coverage in 2016
- PCPS has 5 stations, 10 ambulances, 2 Command vehicles, 1 emergency response trailer, toboggan, Supply and Support vehicle, IDERT (infectious disease response team) vehicle



Regional Emergency Service

- PCPS is the only Emergency Service that services all of Perth County, City of Stratford and Town of St Marys under one operation
- Requests for service and assignment of requests is handled by one Dispatch Centre in London (CACC-Central Ambulance Communications Centre) operated by MoHLTC
- PCPS does not recognize municipal borders; PCPS ambulances respond to calls according to CACC policy and our deployment plan



Land Ambulance

- Provide emergency paramedic medical care to citizens in our communities
- Care of patient and transportation to the closest appropriate hospital
- Emergency patient/team transportation between hospitals



Regulatory Oversight

- London Health Sciences Centre (LHSC)
- Ministry of Health & Long Term Care (MOHLT)



MOHLTC- Emergency Health Services Branch

Comprised of two newly created branches:

1. Emergency Health Program Management and Delivery Branch
2. Emergency Health Regulatory and Accountability Branch

- Legislation/Regulations/Standards
- Basic Life Support
- Quality Assurance of Ambulance Service through Audits/Reviews/Unannounced Inspections
- Central Ambulance Communication Centre (CACC)
- Base Hospital – Medical Over-site
- Funding
- <http://www.ambulance-transition.com/>



MOHLTC & Emergency Health Branches



Legislation:

- Ambulance Act

Regulations

- Ontario Regulation 257
- Ontario Regulation 129



Ambulance Standards

- Advanced Life Support Patient Care Standards
- Air Ambulance Certification Standards
- Ambulance Service Communicable Disease Standards
- Basic Life Support Patient Care Standards
- Land Ambulance Certification Standards
- Ontario Ambulance Documentation Standards
- Ontario Provincial Land Ambulance and Emergency Response Vehicle Standards
- Patient Care & Transportation Standards
- Provincial Equipment Standards for Ambulance Services
- Field Trauma Triage and Air Ambulance Utilization Standards
- Deceased Patient Standard
- Do Not Resuscitate Standard



When is an Ambulance not an Ambulance?





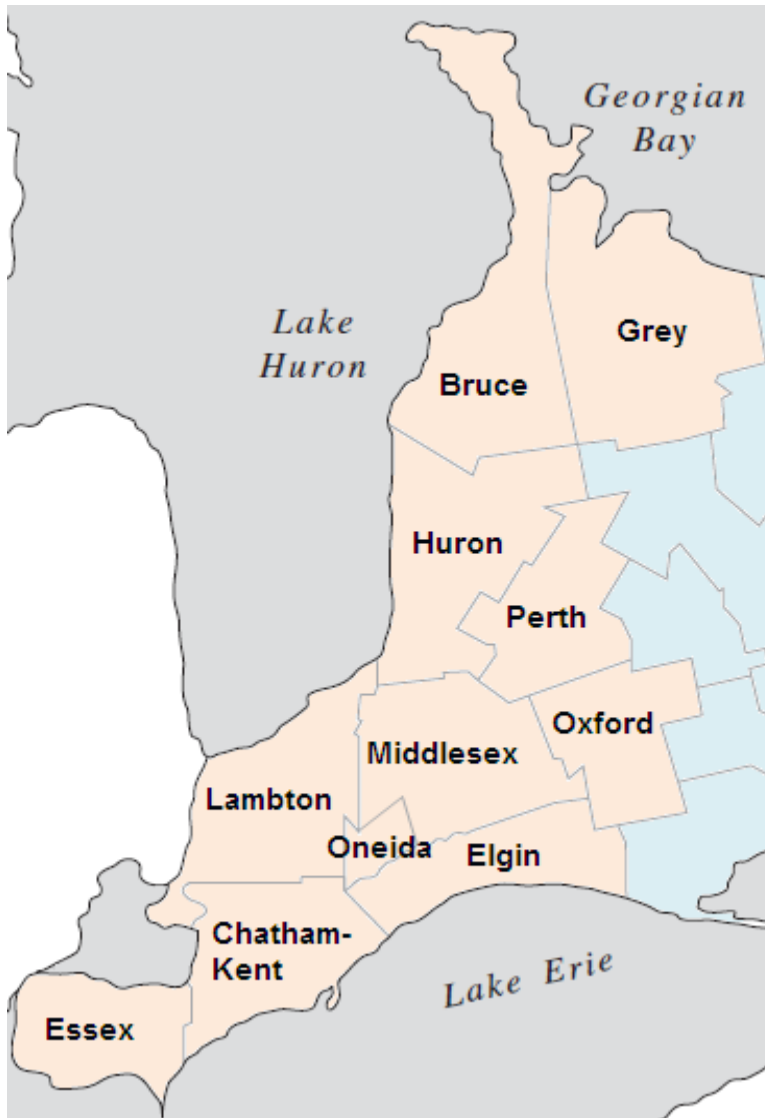
Standards Define Ambulances

- 2 qualified/certified paramedics
- Right types and right quantities of medical supplies and equipment
- Meets the vehicle standard
 - lights, reflectivity, signage



Southwest Ontario Regional Base Hospital Program (SWORBHP)

- SWORBHP (Base Hospital) operates under the leadership of London Health Sciences Centre (LHSC).
- SWORBHP provides:
 - Medical direction and delegation,
 - Advanced Life Support (ALS) certification & training,
 - Quality management, and
 - Continuing education
 - Leadership, guidance and advice, in the provision of ambulance based pre-hospital emergency health care to the Ministry of Health and Long Term Care and the eleven Paramedic Services in the region.



Base Hospital Area

Modified from: St. Catharines Downtown [computer file]. (no date). St. Catharines, Ontario: Brock University Map, Data & GIS Library. Available: Brock University Map, Data & GIS Library Controlled Access
<http://www.brocku.ca/maplibrary/maps/outline/local/stcathDT.jpg> (Accessed April 27, 2010).



London Central Ambulance Communication Centre





Who Do they Send?

- Closest, fastest and most appropriate emergency medical vehicle
- No boundaries
- Ambulance (2 paramedics)
- EMS first response unit (1 paramedic)
- Helicopter (Advanced Care Paramedic)
- Fire First Response (Tiered Response Agreements)



Ambulance Call Types

Priority	Definition
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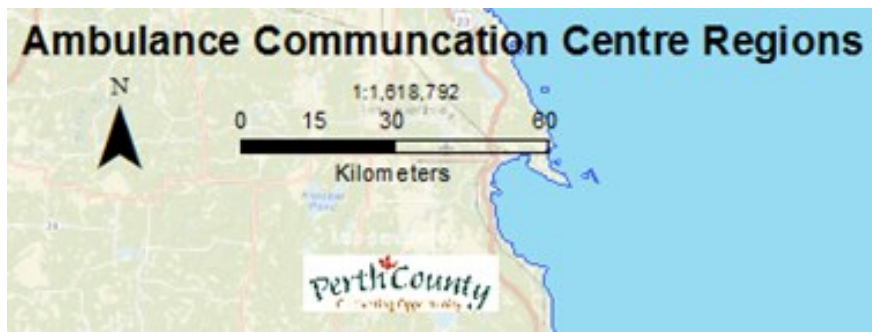
Code 2	Scheduled appointment for medical treatment or equipment

Code 4	Poses a threat to life, limb or vital organ

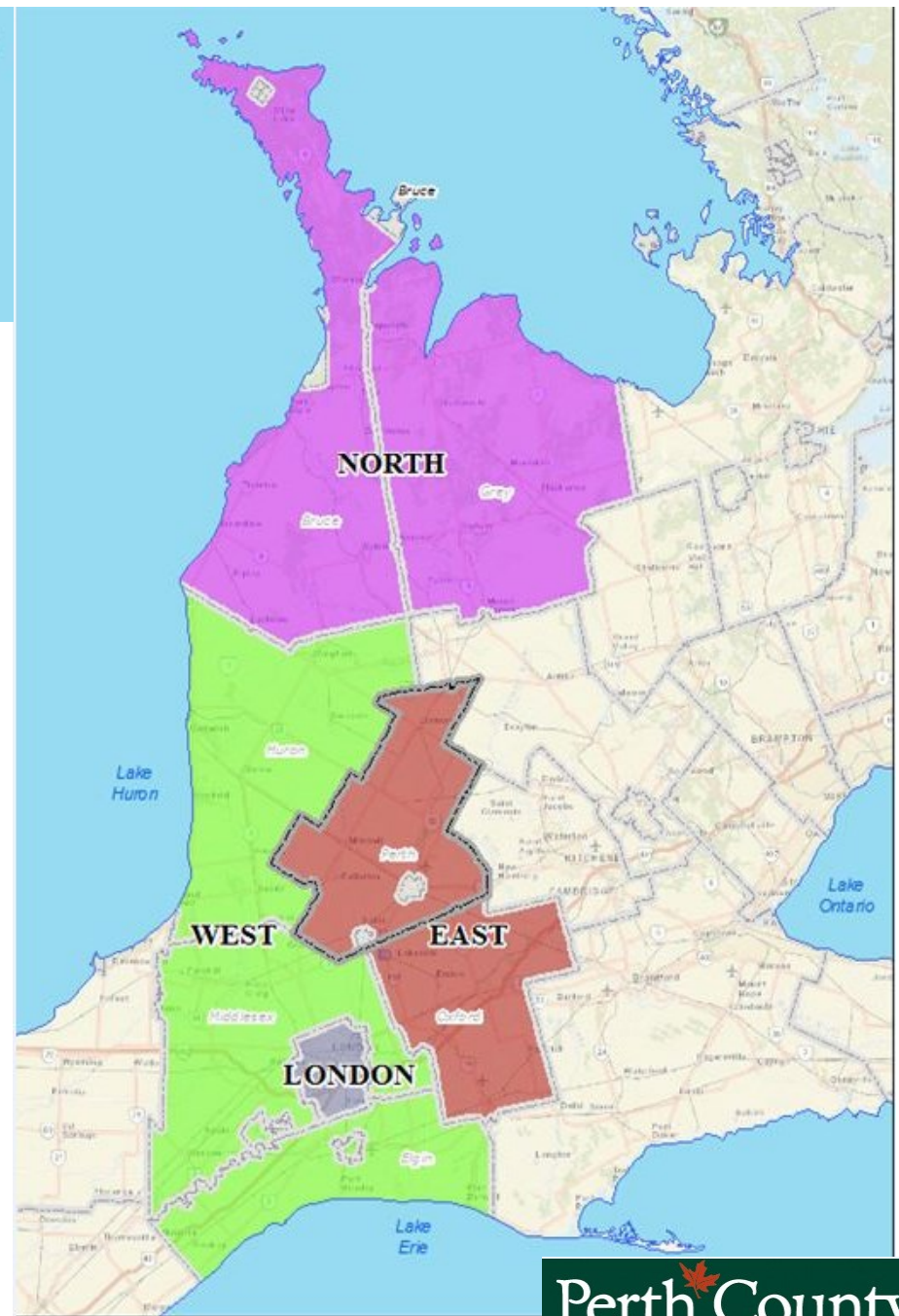


Central Ambulance Communication Centre (CACC)

- Ambulances are dispatched by MOHLTC from London
- MPDS Medical Priority Dispatch System vs Dispatch Priority Card Index (dispatch algorithms)
- CACC controls the movement of our ambulances according to our deployment plans



- 4 MOH dispatchers and 2 call takers cover 7 Counties and the City of London





Base Hospital Delegated Acts for Primary Care Paramedics



Skills

- Defibrillation: Semi – Automatic
- Defibrillation: Manual for pediatric patients
- Termination of Resuscitation
- Continuous Positive Air Pressure (CPAP for Respiratory distress)
- King LT: advanced airway control
- Labor and delivery
- Chemical Exposure and toxic agent Directives



Symptom Relief Medications

- ASA for chest pain, pain relief
- Nitro-glycerin for chest pain
- Glucagon and D10 for diabetic emergencies
- Epinephrine for anaphylactic reaction, croup, asthma exacerbation, anaphylaxis arrest
- Ventolin for shortness of breath
- Toradol, Ibuprofen, Acetaminophen for pain relief
- Gravol for nausea
- Benadryl for allergic reaction
- Naloxone for opioid overdose
- Adrenal Crisis Medication Assist





PCP Medical Directives



PCP Core Medical Directives

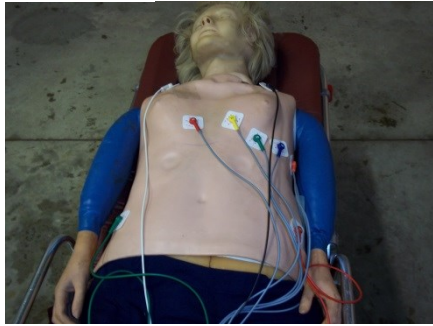
- Medical Cardiac Arrest
- Trauma Cardiac Arrest
- Hypothermia Cardiac Arrest
- Foreign Body Airway Obstruction
- ROSC
- Cardiac Arrest
- Neonatal Resuscitation
- Return of Spontaneous Circulation (ROSC)
- Cardiac Ischemia
- Acute Cardiogenic Pulmonary Edema
- Cardiogenic Shock
- Hypoglycemia
- Broncho-constriction
- Moderate to Severe Allergic Reaction
- Croup
- Analgesia
- Opioid toxicity
- Home dialysis disconnect
- Adrenal Crisis
- Tracheostomy suctioning

