

EMS Advisory Task Force
Medic One/EMS Strategic Plan & Levy Reauthorization
2/15/24 meeting notes

Task Force Members or their representatives:

Shannon Braddock, Deputy County Executive
Brian Carson, Fire Chief, Puget Sound Regional Fire Authority
Cody Eccles, Chief of Staff to Councilmember Reagan Dunn
Don Gentry, Fire Commissioner, Mountain View Fire & Rescue
Tom Goff, Director of Local and Regional Affairs, King County Council
Jay Hagen, Fire Chief, Bellevue Fire Department
The Honorable Karen Howe, Deputy Mayor, City of Sammamish
The Honorable Vic Kave, Mayor, City of Pacific
The Honorable Armondo Pavone, Mayor, City of Renton
Harold Scoggins, Fire Chief, Seattle Fire Department
The Honorable Keith Scully, Councilmember, City of Shoreline
Adrian Sheppard, Fire Chief, Redmond Fire Department
The Honorable Penny Sweet, Councilmember, City of Kirkland
Brad Thompson, Fire Chief, Valley Regional Fire Authority

Attendees:

Will Aho	Becky Ellis	Brian Parry
Rachel Bianchi	Jason Gay	Michele Plorde
Jen Blackwood	Katie Halse	Drew Pounds
Cynthia Bradshaw	Jason Hammond	Tom Rea
Andrew Burns	Cory James	Chris Santos
Matt Burrow	Dawn Judkins	Dave Tait
Helen Chatalas	Rebecca Maskin	Eric Timm
Andrea Coulson	Vonnie Mayer	Aaron Tyerman
Matt Cowan	Doug McDonald	Dave Van Valkenburg
Brian Culp	Graham McGinnis	Simon Vila
Lisa Defenbaugh	Amy Moorhead	Jimmy Webb
Chuck DeSmith	Bill Newbold	Jim Whitney
Chris Drucker	Kelly O'Brien	Ryan Woodey
Maggie Eid	Andres Orams	Rose Young

Summary:

At the first meeting of the *EMS Advisory Task Force*, members were grounded in their roles and responsibilities, the levy planning timeline, and the policy decisions they would be making. They were then introduced to the components and principles that allow the successful Medic One/EMS system to thrive.

Task Force Roles and Timeline:

Shannon Braddock reviewed the *Task Force* roles, objectives, and levy planning timeline. The *EMS Advisory Task Force* is charged with overseeing the development and vetting of the next Medic One/EMS Strategic Plan and levy. This includes reviewing and proposing recommendations concerning:

- Current and projected EMS system needs;
- A Financial Plan based on those needs; and
- The levy rate, levy length, and timing of the levy ballot measure.

The *Task Force* is scheduled to meet a total of four times; meetings will include a discussion of levy components and a review of the work done in four subcommittees (ALS, BLS, Regional Services and Finance). The bulk of the programmatic and financial analysis will be conducted in these subcommittees and brought forward as draft recommendations for the *Task Force* to review and endorse. *Task Force* members were encouraged to chair and serve on subcommittees.

The process is anticipated to take approximately nine months, with recommendations finalized by the *Task Force* in October of 2024, and the Strategic Plan and levy Ordinances transmitted to the King County Council in mid-February, 2025.

Topics Discussed:

This meeting provided a general overview of the Medic One/EMS system and the process for developing the next Strategic Plan and EMS levy.

- Redmond Fire Chief Adrian Sheppard reviewed the components of the Medic One/EMS system and how it operates in a regional and tiered manner.
- Dr. Tom Rea, Medical Program Director for the Medic One/EMS system of King County, focused on the system's commitment to medicine and innovation, and how medical oversight, medical direction and ongoing quality improvement are the reasons the system is world class.
- Rebecca Maskin, the King County Demographer, shared details of King County's historic growth from 2010-2020 and the communities served by the EMS system.
- Drew Pounds from the King County Office of Performance, Strategy and Budget reviewed the state statute allowing jurisdictions to impose an EMS levy, briefly reviewed expenditure levels and levy rate, and stressed the benefits of financing the Medic One/EMS system via an EMS levy.

Panel/Q&A Session (featuring Deputy Chief Jim Whitney, Chief Brian Carson, Chief Harold Scoggins, Vonnie Mayer, Tom Rea, Drew Pounds and moderated by Chief Matt Cowan)

An expert panel representing dispatch, ALS, BLS, medical direction and finance answered questions about their respective areas. Collaboration, adaptive leadership, commitment to improving, highly skilled 9-1-1 and EMS professionals, and continued focus on data and research were all emphasized. Participants pointed out that connecting people who call 9-1-1 to local services is more important than ever. Wall times and creating opportunities to reduce the stress and usage of the 9-1-1 system were mentioned. Challenges facing panel members include staffing issues, an aging population (which impacts call volumes), and technology needs.

It was asked whether there are voter validation requirements for passing an EMS levy. Per [RCW 84.52.069](#), the original imposition of a 6-year, 10-year or permanent levy requires a 60% passage rate and a voter turnout equal to 40% of the total number of voters voting at the last preceding general election. The subsequent approval of a six-year or ten-year tax levy requires a majority vote. (This change to validation rates was made in 2012, and further clarified in 2018.)

Upcoming Task Force Meetings:

Wednesday, May 22, 2024	1 pm – 3 pm	Tukwila Community Center 12424 42nd Ave S, Tukwila
Wednesday, July 31, 2024	1 pm – 3 pm	Tukwila Community Center 12424 42nd Ave S, Tukwila
Wednesday, October 23, 2024	1 pm – 3 pm	Tukwila Community Center 12424 42nd Ave S, Tukwila

For more information on the EMS Advisory Task Force and the levy reauthorization process, please contact Helen Chatalas at helen.chatalas@kingcounty.gov or 206-263-8560.

