Vision 20/20

Fire is Everyone's Fight™

Model Performance in Community Risk Reduction

SYMPOSIUM 2018

A Systematic Approach to Resuscitation in the Spokane Valley

Rich Llewellyn

Spokane Valley Fire Department

Photo Credit: Ирина Лепнёва

Photo Credit: Frode Inge Helland

43
STP
Photo Credit: Doctorindy

Vision 20/20
MODEL PERFORMANCE IN COMMUNITY RISK REDUCTION
SYMPOSIUM

OBJECTIVES

OUR VISION

The Spokane Valley Fire Department will strive for “excellence” in everything we do and will become recognized as the “premier” fire department in the state.

FORMATIVE EVALUATION

Sudden Cardiac Arrest

"Without immediate treatment, cardiac arrest is often fatal."

- Sarah Klein

The Utstein Style

Our Worst Year

Cardiac Etiology	Survival Rates
Overall	13.4% (97)
Bystander Witnessed	21.1% (38)
Unwitnessed	4.3% (46)
Ustein	18.8% (16)
Ustein Bystander	11.1% (9)

PROCESS EVALUATION

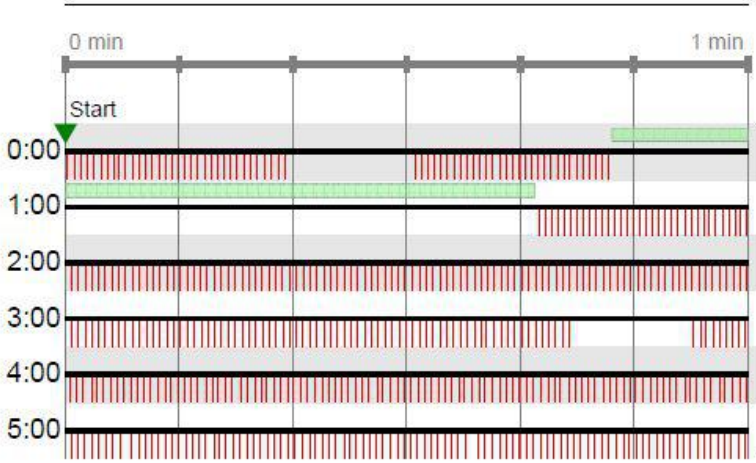
CPR Classes

SPOKANE VALLEY FIRE DEPT
About Us
News & Events
Services
Fire & Life Safety
Fire Stations
Permits & Forms
CPR & FIRE SAFETY CLASSES
Photo by: Mary Requejo