PCP Auxiliary Medical Directives

- Intravenous and Fluid Therapy
- Continuous Positive Airway Pressure (CPAP)
- Supra-glottic Airway Medical
- Nausea / Vomiting
- Electronic Control Device Probe Removal
- Minor Abrasions
- Minor Allergic Reaction
- Musculoskeletal Pain
- Headache
- Moderate to Severe Pain



Additional PCP Skills



- Primary Care Paramedic (PCP)
- 12 lead identification of STEMI (ST elevation myocardial infarct) patients
- Capnography interpretation
- Tourniquets and Hemostatic agent application
- Spinal motion restriction
- I.V. : dextrose, fluid bolus, gravol (introduction of a wider variety of drugs)





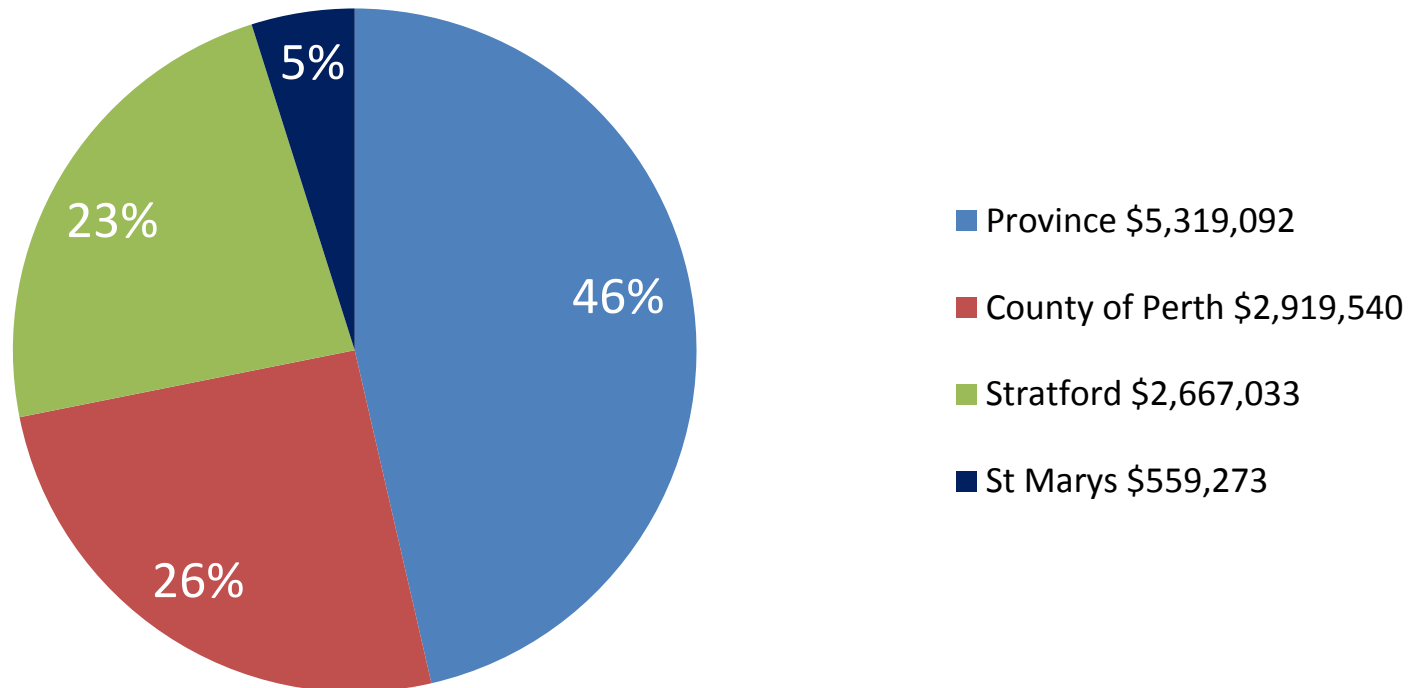
MOHLTC Funding

- The Provincial Government made a commitment to municipalities to fund 50% of land ambulance costs.
- Funding is offset to the following year
- Approved costs do not include:
 - Capital costs for new ambulance stations
 - History of one time funding....SARS, Ebola supplies and training, tablets, Automatic Vehicle Location



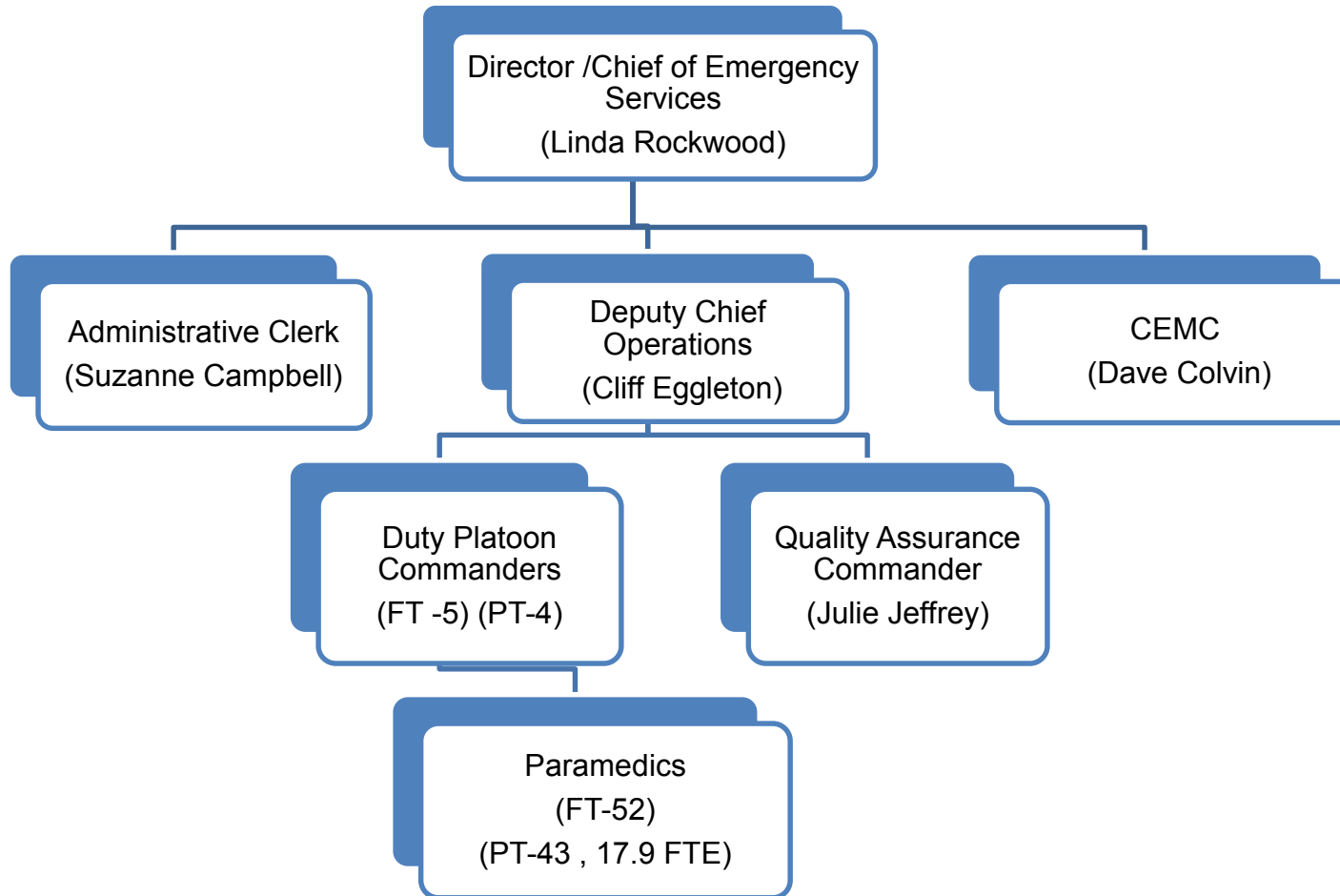
Funding

2016 Funding Contributions





Emergency Services Team





Unionized Group

- Paramedic Services is NOT an essential service
- Paramedics have the right to strike but must have negotiated an essential services agreement first
- Only unionized group in the County
- Hicks Morley provides provincial summary of Paramedic wages and collective bargaining issues to all municipal paramedic services
- Perth Paramedics are CUPE 4514
- Perth contract expires Dec. 31, 2018



Municipal Service Level Decisions

- Number of Ambulances
- Staffing Levels (paramedics, management)
- Skill Level
 - PCP, PCP Plus (additional skills), ACP
- Deployment (where and when ambulances are located)
- Station Location
- Tiered Response Agreements
- Equipment/Vehicle Selection
- Budget
- Hospital By-Pass Protocols
 - Stroke Bypass local hospital and go directly to Stratford, Goderich, LHSC-UH for CT
 - STEMI By Pass local hospitals and go to LHSC-UH or St Marys KW to cardiac catheter lab

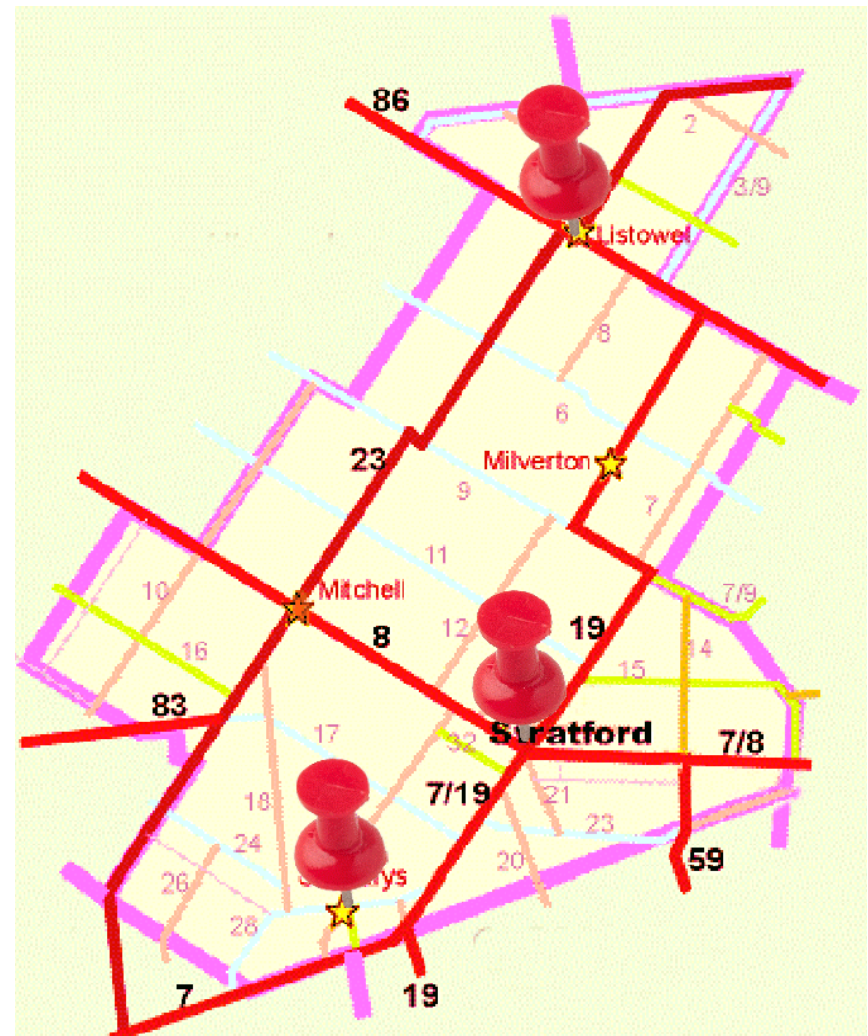


Perth County Pre- Dec.10, 2000

Listowel:
12 hrs + On call

Stratford:
Staffed 24 hrs
12 hrs + On call
10 hrs Mon to Fri

St. Marys:
12 hrs + On call





Perth County Staffing July 2004

Listowel:

Staffed 24 hrs

Stratford:

2 - Staffed 24 hrs

12 hr Days (Mon-Fri)

St. Marys:

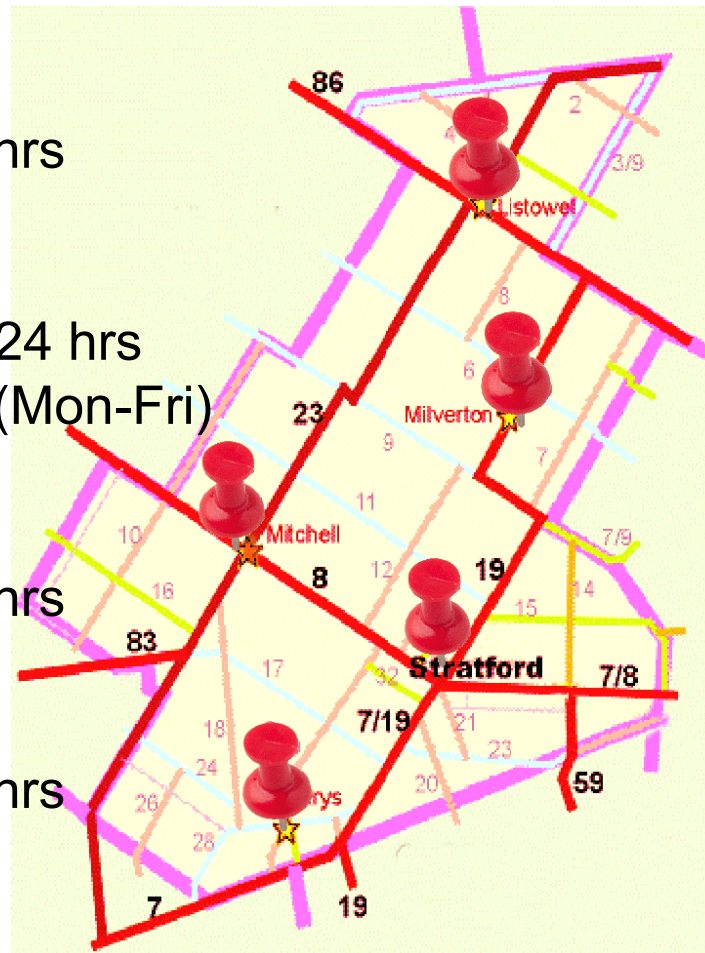
Staffed 24 hrs

Mitchell:

Staffed 24 hrs

Milverton:

Staffed 24 hrs



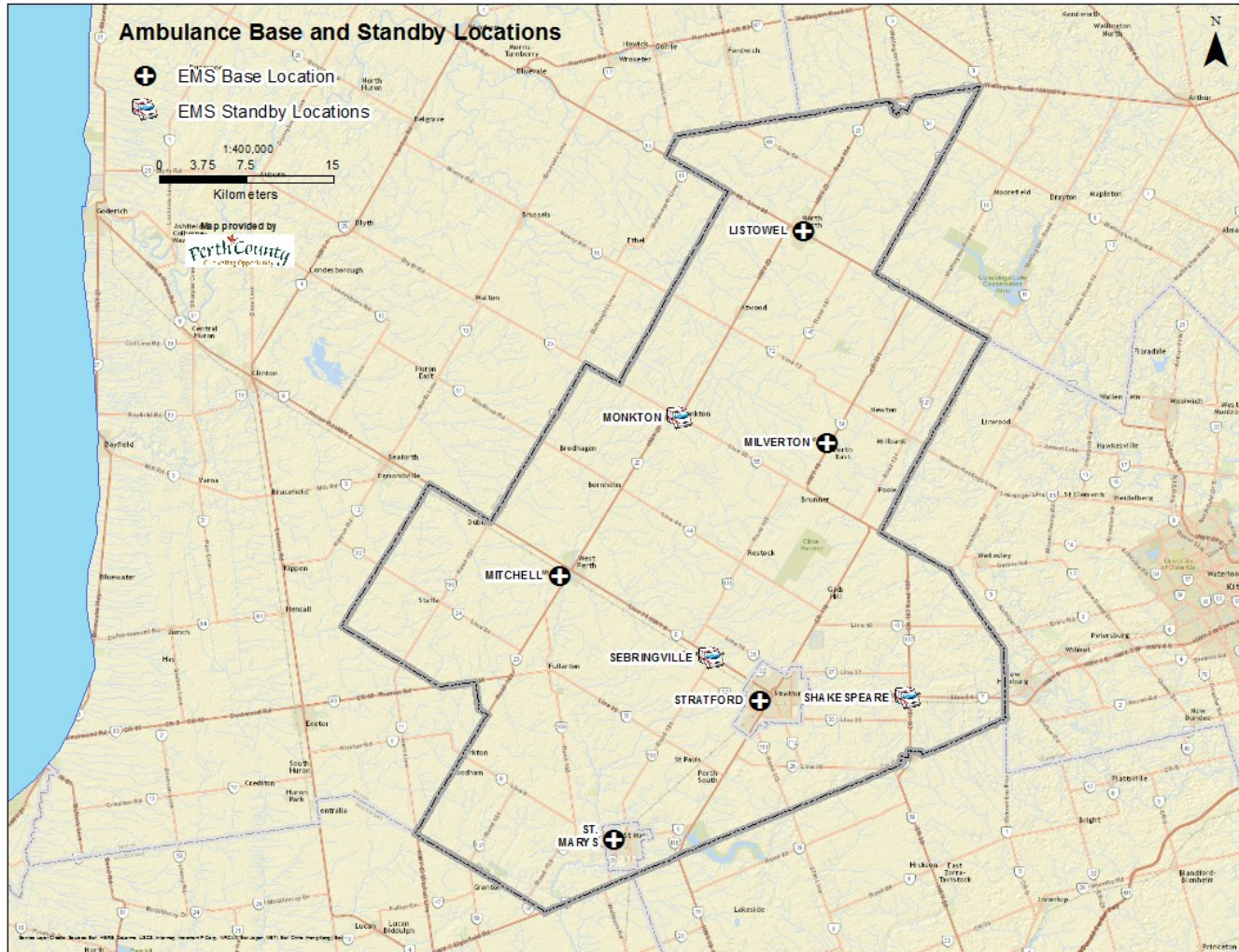


Perth County Current Staffing

Listowel:	1 - Staffed 24 hrs
Stratford:	2 - Staffed 24 hrs
St. Marys:	1 - Staffed 24 hrs
Mitchell:	1 - Staffed 24 hrs
Milverton:	1 - Staffed 24 hrs
	1 - Shifts Adjusted to Need
	<ul style="list-style-type: none">• Mon/Fri: 9am to 6pm• Tues/Wed/Thurs: 9am to 5pm• Sat/Sun: 11am to 8pm



Perth County Ambulance Locations





Perth County Ambulance Stations



Listowel
1991



Milverton 2004



St Marys 2008



Mitchell 2010



Stratford/HQ 2016



Vehicles

Mercedes Type 11



Type 111





Winter/Summer Rescue





Tiered Response Agreements – Extrication vs Medical Assistance vs Medical Response