A Walk Through the Medic One/EMS System in King County

EMS ADVISORY TASK FORCE

FEBRUARY 15, 2024

The Medic One/EMS System


Regional

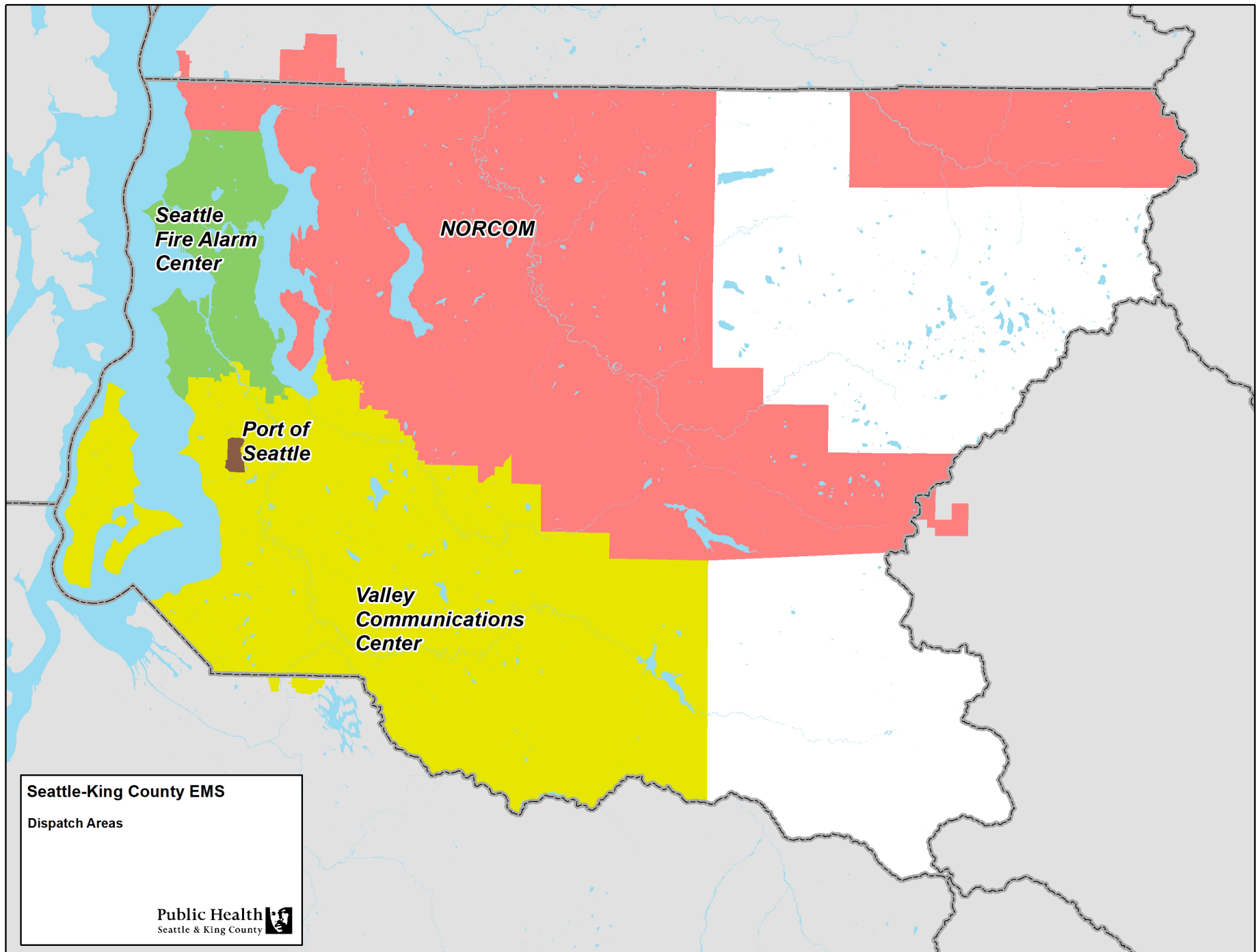
Tiered

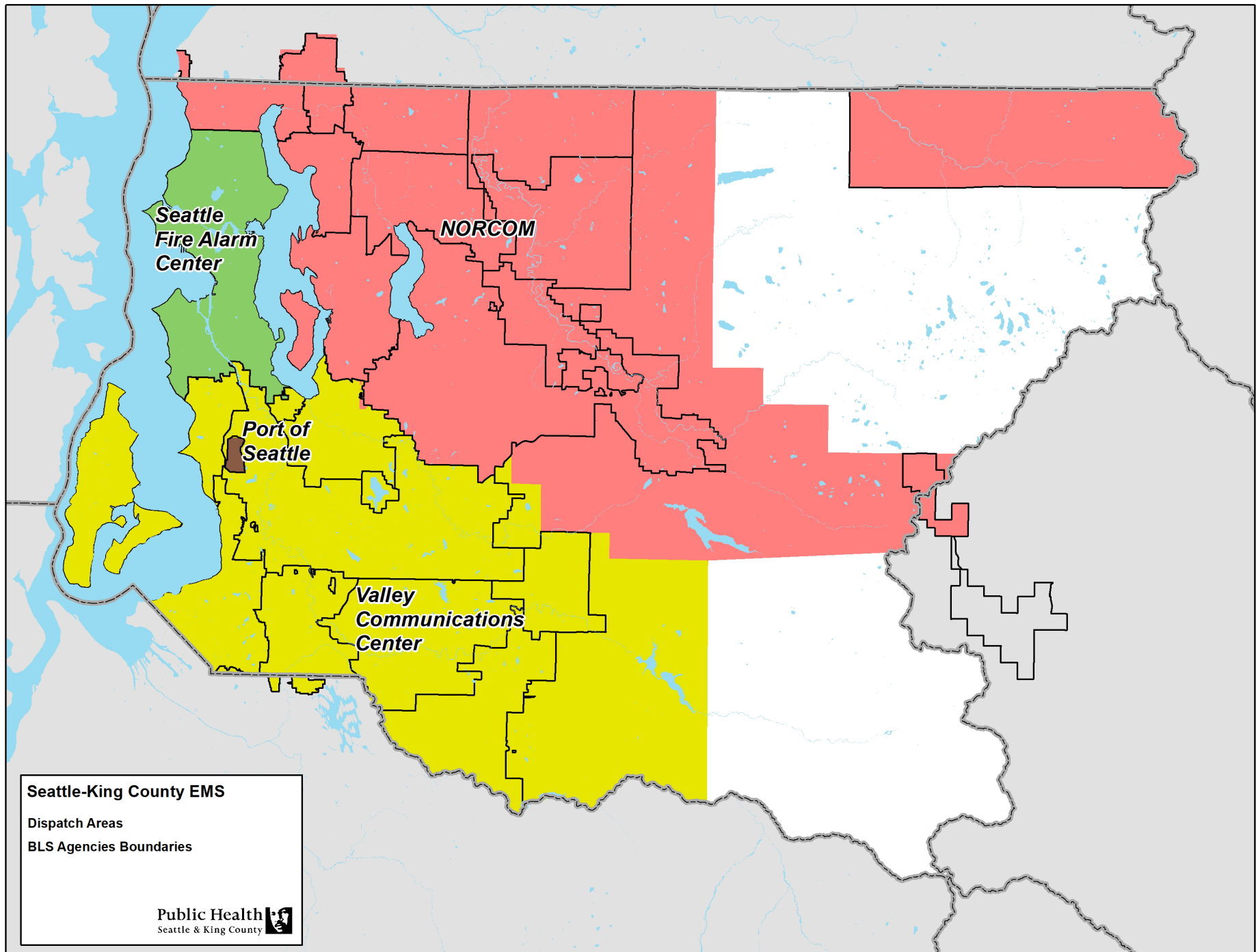


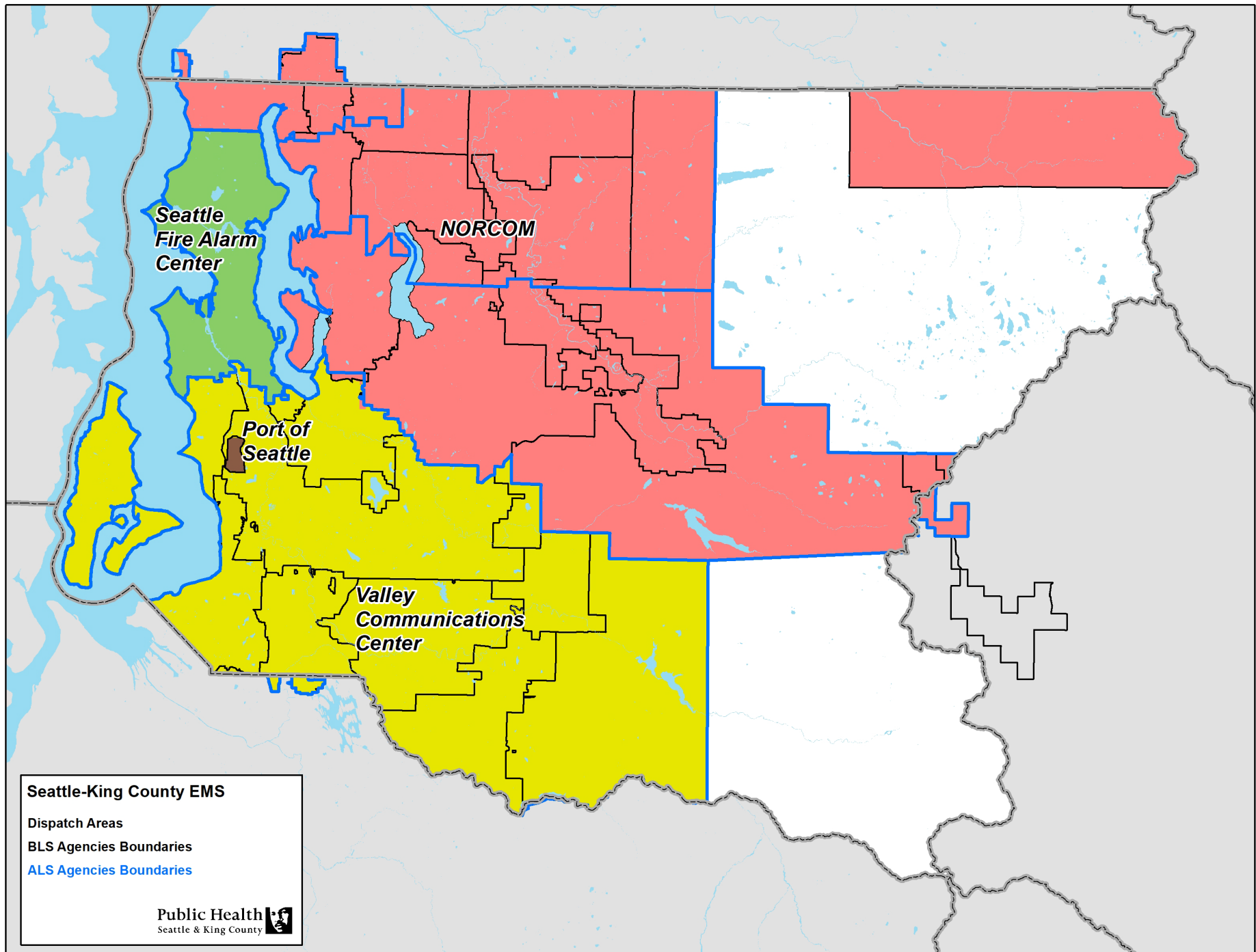