High School CPR

The CODE-STAT Program

CPR QUIK-VIEW

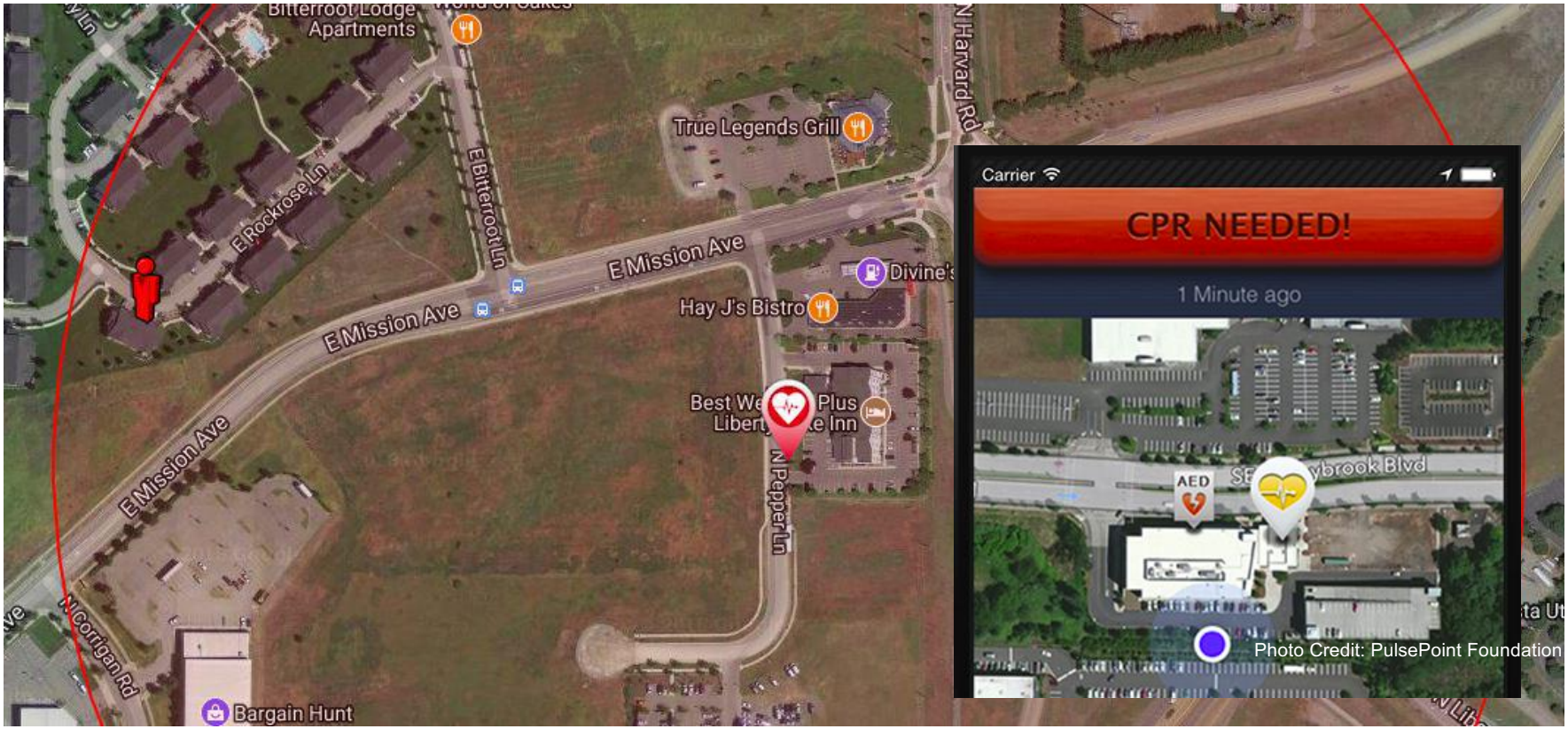


Interval Statistics

CPR Ratio, %	Prompt. CPR Ratio, %	Compr. Ratio, %	Prompt. Compr. Ratio, %	Compr. Rate	Compr. /min	Vent. Rate	Vent. /min
--	--	78	--	105	81	--	--
--	--	100	--	108	--	--	--
--	--	100	--	100	100	--	--
--	--	84	--	100	83	--	--
--	--	100	--	100	100	--	--
--	--	100	--	100	98	--	--

Pit Crew CPR

PulsePoint App



PulsePoint Verified Responder

Off-Duty Firefighters Step Up to Save Lives

Fifty Spokane Valley firefighters are now carrying automated external defibrillators (AEDs) to quickly respond to cardiac incidents in public and private locations when they are off-duty. The new PulsePoint Verified Responder program will help ensure lifesaving skills and equipment arrive at the right place at the right time to save a life.

IMPACT EVALUATION

Internal Changes…

Location: 821 S Sullivan Rd **Building:** CENTRAL VALLEY HIGH SCHOOL **Date:** 10/30/2017 **Time:** 17:40:17
Dispatch Code: 31E **Nature:** 31E01-Unconscious, INEFFECTIVE BREATHING **Dispatcher:** KTM **Call Taker:** KTM
Complainant: **Phone:** 5092177096 **FDID:** 32101/32999 **Grid:** 45243B **Fire Area:** 0107-A
Longitude: -117.196544830609 **Latitude:** 47.649533632883 **Manpower:** 0
Cross Street 1: E 8th Ave **Cross Street 2:** E 9th Ave
Dispatch: 00:00:33 **Response:** 00:03:57 **Disp/Resp:** 00:04:30 **On-Scene:** 02:40:11 **Involved:** 0 Days 02:44:41

Unit Times

Unit	Type	Dispatch	EnRoute	On-Scene	Available	Unit Transfer	Unit Hospital	Available On-Scene
VE7	P	17:40:51	17:42:09	17:44:48	18:09:05	00:00:00	00:00:00	00:00:00
ME1	A	17:40:51	00:00:00	00:00:00	17:42:48	00:00:00	00:00:00	00:00:00
VE5	P	17:41:33	17:42:19	17:47:09	18:10:05	00:00:00	00:00:00	00:00:00
VL10	BL	17:41:33	17:42:14	17:45:16	18:08:35	00:00:00	00:00:00	00:00:00
V31	VS	17:41:33	17:42:54	00:00:00	20:24:59	00:00:00	00:00:00	17:51:53
V22	DC	17:41:33	17:42:44	17:45:20	18:06:37	00:00:00	00:00:00	00:00:00
AM130	A	17:42:22	17:42:42	17:55:36	18:17:40	18:03:10	18:17:37	00:00:00