130 Pounds Without a Patient

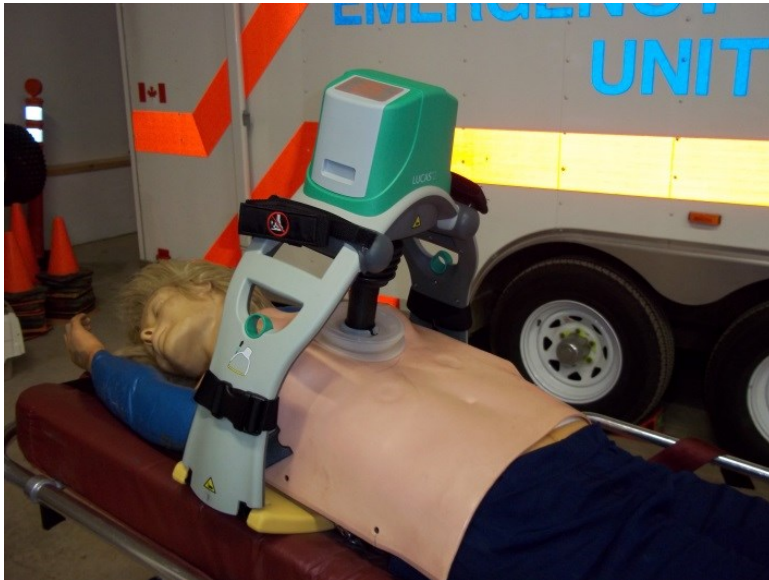




Equipment

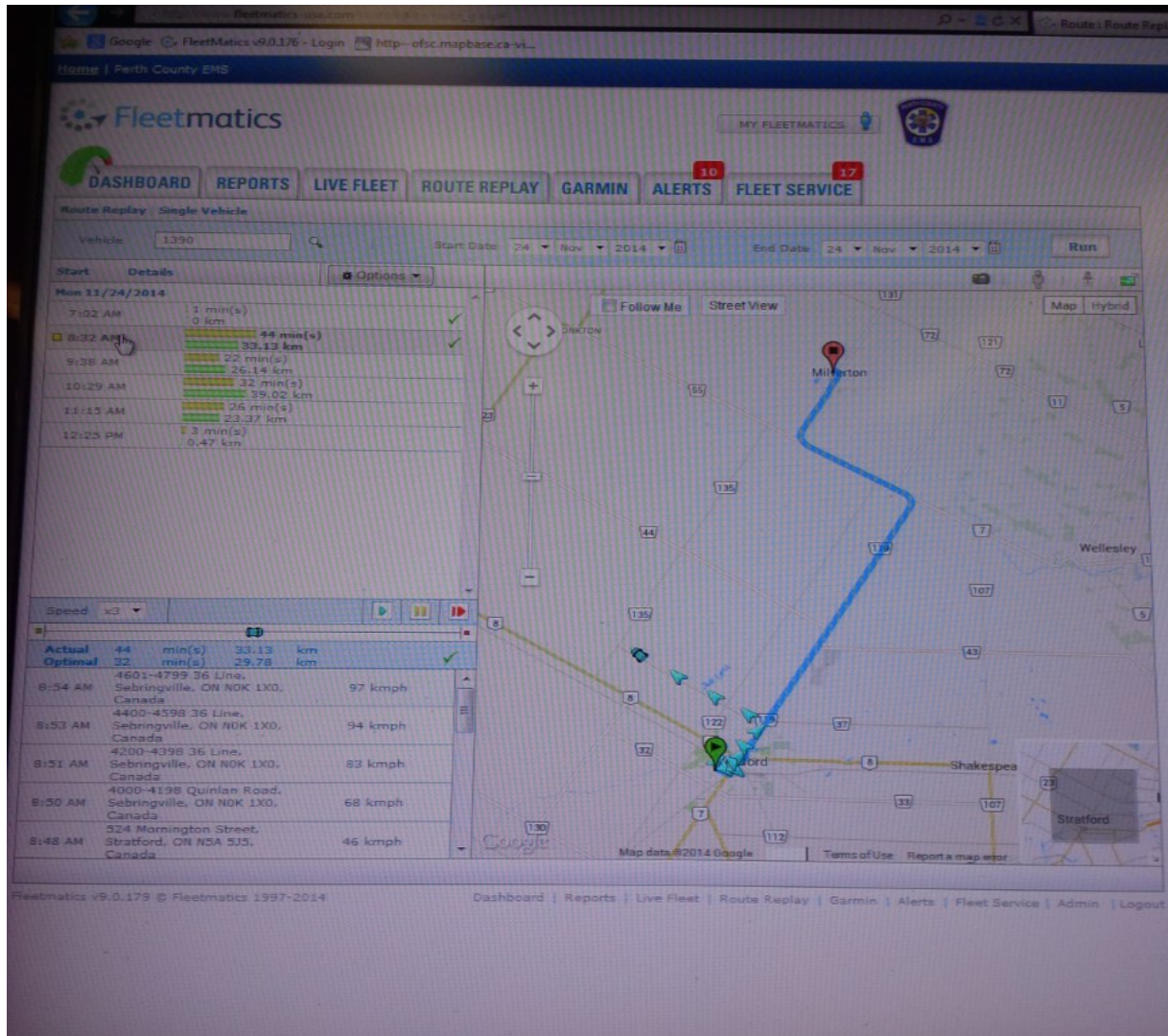
Mechanical CPR devices

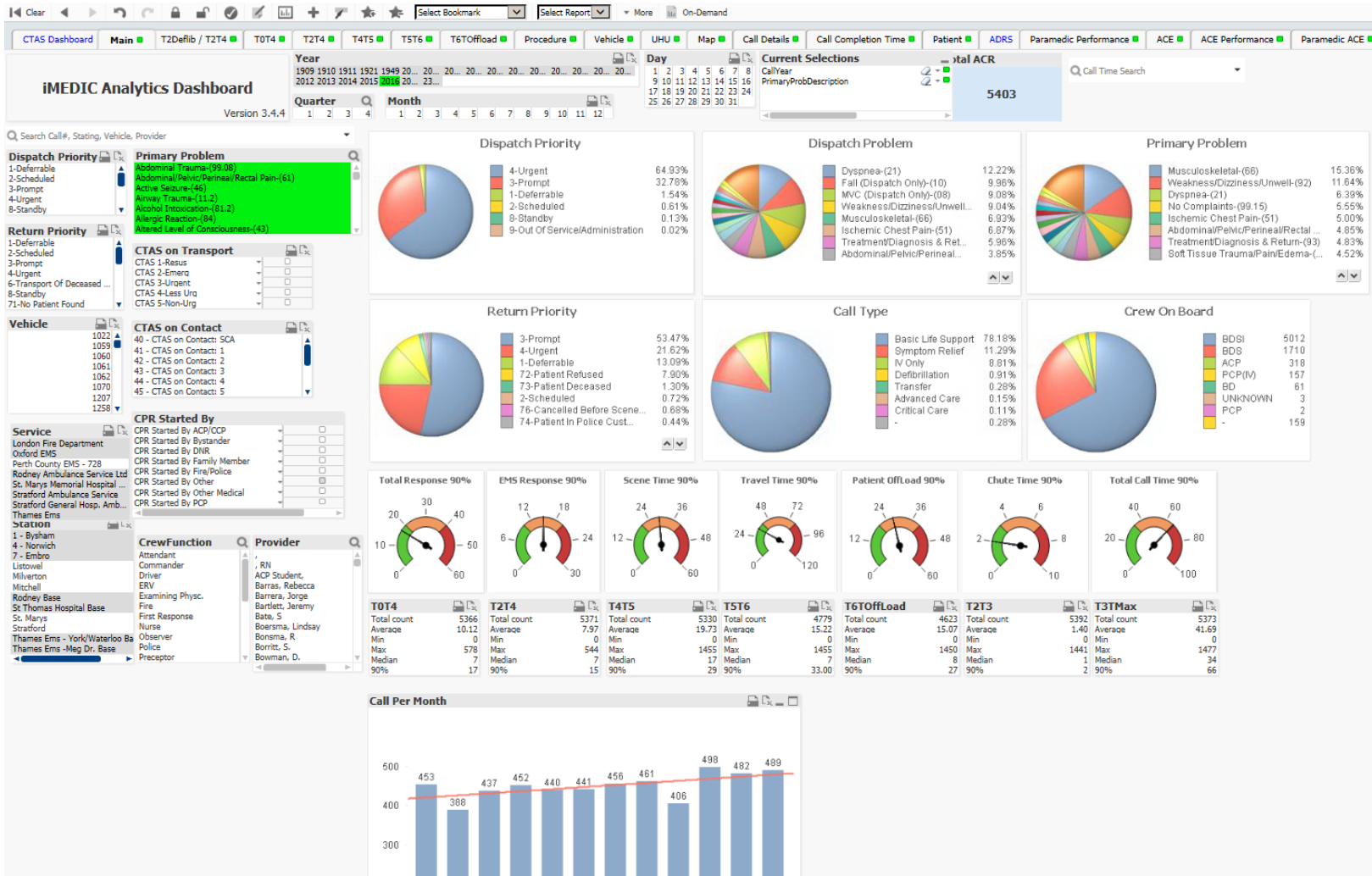
HoverJack





Fleetmatics





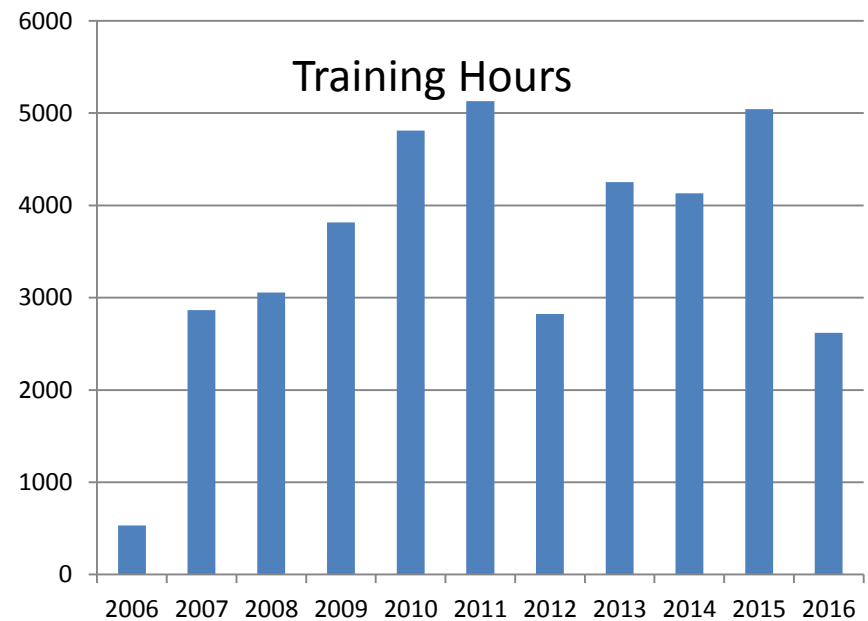


Paramedic Services Standing Committees

- Perth Emergency Planning Group
- Situation Table (Huron Perth)
- Perth County Opioid Group
- MOHLTC Health Systems Coordination Teleconference Opioid Crisis-Paramedic Services
- SW LIHN Regional Trauma Network
- EOC Meetings
- London CACC Advisory Committee
- Joint Critical Care/ER Care Team (Stratford General Hospital)
- Huron Perth Hospice Group
- SWORBHP Utilization Committee
- SWORBHP Program Advisory Committee
- SWORBHP Education Committee
- SWORBHP Quality Meetings
- Regional Stroke Education Committee
- Local Stroke Working Group
- PPCI (Stroke) Committee
- Hyper-acute Stroke Forum Group
- Provincial PAD Working Group.
- Falls Prevention Committee
- Perth County Paramedic Services Monthly Commander Meeting
- Perth County Paramedic Services Paramedic Advisory Committee
- Perth County Paramedic Services Public Education Committee
- Perth County Paramedic Services Labour Management Committee
- Perth County Paramedic Services Peer Support Team
- County of Perth Monthly Leadership Team Meeting
- County of Perth Council Meetings
- County of Perth Senior Management Team Meeting
- County of Perth Health and Safety Committee
- County of Perth Return to Work Committee
- Municipal Shared Services Committee



Training





Public Access Defib (PAD) Program

Places defibrillators in public places in
the event of a cardiac arrest.





Public Access Defib Program

- 86 Automatic External Defibrillators (AED)
PCPS is directly responsible for
- 6 AEDs indirectly responsible for
- 3 spare AED units
- All Perth County Public and Catholic schools
have AEDs (2007)...nearing replacement
- Assisted 22 organizations obtain AEDs
- Have been used twice





AED Loaner Program

- Public will be able to apply for a AED unit for short term special medical needs or special events
- Electronic submission on new County website
- Includes one hour training as a requirement in use and CPR





CPR/AED Training

- 1800 individuals trained initially tied to the 86 locations
- Approx. 500 trained through mass public events
- Approx. 200 grade 5-6 students trained through mass public events
- Yearly approx. 100 individuals are re-orientated to AED and CPR use



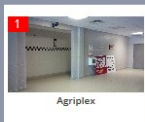
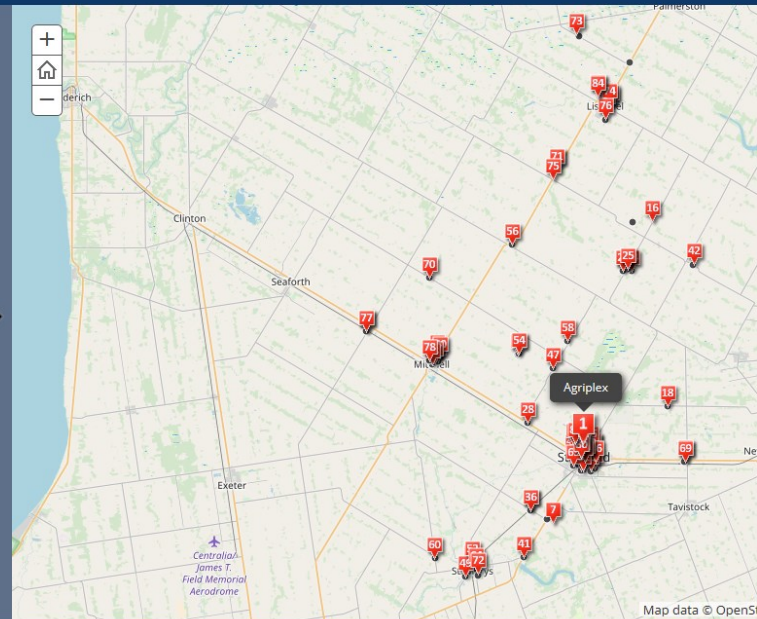
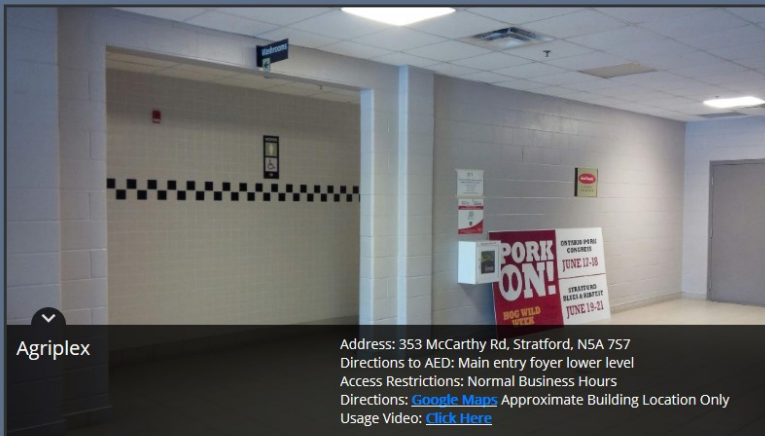


Public Map / Website

<http://perthcounty.maps.arcgis.com/apps/MapTour/index.html?appid=897576eceff54317942ba2e0d747e839>

Perth County AED Locations

An Interactive map to the AED Locations within Perth County



Agriplex



Allman Arena



Mitchell Arena



Avon Theatre - Balcony



Avon Studio Theater Lobby



Avon Theatre Main Lobby



Downie Central Public School



Elma Memorial Community Centre



Stratford Festival Theatre Balcony



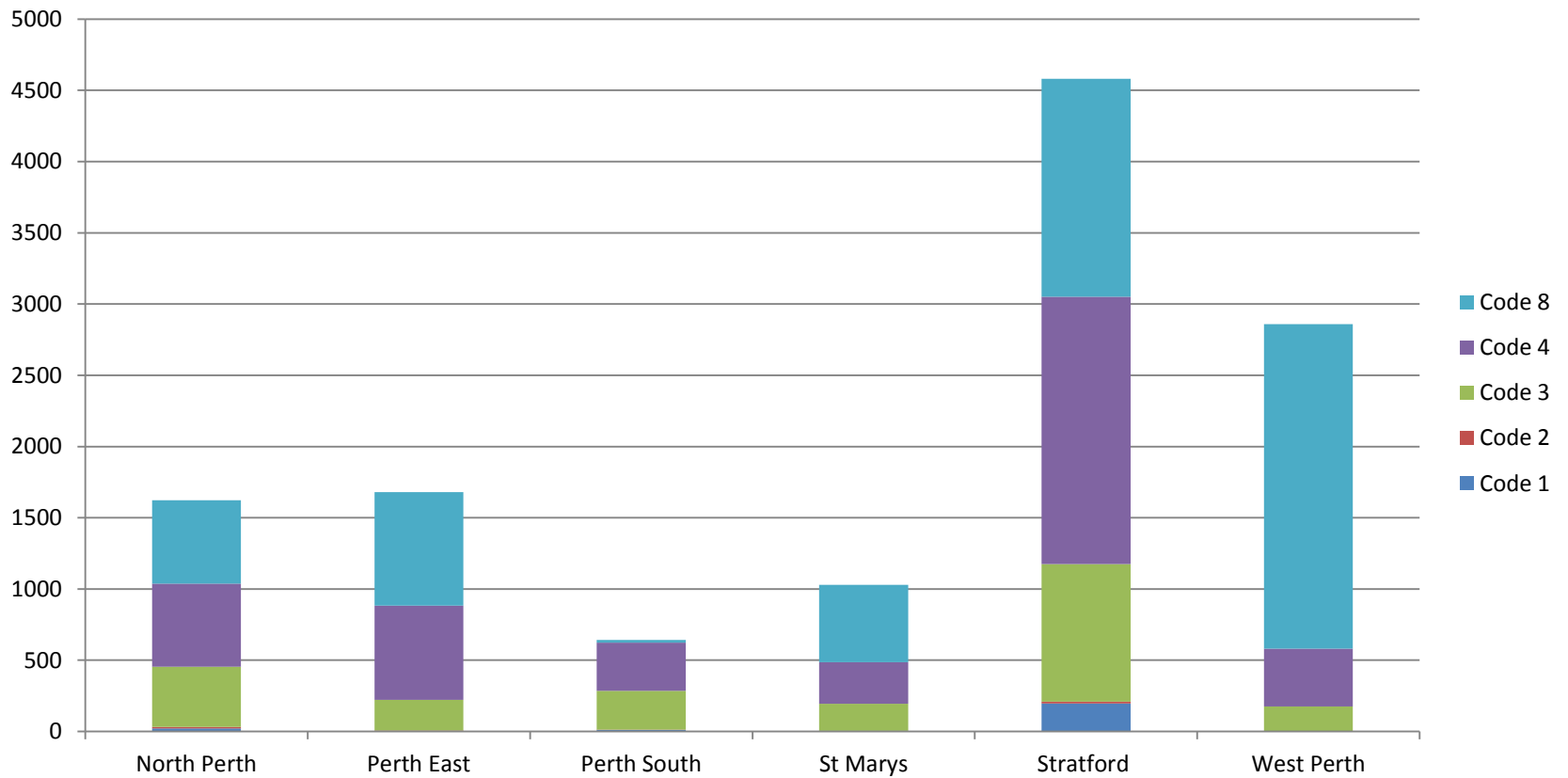


Emergency Coverage Standby Guidelines for Ambulance Location

# of Units	Stratford HQ east	Stratford west	Mitchell	St. Marys*	Milverton	Listowel*	Monkton	Sebringville
7	2		1	1	1	1	1	
6	2		1	1	1	1		
5	1		1	1	1	1		
4	1			1		1	1	
Code Minimum Protocol Initiated								
3	1			1		1		
2	1						1	
1								1
0	Code Capacity Initiated							
	*If call is with-in town limits no standby is required (excluding out of town transfers).							