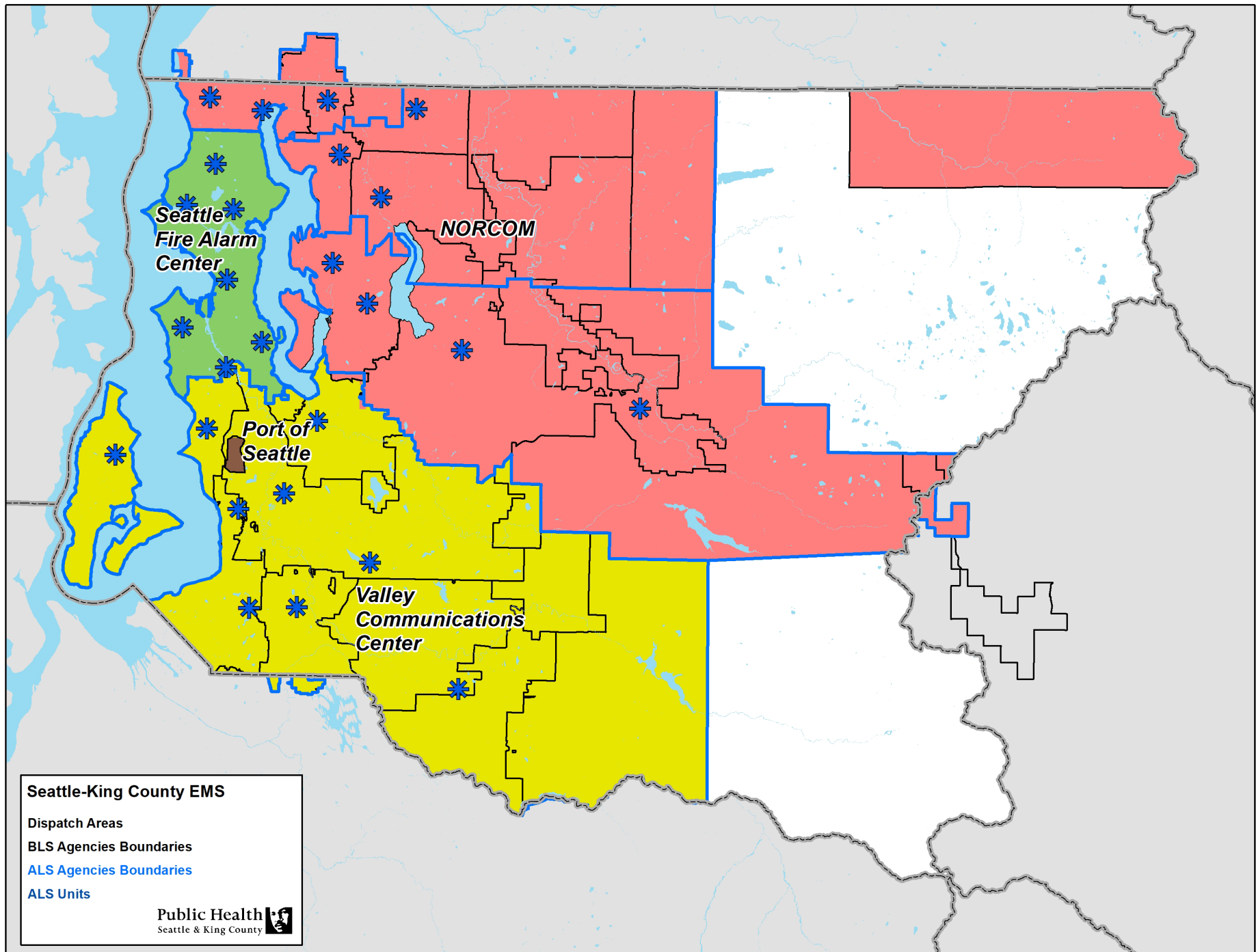
Seattle-King County

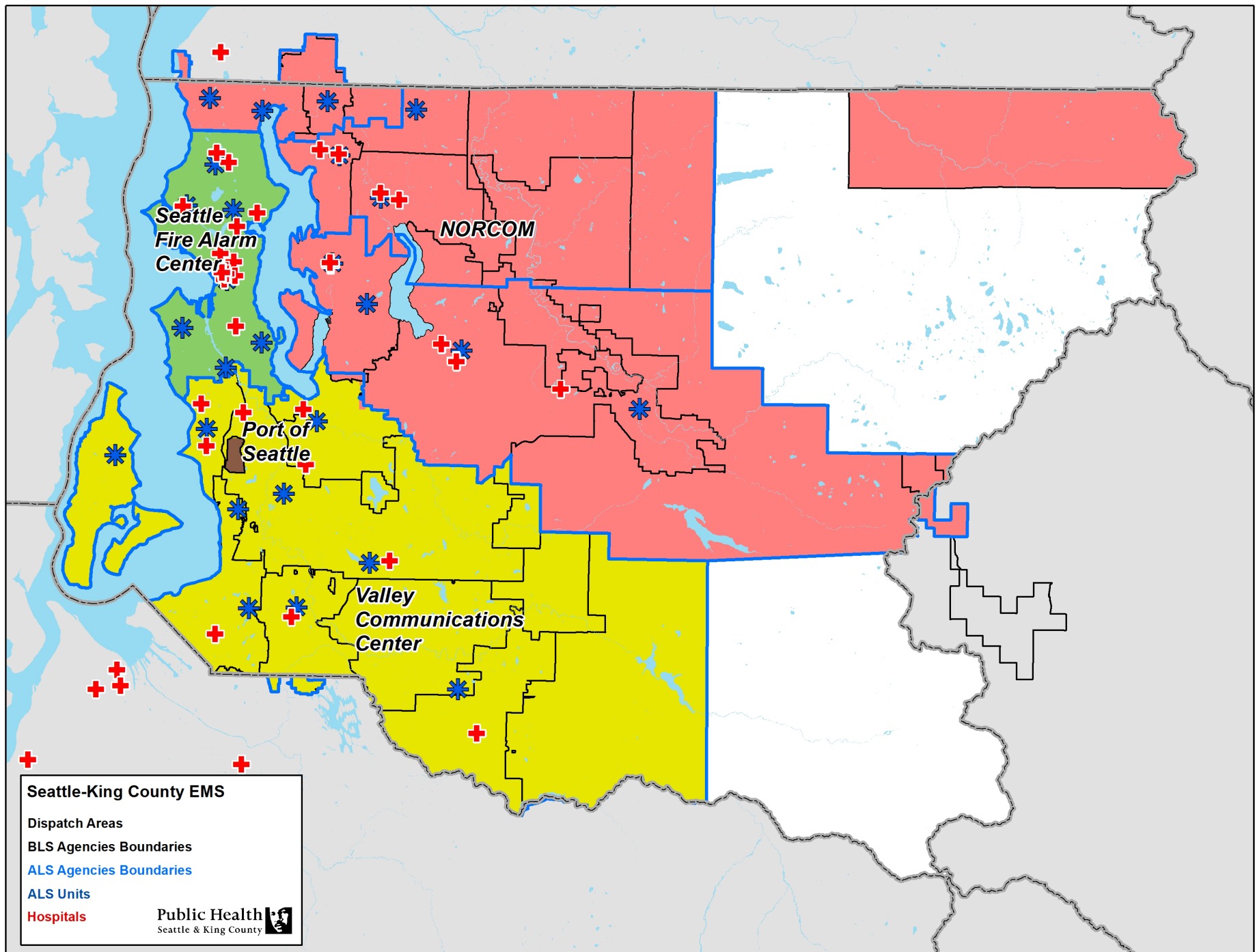
Public Health
Seattle & King County 





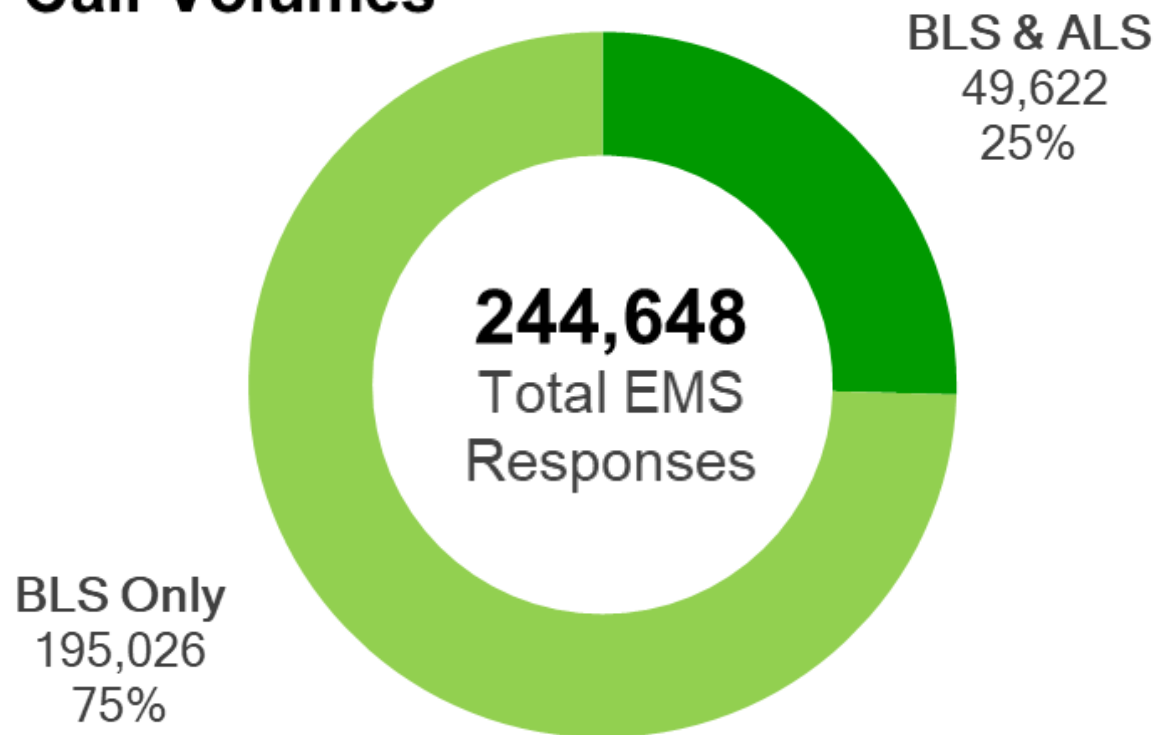




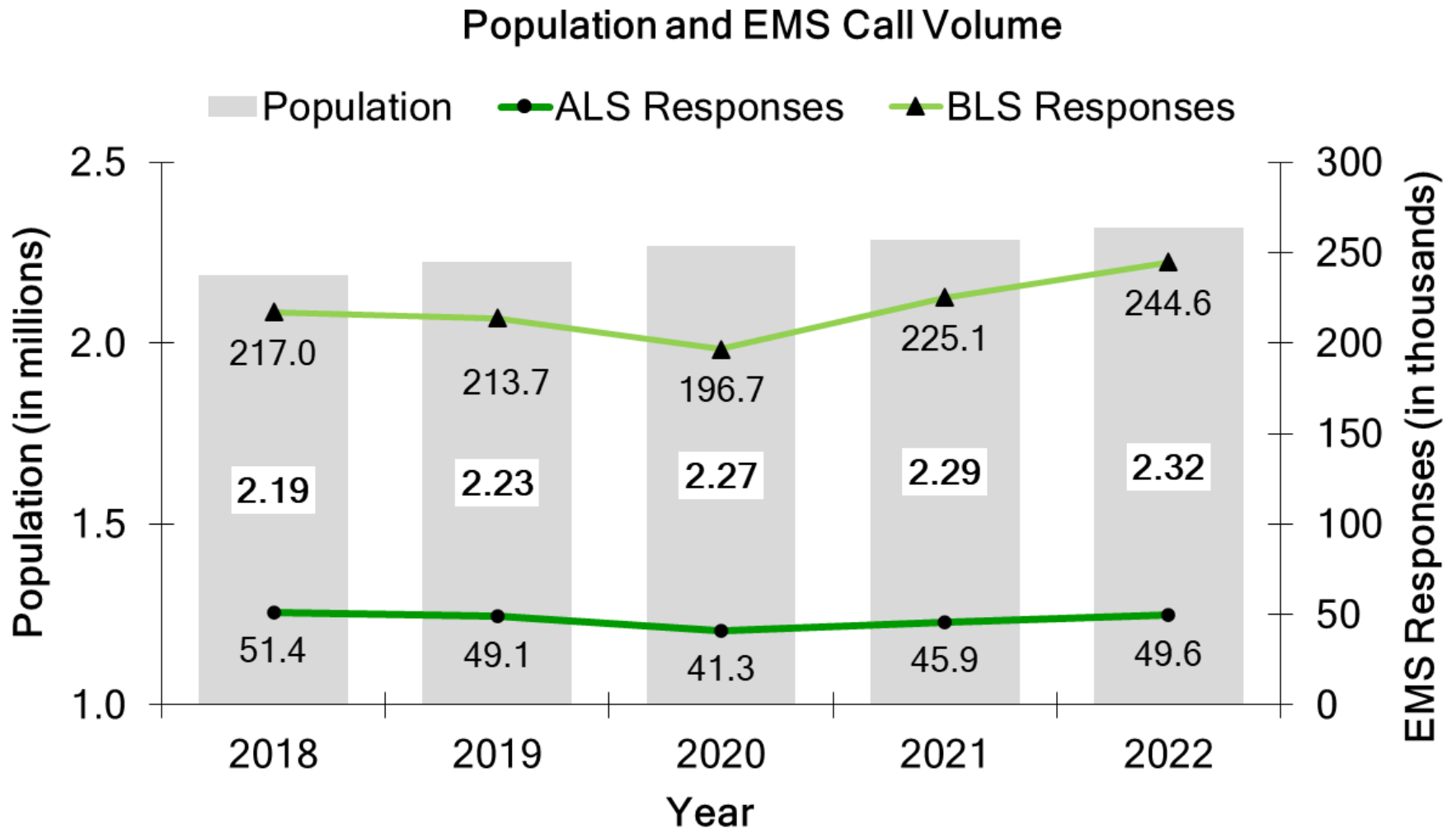


2022 Statistics

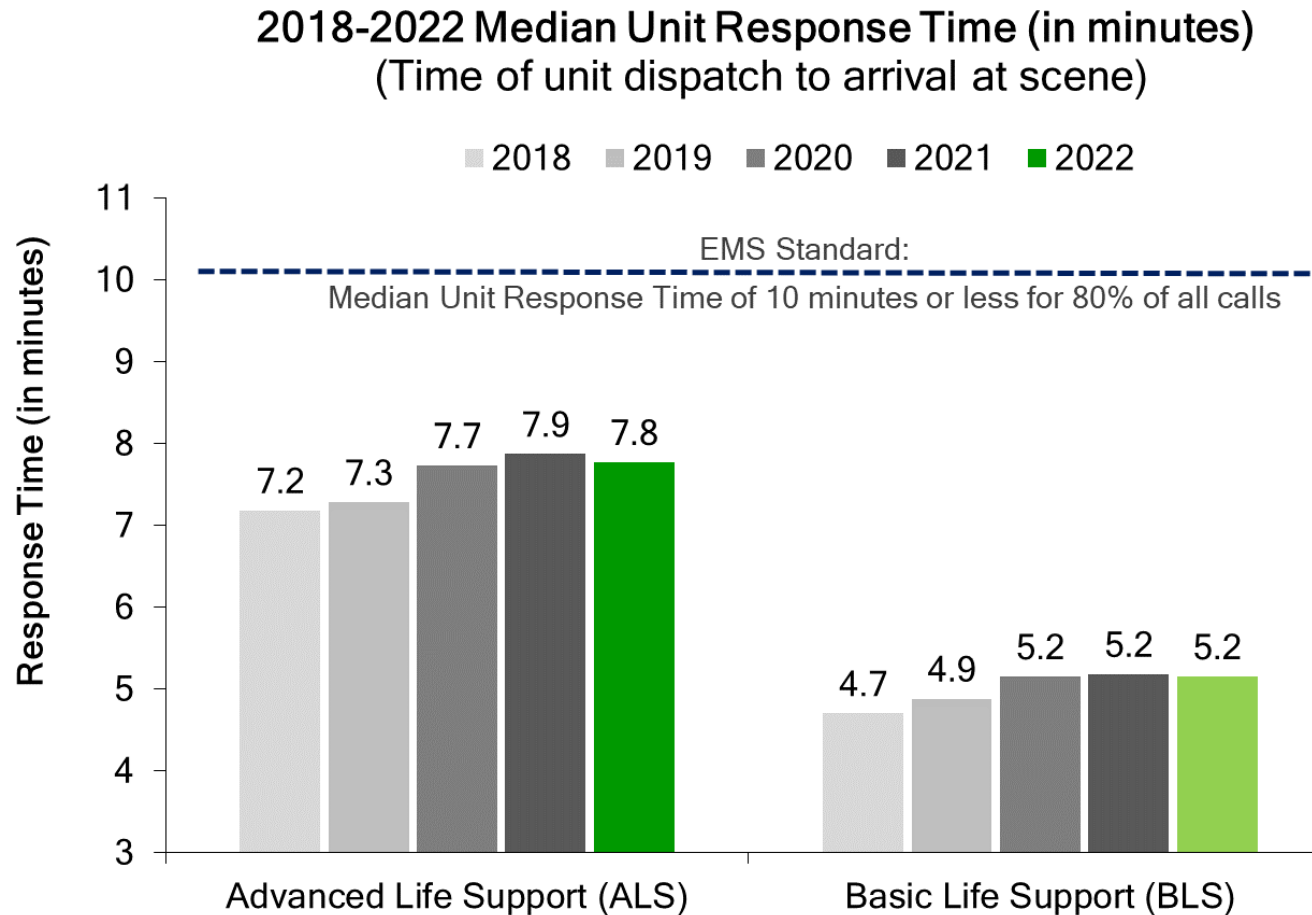