…External Impact

Spokane County EMS & Trauma Care Council

EMS Protocols
Revision: July 2013

TEAM FOCUSED CPR PROTOCOL: A COORDINATED APPROACH TO CARDIAC ARREST

- ✓ Begin continuous CPR compressions
- ✓ Push Hard (≥2 in.) Push Fast (> 100-120/min)
- ✓ Change compressors every 2 minutes
- ✓ (Limit changes/pulse checks ≤ 5 seconds)

Position 1-Compressor
- ✓ Assess responsiveness
- ✓ Initiate chest compressions if needed
- ✓ Alternate compressor with position 2

Position 2-AED/Monitor
- ✓ Applies AED or Manual Defibrillator
- ✓ Operates AED/Defibrillator as appropriate
- ✓ Applies 15 L O^2 via NRB
- ✓ Alternates chest compressions with position 1

Position 3-Airway
- ✓ Assembles and applies equipment for airway and ventilations
  - OPA, BVM, KING, etc.
- ✓ Ventilate at 8-10 breaths

Position 4-Team Lead
- ✓ May function as team leader
- ✓ Check off sheet
- ✓ Code timer

ALS Integration
- ✓ One Paramedic
  - Communicates/interfaces with providers performing CPR
  - Establishes IV/IO
  - Administers medications as appropriate
- ✓ Two Paramedics
  - Sets up and operates manual defibrillator
  - Advanced airway, if necessary and resources allow

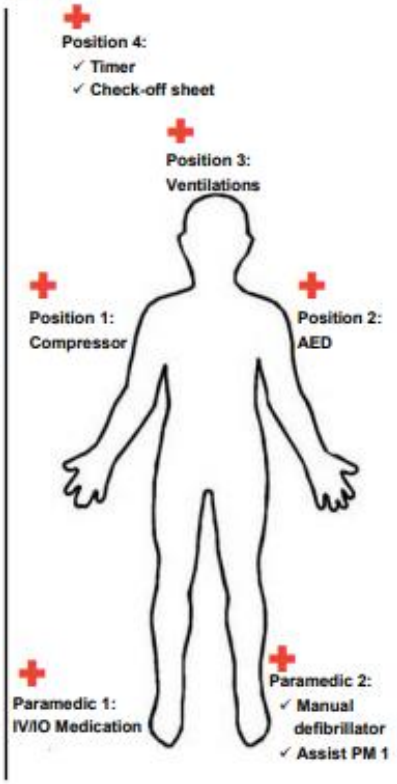


Photo Credit: Colin Mulvany \ The Spokesman-Review

Vision 20/20

Fire is Everyone's Fight™

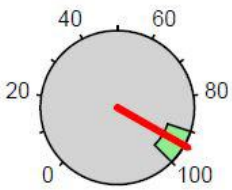
Grading Each Response

CPR Report

Device Type:	LIFEPAK 15	Duration:	00:46:02
Power On:	11/19/2017 06:36:47	Incident ID:	20171119063647 00-V E-1 LP15
CPR Annotations Edited:	Yes		
Device Configuration:	0LJ55RO402B9OR	Statistical Parameters:	1000-0300-3000-05

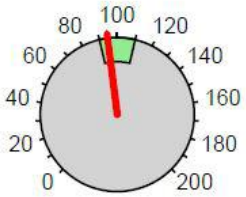
*Times have been adjusted by the system

Compressions Ratio
(/total time)