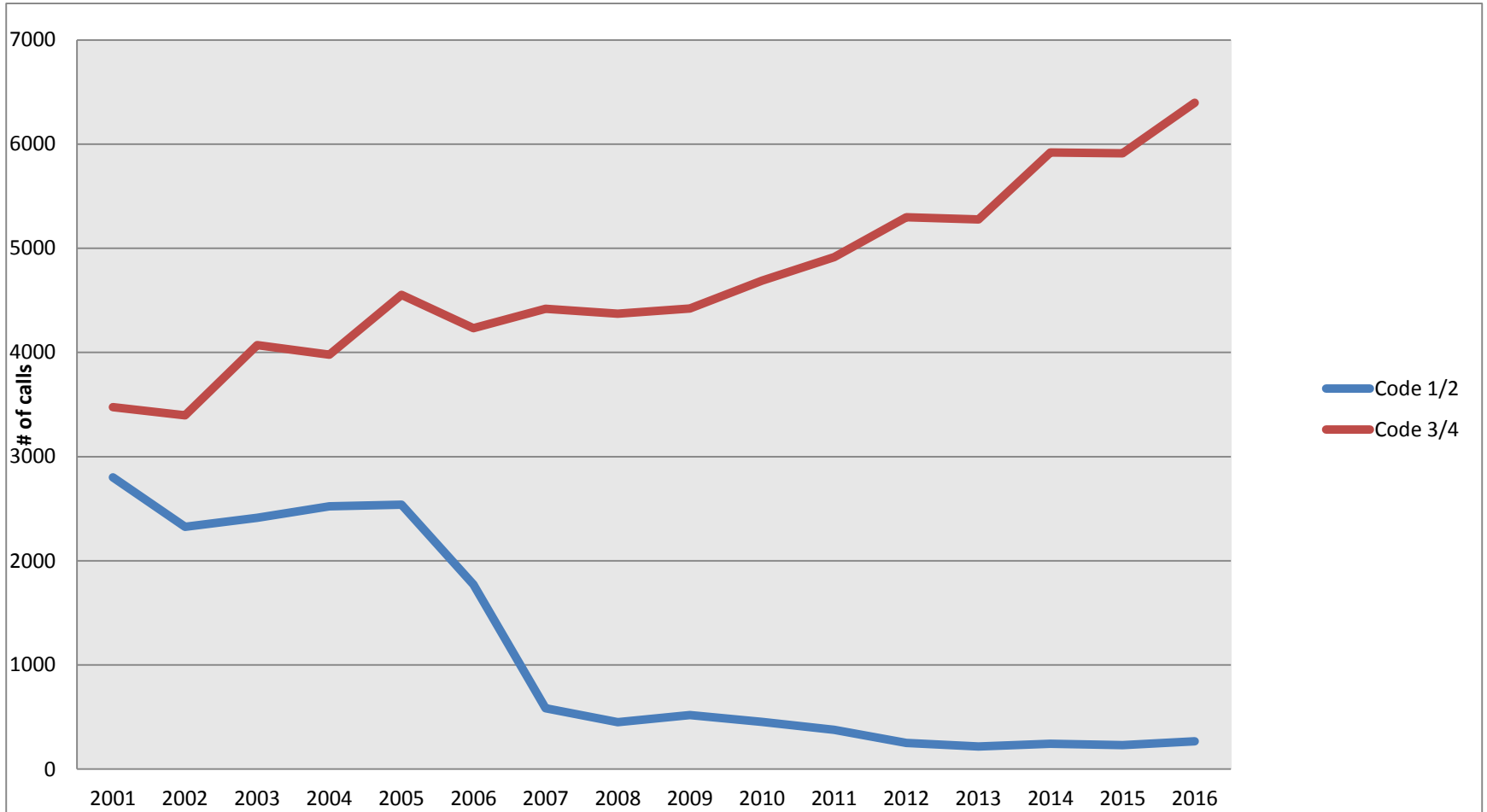


Perth County Ambulance Calls 2016



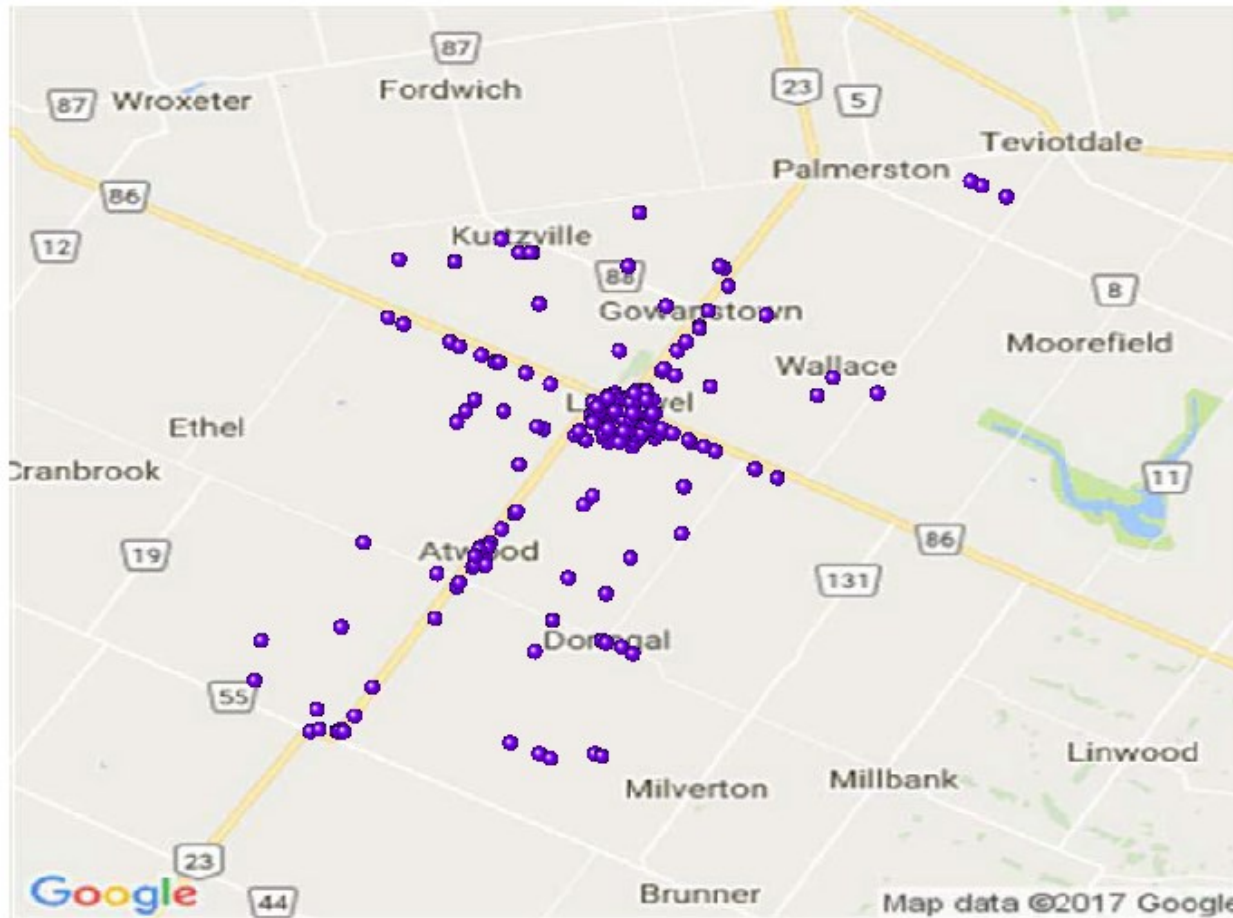


Perth County Call Volumes



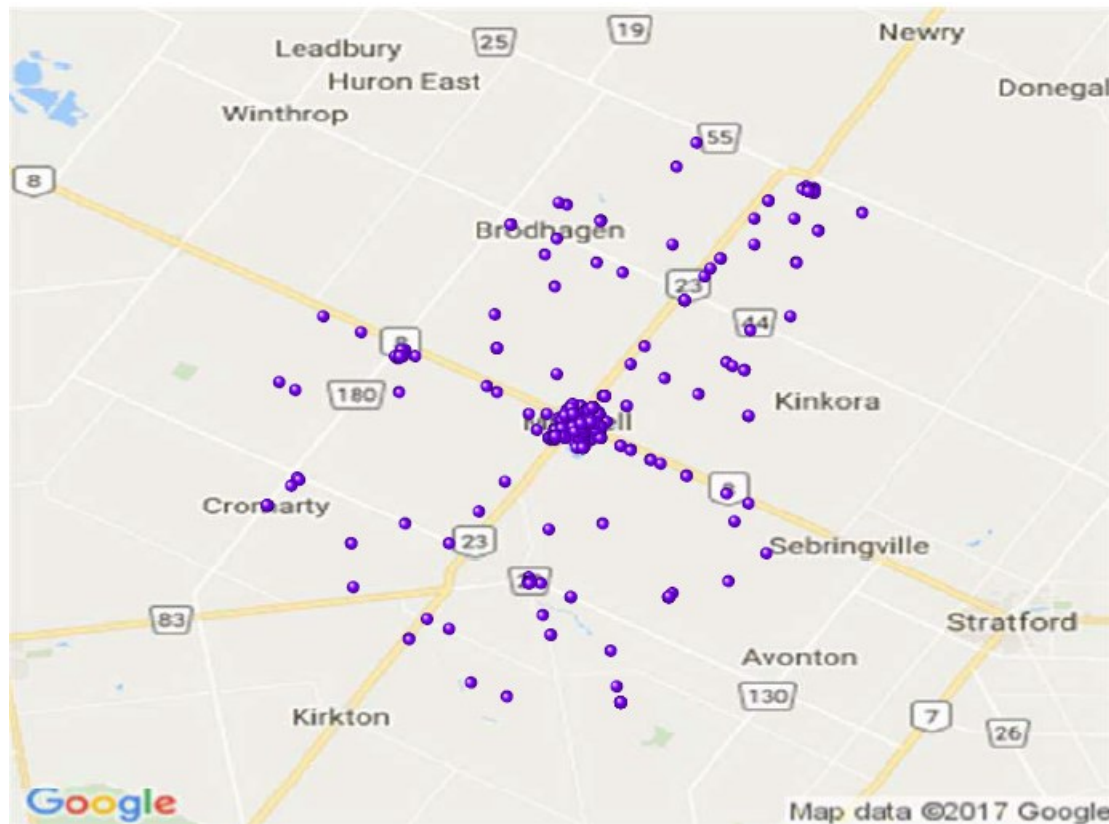


North Perth Call Locations 2016



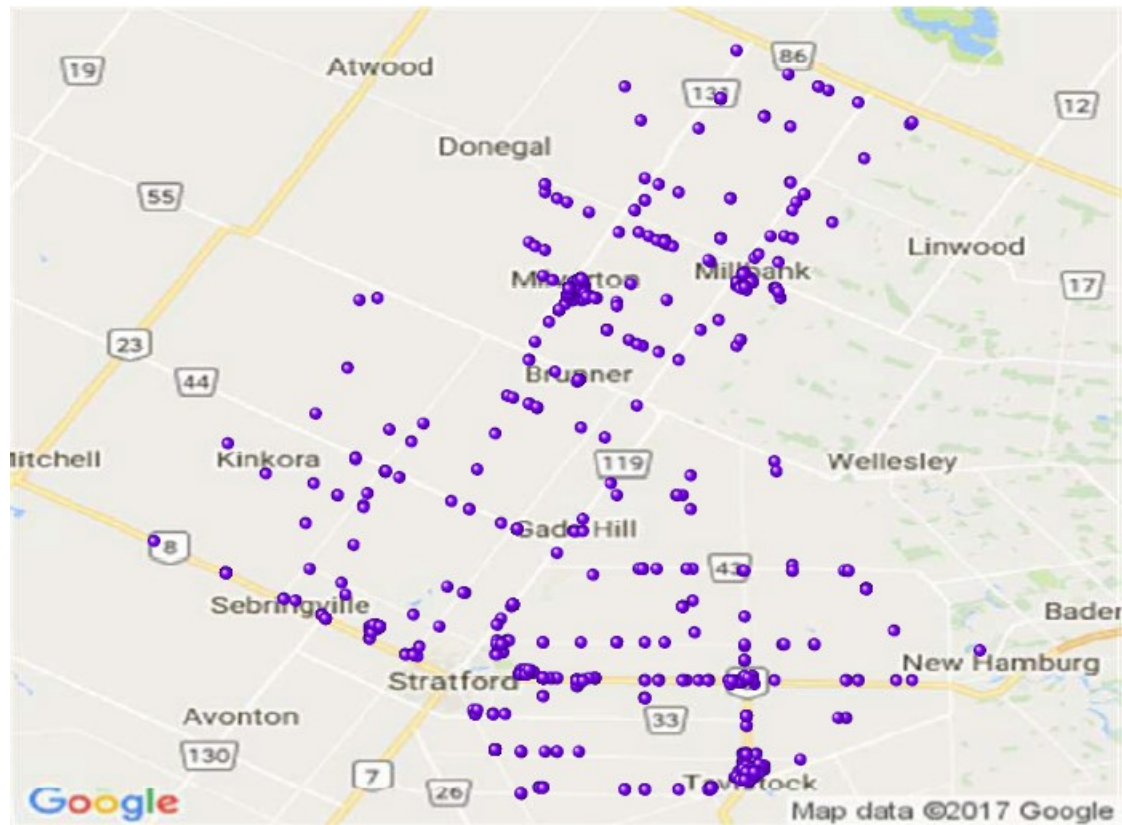


West Perth Call Locations 2016



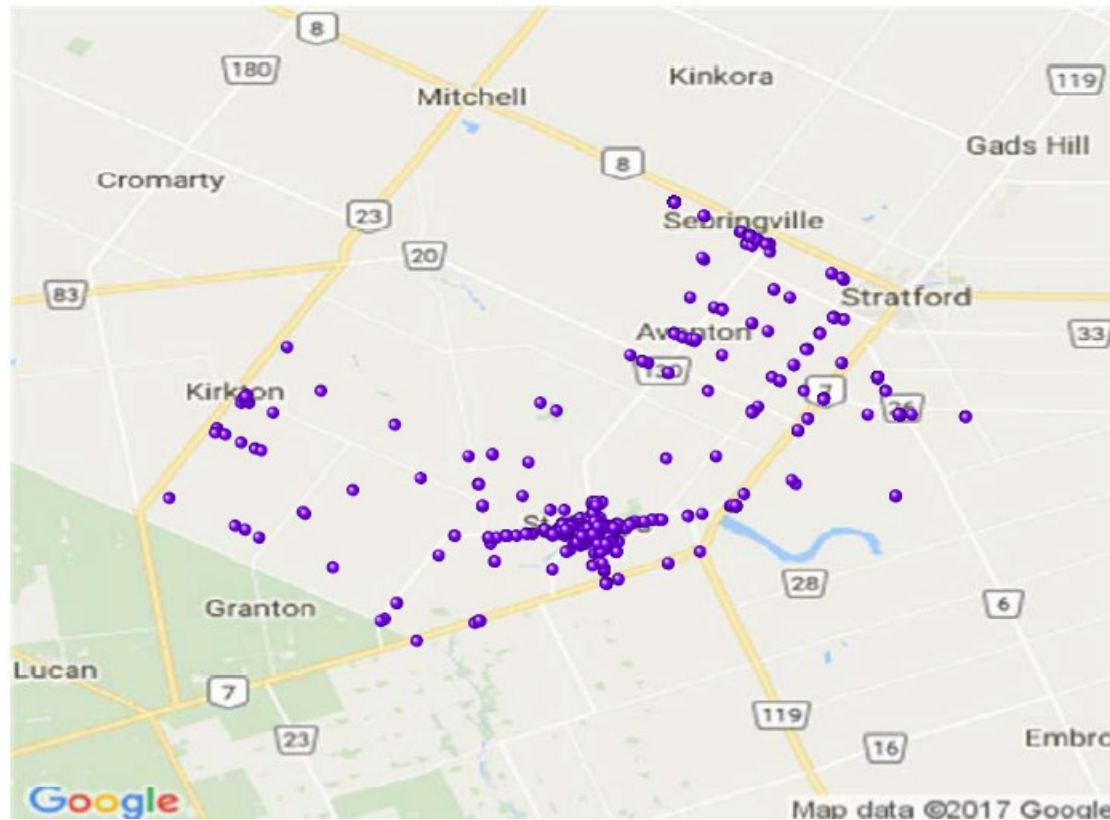


Perth East Call Locations 2016



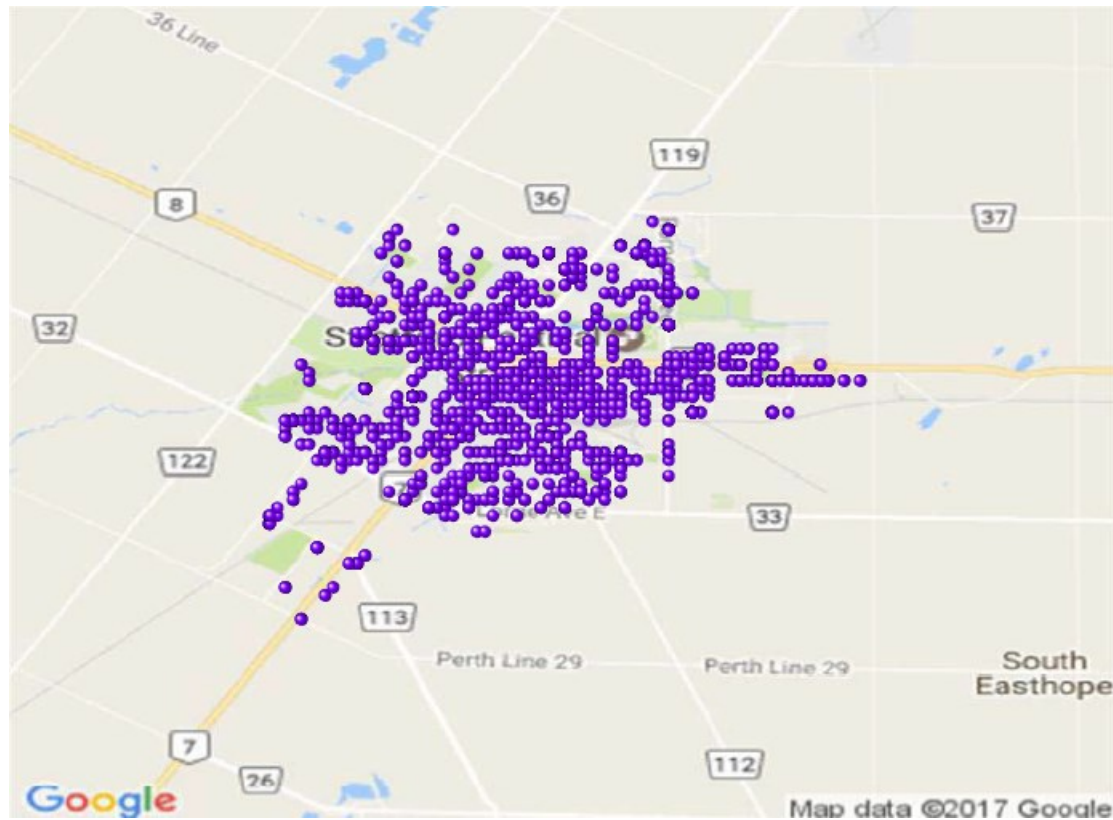


Perth South and St Marys Call Locations 2016





Stratford Call Locations 2016





Defibrillator on Scene within 6 Minutes

What percentage of time does a person equipped with a defibrillator arrive on scene, within six minutes of the time notice was received from dispatch, to provide ambulance services to sudden cardiac arrest patient?

	Huron	Elgin	Brant	Perth	Bruce	Leeds & Grenville	Renfrew	Average
Target	40	45	35	51	35	30	35	39
Actual 2016	21	62	39	51	35	25		39
Actual 2015	10	60	38	47	36	33	44	38
Actual 2014	42	49	39	53	39	41	41	43
Actual 2013	29	64	47	0	31	38	38	35
Largest Town	South Huron	St. Thomas	Brantford	Stratford	Saugeen Shores	Brockville	Petawawa	
Population	10,019	33,236	86,417	29,676	11,388	21,375	14,398	29,501



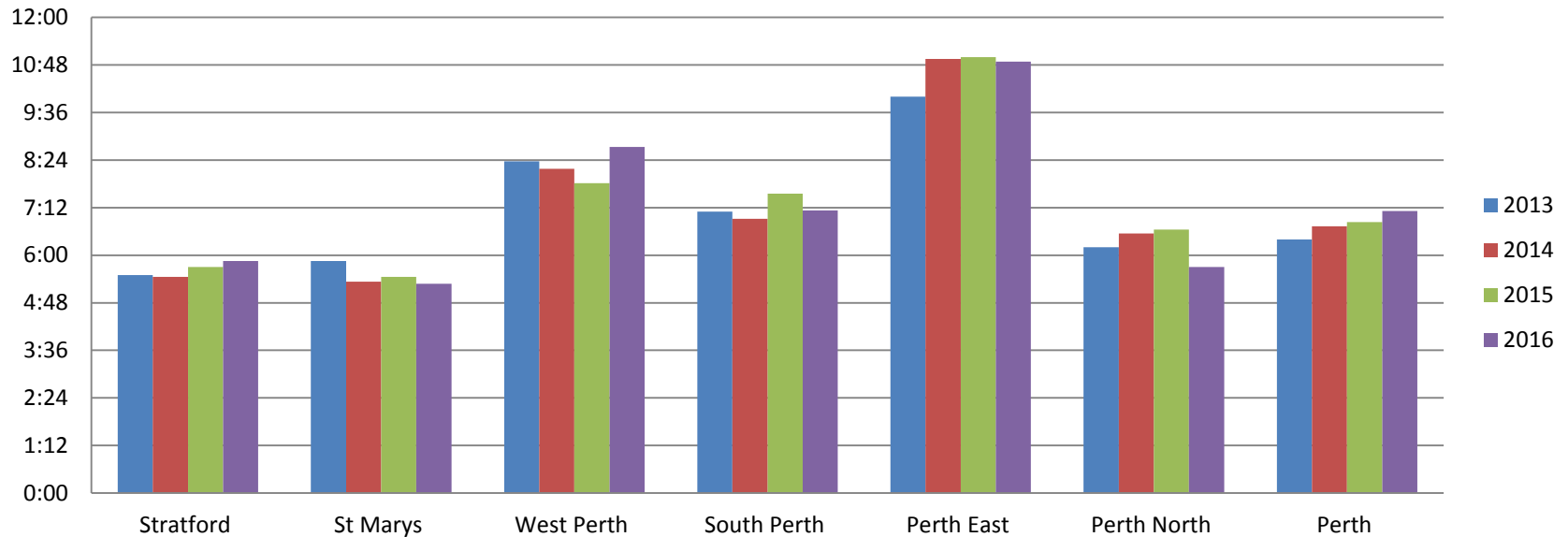
CTAS 1 Within 8 Minutes

What percentage of time does a Paramedic arrive on scene, within eight minutes of the time notice is received, to provide ambulance services to sudden cardiac arrest patients or other patients categorized as CTAS 1?