2022 Call Volumes



Population and Calls

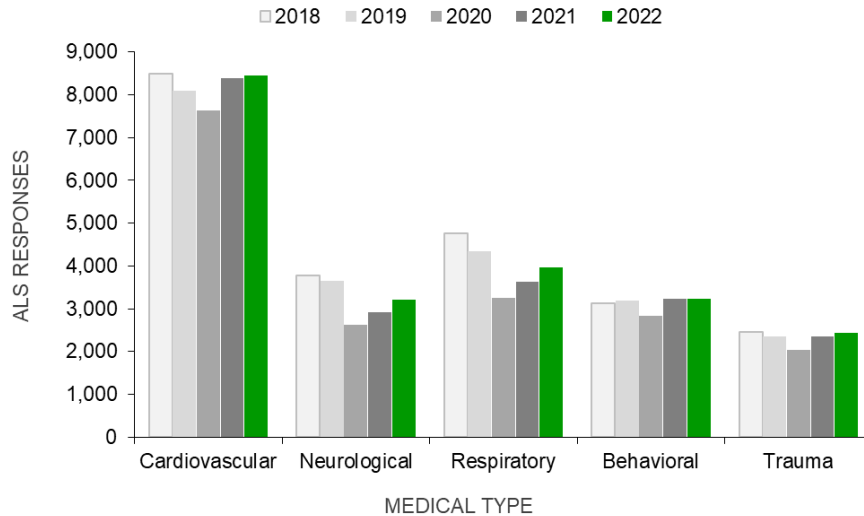


Median Response Times

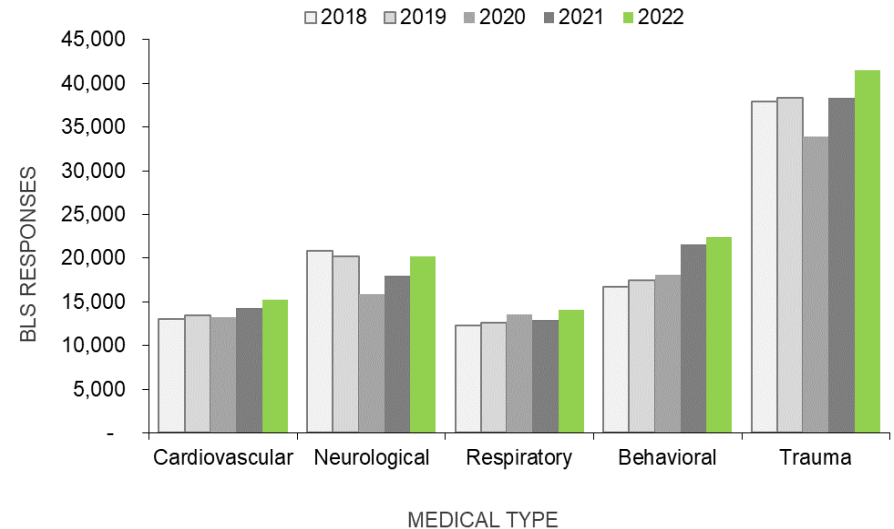


EMS Medical Types

ALS RESPONSES BY MEDICAL TYPE 2018-2022

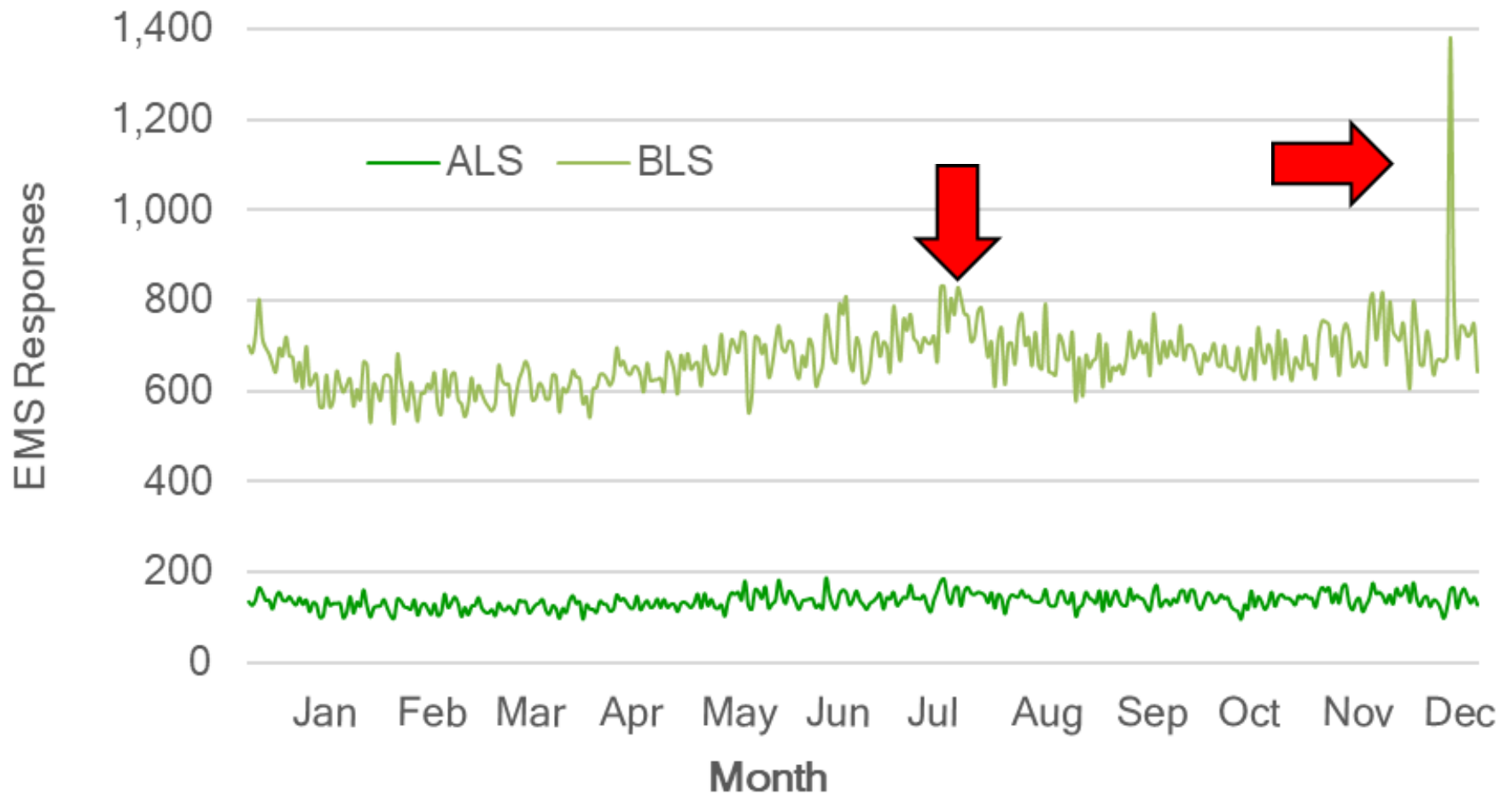