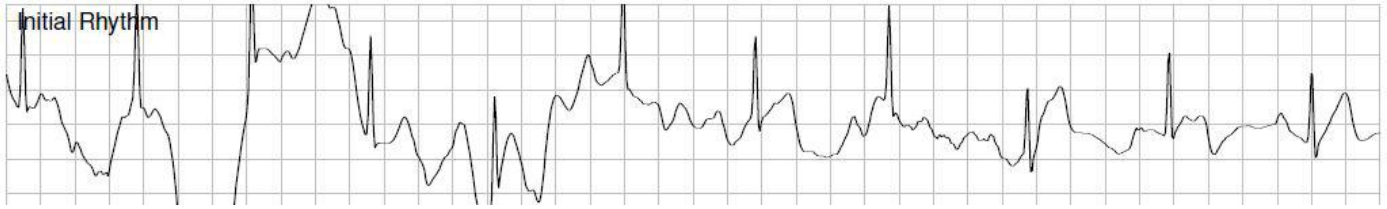


9:32 / 10:07 = 94 %

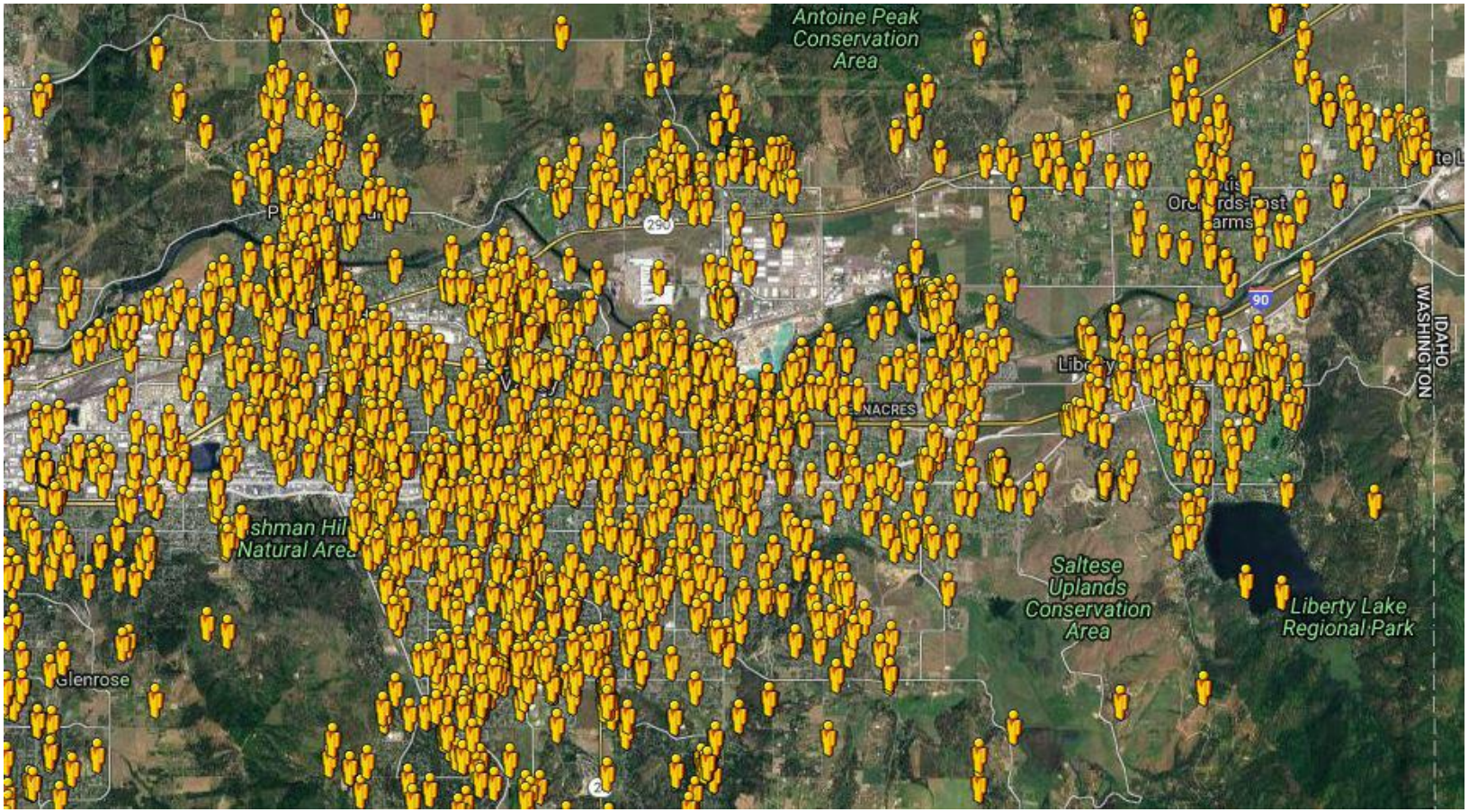
Compressions/minute



95/minute



CPR Ninjas


Antoine Peak Conservation Area
90
NACRES
IDAHO
WASHINGTON
Saltese Uplands Conservation Area
Liberty Lake Regional Park
Glenrose

OUTCOME EVALUATION

Different Year, Different Numbers

Cardiac Etiology	Survival Rates
Overall	14.4% (90)
Bystander Witnessed	23.8% (42)
Unwitnessed	7.0% (43)
Ustein	60.0% (10)
Ustein Bystander	66.7% (6)

Numbers Have Meaning

Spotlight: Chase Burright

This Spokane Valley teenager is alive today thanks to a team of six Spokane Valley firefighters who performed CPR for 73 minutes, one year ago. The firefighters were recently honored with Emergency Medical Service (EMS) Heroes Awards.

Read More

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RECOMMENDATIONS

One Picture Sums It All Up