	Huron	Elgin	Brant	Perth	Bruce	Leeds & Grenville	Renfrew	Average
Target	40	60	65	70	50	45	55	55.0
Actual 2016	40	73	67	61	44.7	39		54.1
Actual 2015	45.5	74	68	61	45.1	43.6	56.2	56.2
Actual 2014	41.4	67	66	72	46.6	52.9	56.2	57.4
Actual 2013	49	76.1	71	69.2	52	44.1	58.4	60.0
Largest Town	South Huron	St. Thomas	Brantford	Stratford	Saugeen Shores	Brockville	Petawawa	
Population	10,019	33,236	86,417	29,676	11,388	21,375	14,398	29,501



Average Response Times



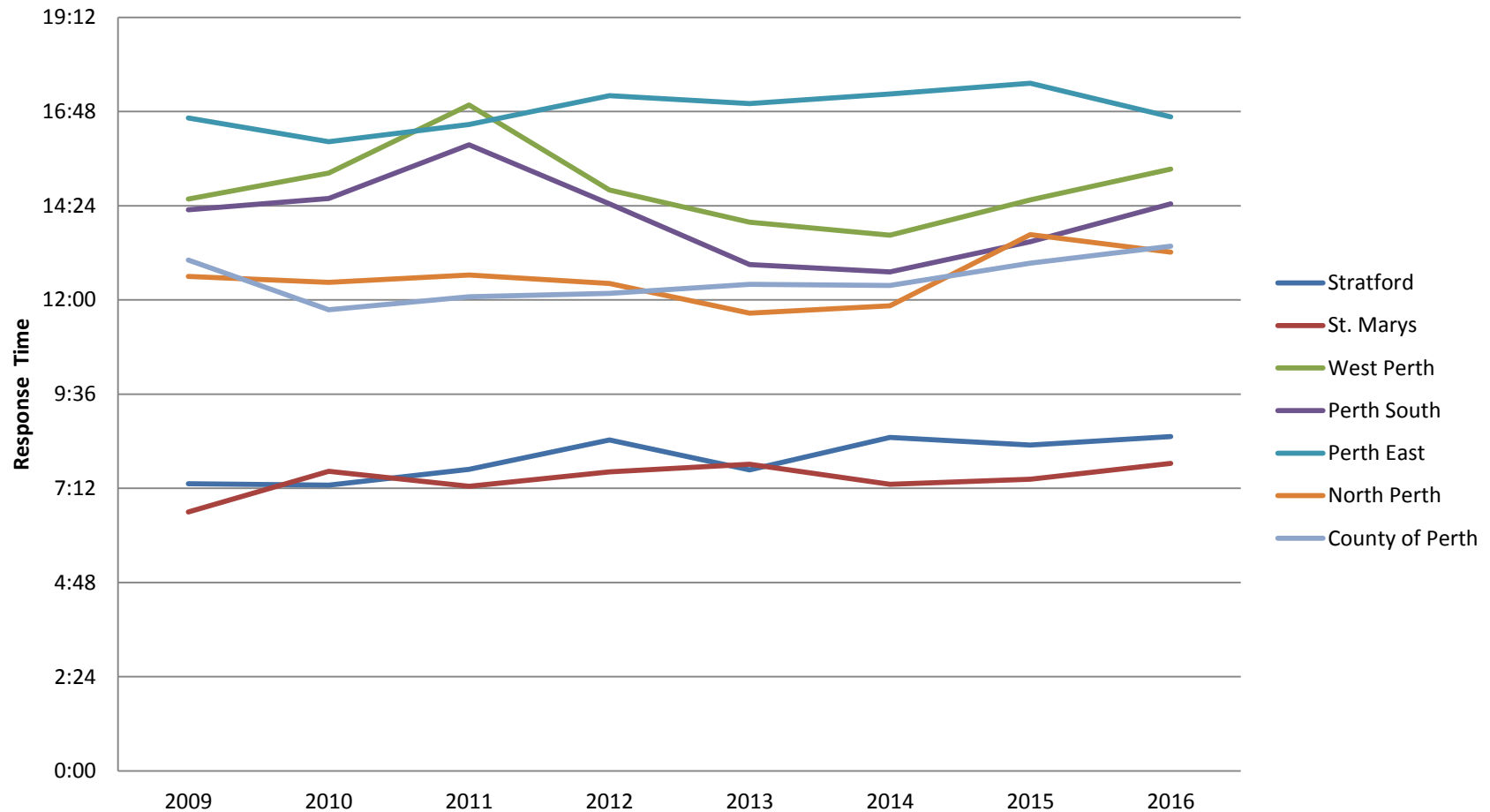
	2013	2014	2015	2016
Stratford	5:30	5:27	5:42	5:51
St Marys	5:51	5:20	5:27	5:17
West Perth	8:22	8:11	7:49	8:44
Perth South	7:06	6:55	7:33	7:08
Perth East	10:00	10:57	11:00	10:53
North Perth	6:12	6:33	6:39	5:42
Perth County	6:24	6:44	6:50	7:07



Perth County Paramedic Services

90th Percentile Response Times

(T2 to T4)





Response Time Reporting

Beginning in October 2012, every upper tier municipality and delivery agent will:

- Develop an annual response time performance plan that shall sets response time targets for responses to notices respecting patients categorized as Canadian Triage Acuity Scale (“CTAS”) 1, 2, 3, 4 and 5;
- Ensure that this plan is continually maintained, enforced and where necessary, updated;
- Provide each plan and each update to the ministry;
- Report to ministry on the response time performance achieved under the previous year’s plan.