BLS RESPONSES BY TYPE 2018-2022



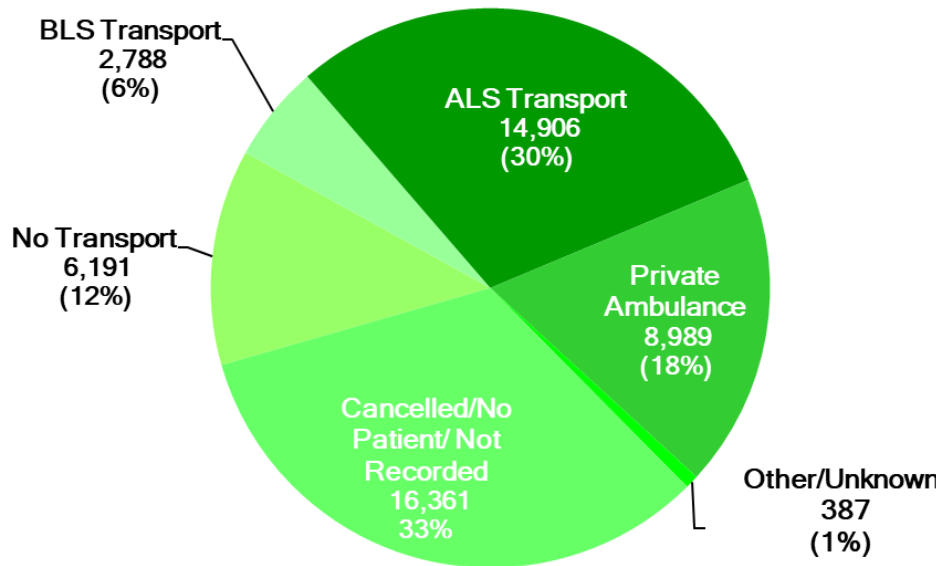
Calls Per Day

Number of EMS Responses in 2022

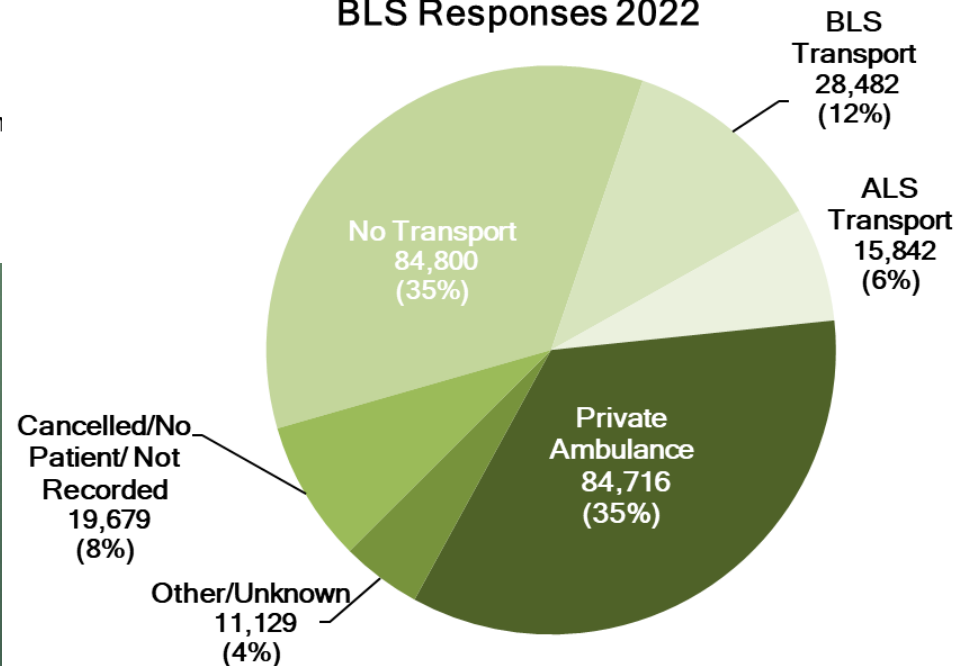


Transport Type

Transport Type
ALS Responses 2022



Transport Type
BLS Responses 2022

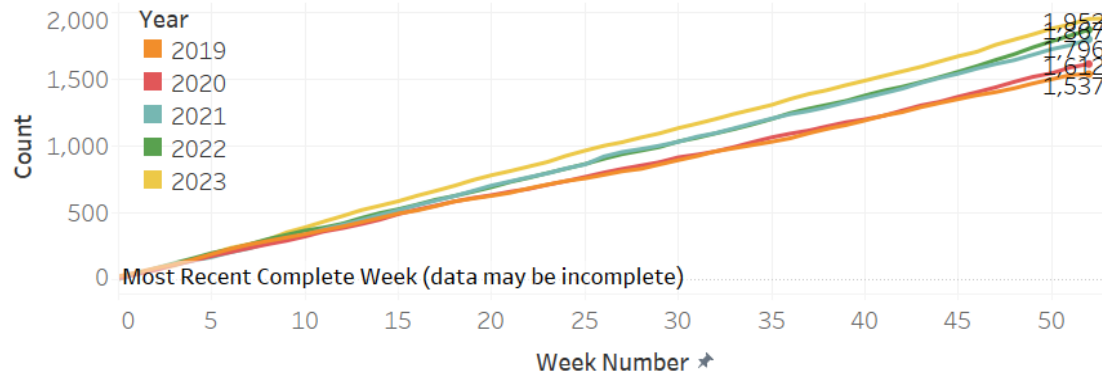