<http://www.health.gov.on.ca/english/public/program/ehs/land/responsetime.html>



Canadian Triage Acuity Scale (CTAS)

The new ambulance response time reporting standard measures ambulance response time based on the severity of the calls as found by the paramedic using the Canadian Triage Acuity Scale (CTAS). CTAS (Canadian Triage Acuity Scale) is an international medical triage standard utilized by hospitals, ambulance communication services and paramedics to identify how urgently a patient requires medical care.

The new ambulance response time reporting standard divides ambulance calls into 6 categories as listed below. Hospitals assign wait times to each level.

- **Sudden Cardiac Arrest:** person has no pulse and is not breathing
- **CTAS I:** severely ill, requires resuscitation (ie. Choking, major trauma)
- **CTAS II:** requires emergent care and rapid medical intervention (ie. head injury)
- **CTAS III:** requires urgent care (ie. Mild asthma)
- **CTAS IV:** requires less urgent care (ie. Ear ache)
- **CTAS V:** requires non-urgent care (ie. Sore throat)

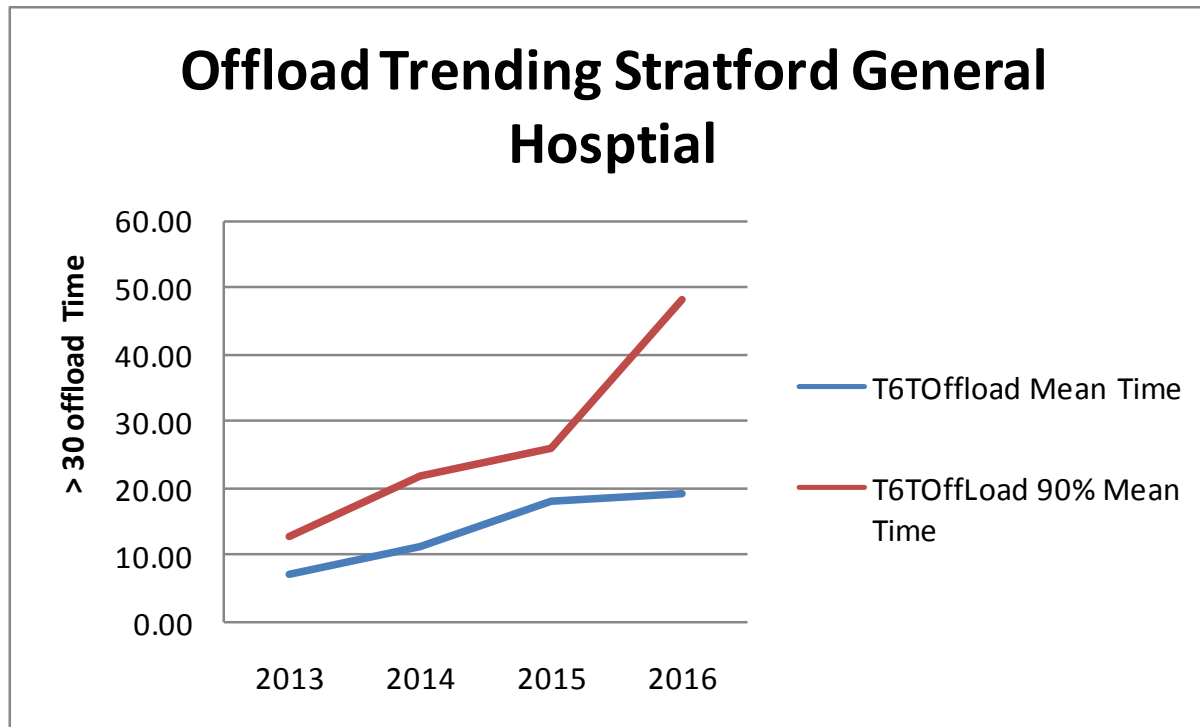


Response Time Chart

		2013			2014			2015			2016		
Call Type	Performance Standard	Call Totals	Calls Within Time Frame	Actual %	Call Totals	Calls Within Time Frame	Actual %	Call Totals	Calls Within Time Frame	Actual %	Call Totals	Calls Within Time Frame	Actual %
SCA*	Calls within 6 min, 51 % of time	1	0	0%	34	18	53.00%	15	7	46.67%	15	7	51%
CTAS 1	Calls within 8 min, 70% of time	39	27	69.23%	50	36	72.00%	56	34	60.71%	56	34	60.87%
CTAS 2	Calls within 16 min, 75% of time	644	622	96.58%	830	803	96.75%	923	873	94.58%	923	873	92.64%
CTAS 3	Calls within 16 min, 75% of time	1624	1556	95.81%	1879	1762	93.77%	2216	2054	92.69%	2216	2054	91.50%
CTAS 4	Calls within 16 min, 75% of time	487	461	94.66%	554	523	94.40%	554	513	92.60%	554	513	93.30%
CTAS 5	Calls within 16 min, 75% of time	59	57	96.61%	65	65	100%	83	82	98.80%	83	82	100%
*SCA Sudden Cardiac Arrest													

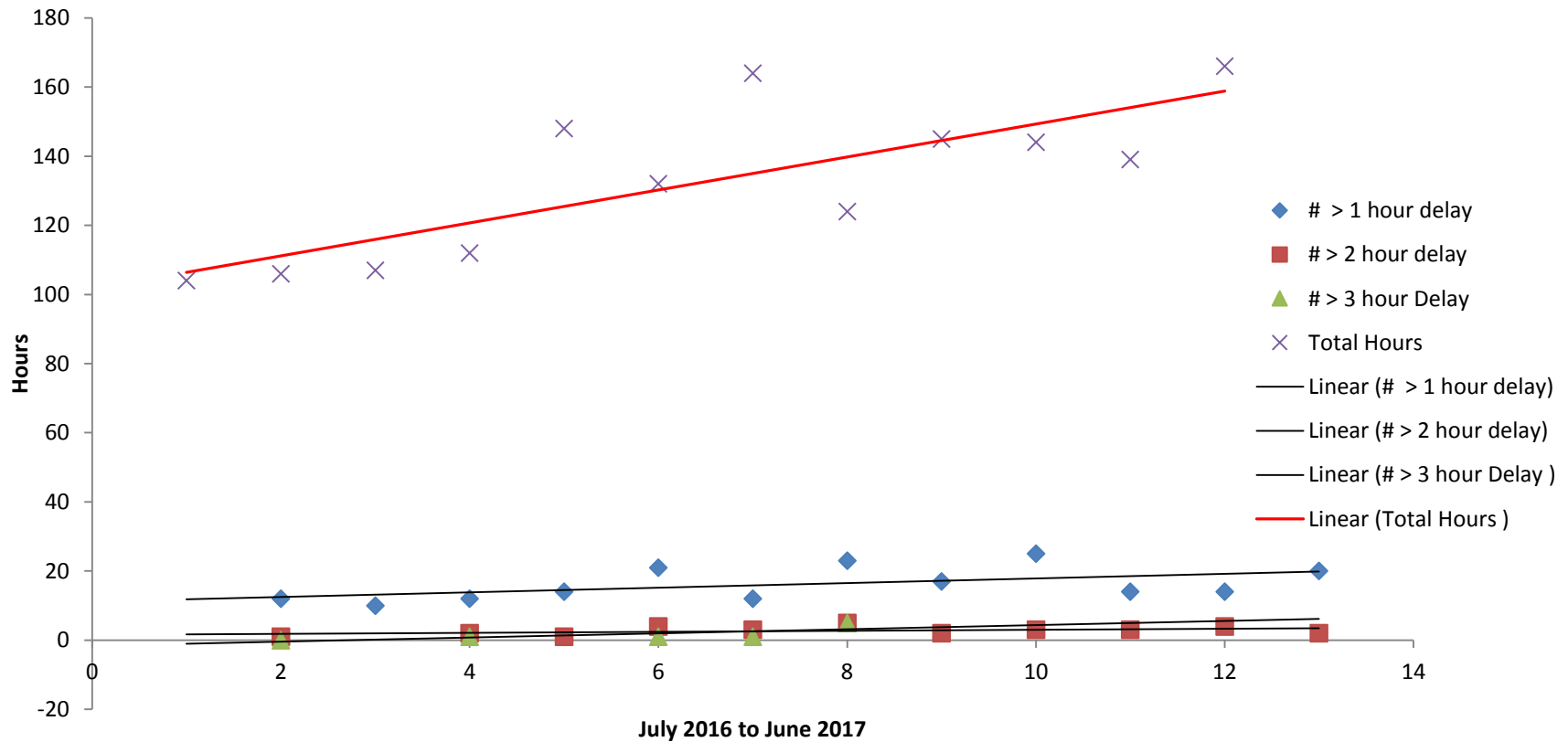


Off Load Delays





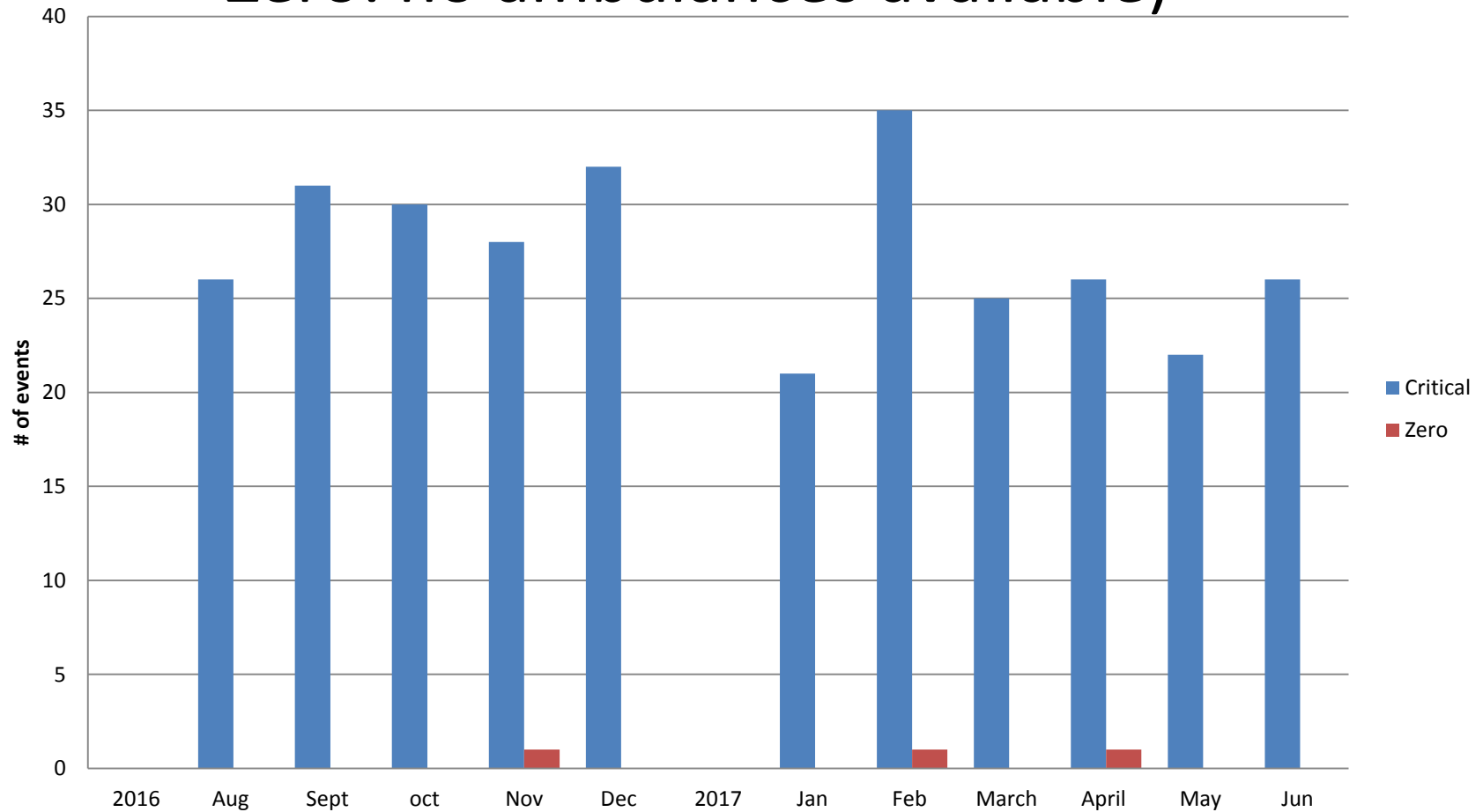
Offload Trend Stratford General Hospital