Conditions of Focus

OHCA - Out of Hospital Cardiac Arrests

Definition: Refers to treated cardiac arrests (with at least 1 EMS compression or PAD shock delivery) fr

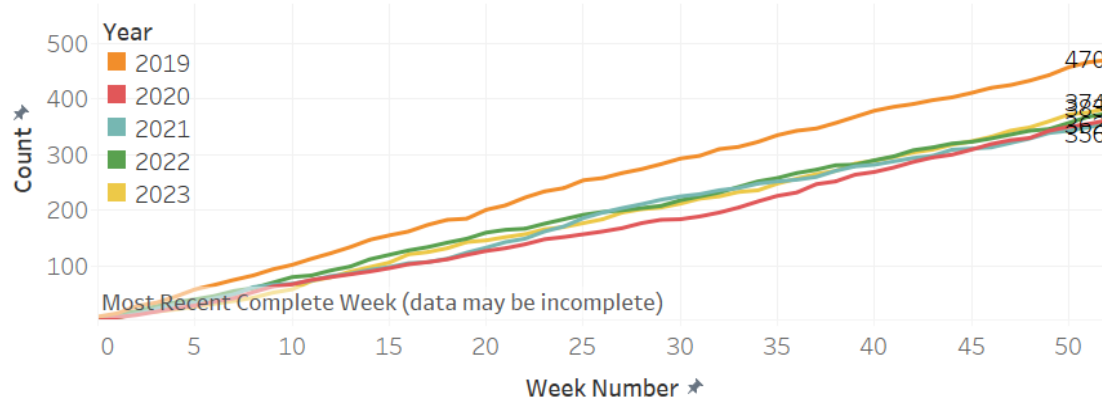
Cumulative Incidents of OHCA



STEMI

Definition: Primary/secondary impressions include "STEMI" or STEMI alert is noted.

Cumulative Incidents of STEMI

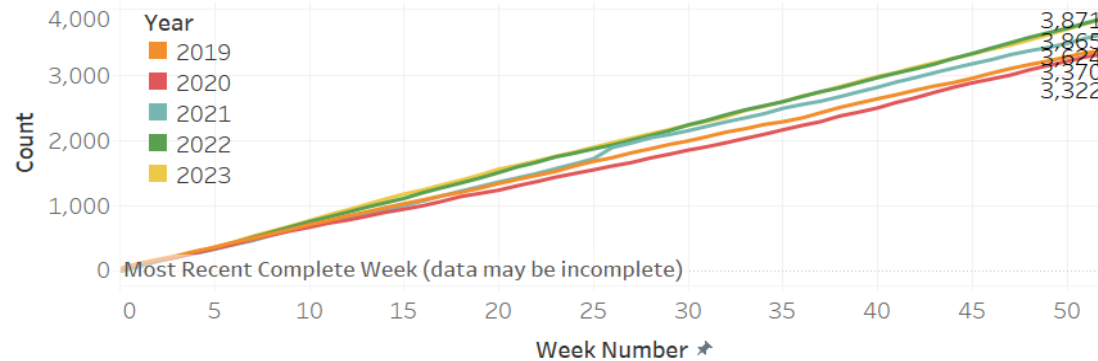


Conditions of Focus

Stroke

Definition: Primary/secondary impressions included "Stroke", "TIA", or "Intracranial hemorrhage", or