Perth County Alert Status

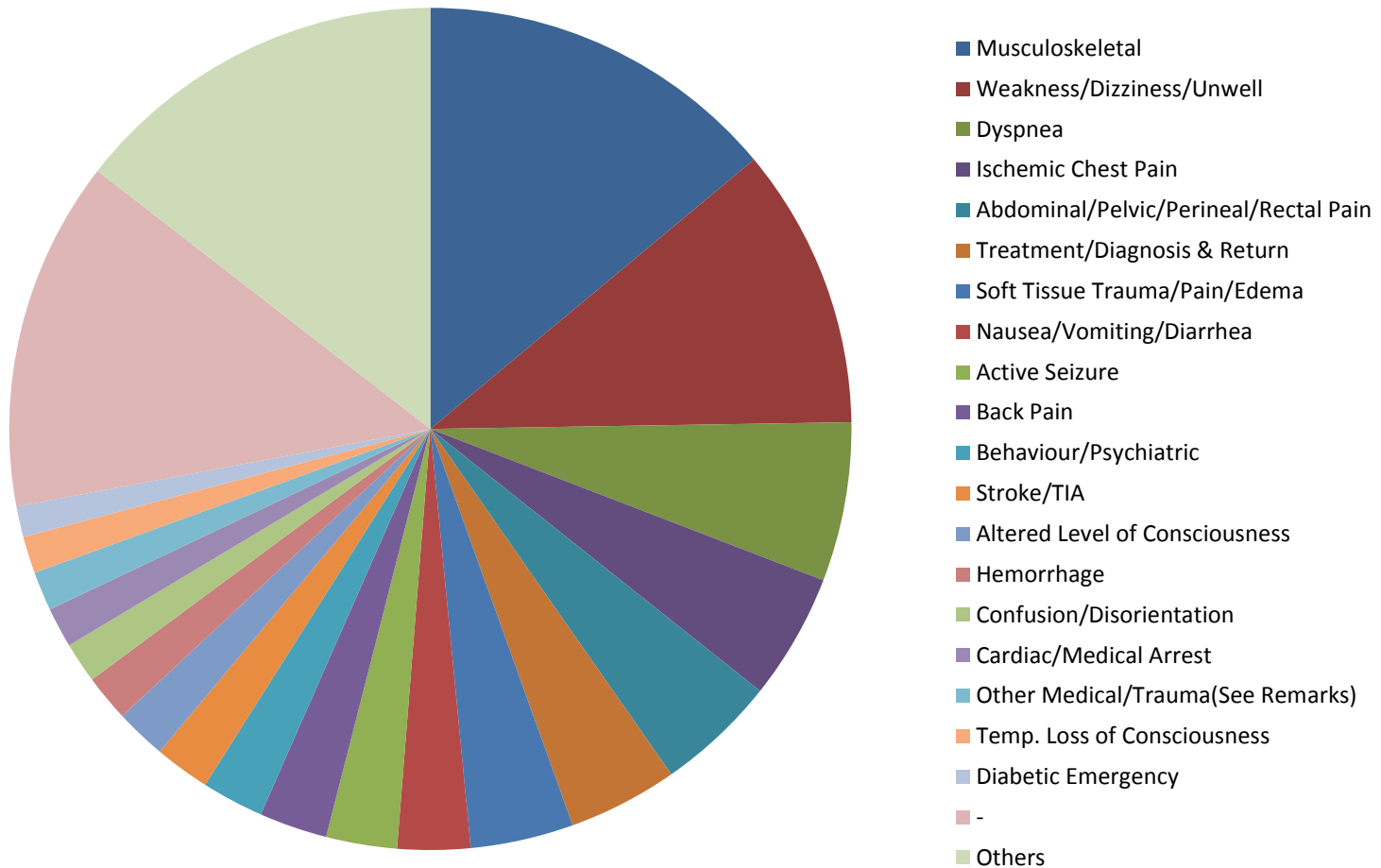
(Code Critical: 3 ambulances;
Zero: no ambulances available)





Ambulance Calls by Primary Problem 2016

(Total Calls 5513)





Community Paramedicine



- Collaboration between Bruce, Huron, Perth EMS
- Paramedic Referral Program...3 questions
 - Safety concerns in the home
 - Used 911 in past 30 days
 - Male
 - Lack of social supports
- Paramedics see what others don't
- Keep people at home, keep them out of Emerg Departments, refer them to the help that they need ...home visits, mental health, CCAC

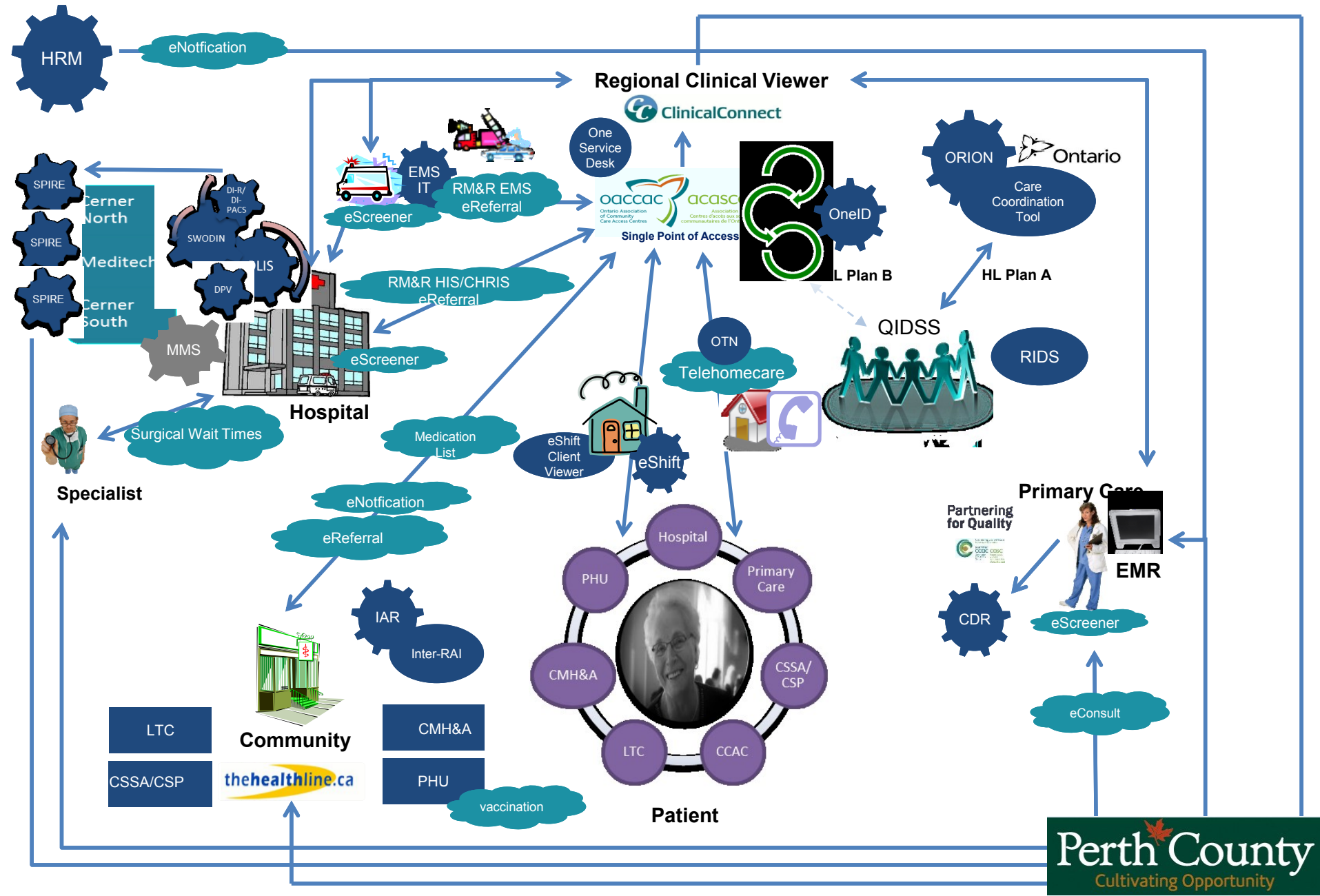


To better help patients we need to share



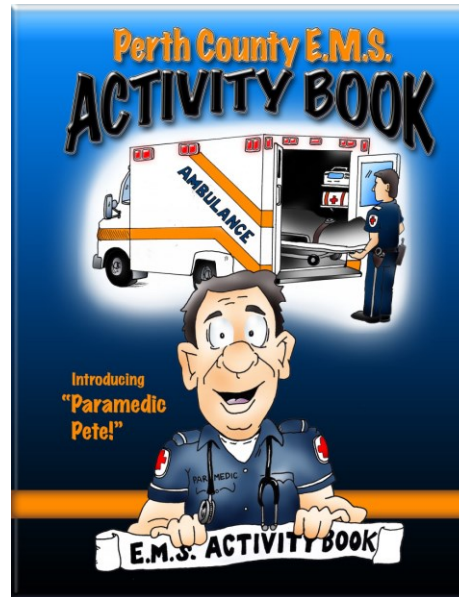
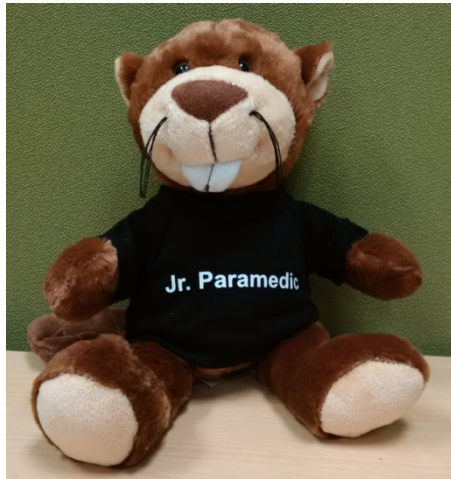
- CCAC Records
- CACC Ambulance Call Details
- Paramedic Records
- Physician Records
- Hospital Records

Circle of Care System Interactions and Programs





Public Education



“COOL-AID” Program

Name: _____
Address: _____ Phone #: _____
Doctor: _____ Phone #: _____
Emergency Contact: _____ Phone #: _____
Health Card #: _____ Date of Birth: ____/____/____

Medical History:

- | | | |
|---|--|--|
| <input type="checkbox"/> Heart Attack | <input type="checkbox"/> Mental Health | <input type="checkbox"/> Stroke/T.I.A. |
| <input type="checkbox"/> Angina | <input type="checkbox"/> Implanted | (Trans Ischemic Attack) |
| <input type="checkbox"/> Congestive Heart Failure | <input type="checkbox"/> Defibrillator | <input type="checkbox"/> Bleeding (ulcers) |
| <input type="checkbox"/> Asthma | <input type="checkbox"/> Pace Maker | <input type="checkbox"/> Seizures |
| <input type="checkbox"/> COPD (Chronic Obstructive Pulmonary Disease) | <input type="checkbox"/> Diabetes | <input type="checkbox"/> Cancer – where? |
| | <input type="checkbox"/> High Blood Pressure | |

☐ Other health concerns: _____

Disability: ☐ Visual ☐ Hearing ☐ Mobility

☐ Other Physical Disability _____

Current Medication and Dosage: (attach to other side if more room needed)

Allergies that you have:

Do Not Resuscitate Order (DNR) ☐ YES ☐ NO Identification #: _____

- Once you have completed recording your medical history, place this report on the front of your refrigerator.
- Paramedics will need this information if you are unable to communicate at the time of emergency.

If you require additional “Cool-Aid” medical information kits, or information on this or any other community program that Perth County Paramedic Services offer, please contact us at (519) 271-0531 ext. 520 or on-line at www.perthcounty.ca



Evan's Touch a Truck, St Marys





St Marys MCI Exercise



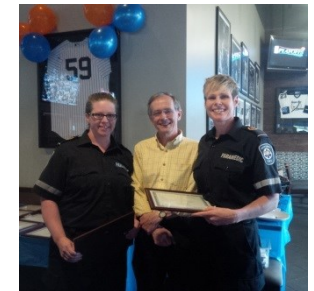


HQ Grand Opening





Special Events





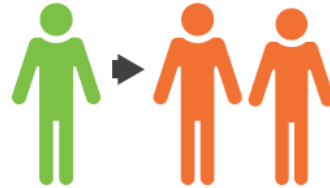
Issues/Challenges

- CACC – 49% calls are over prioritized
- CACC controls our vehicles
- Requests for Service in Region of Waterloo
- Off Load Delays (Stratford, LHSC, KW)
- Non urgent transportation
- “Baby Boomer” impact
- PTSD, Operational Stress Injuries
- Pending Bill 148 changes
- Pending Opioid Crisis



Population is changing

IN THE NEXT TWO DECADES,
THE NUMBER OF ONTARIANS
65 YEARS AND OLDER
IS EXPECTED TO DOUBLE,



THE NUMBER OF
CENTENARIANS
WILL TRIPLE



THE NUMBER OF
**ADULTS AGED 85 AND
OLDER** WILL QUADRUPE.



70% OF ONTARIO'S SENIORS
WILL HAVE TWO OR MORE
CHRONIC CONDITIONS



Thank You.....



Linda Rockwood

Director Emergency Services, Perth County

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