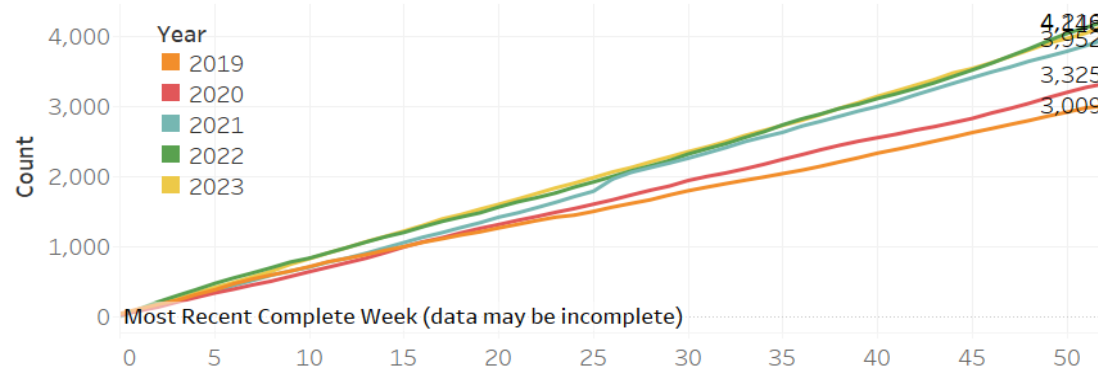
Cumulative Incidents of Stroke



Death at Scene

Definition: Primary/secondary impressions included "death", "DOA", or patient chief/secondary complaints included "death", "DOA", or primary/other associated symptoms were "Dependent Lividity (death)", or CPR form notes in field pronouncement, or incident disposition included "Patient Dead at Scene", or incident dispatch code included "6R1" (obvious DOA - no CPR in progress) or "6M2" (Verbal confirmation of "Do Not Resuscitate Order" on premise), or initial/final patient acuity included "Death without Resuscitation Efforts".

Cumulative Incidents of Death at Scene

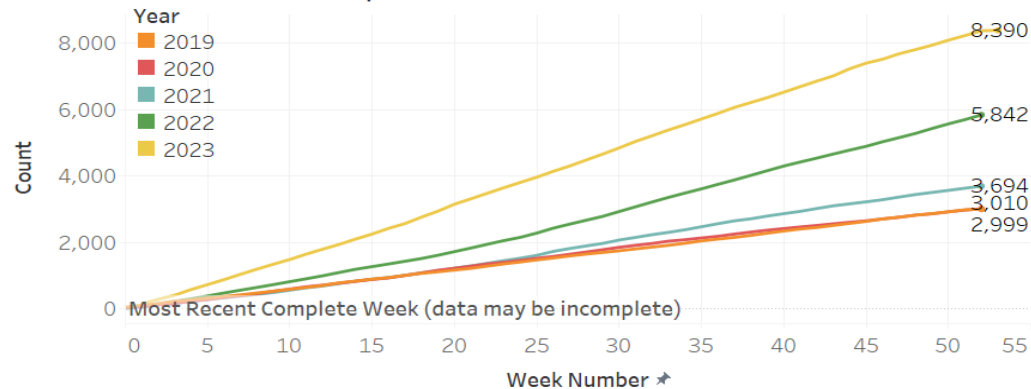


Conditions of Focus

Opioid Overdose

Definition: Suspected overdose determined based on a sum of different factors that were documented in the incident report.
<https://kingcounty.gov/depts/health/overdose-prevention/data.aspx>

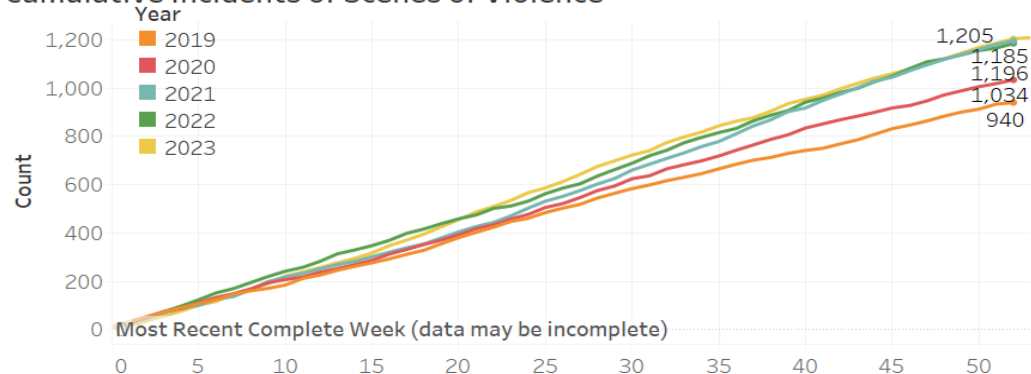
Cumulative Incidents of Opioid Overdose



Scenes of Violence

Definition: Includes intentional stabbing and firearm injury incidents. Stabbing was defined as incidents where narrative included "Stabbed", or injury details were "Assault by sharp object (stabbing)", or chief complaint included "Stab". Firearm was defined as incidents where narrative included "GSW", "Gunshot", "Gun shot", "Firearm", "Rifle", "Bullet", "Fire arm", or chief complaint included "Gun", "Gunshot", "Firearm", "GSW", "Pistol", or mechanism of injury was "GS-Firearms", or primary injury was firearms, or injury details included "Firearms", "Handgun". For further details of various types of violence, see the full report.

Cumulative Incidents of Scenes of Violence

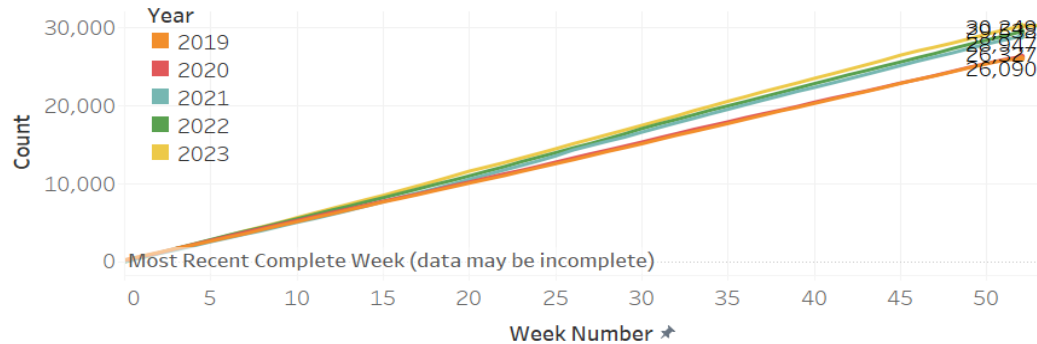


Conditions of Focus

Behavioral Health

Definition: Primary/secondary impressions included "Anxiety reaction/emotional upset", "Behavioral/psychiatric episode", "Confusion/delirium", "Mental disorder", "Major depressive disorder", "Psychogenic shock", "Restlessness and agitation", "Suicide attempt", "Suicidal ideations", or primary/other symptoms indicated behavior/emotional state, or narrative included "restraints", "handcuffs", "handcuffed", "exds", "delirium", "aggressive", "aggressively", "combative", "agitated", "uncooperative", "belligerent", "unwilling", "screaming", "erratic", "fighting", "spitting", "spit sock", "naked", "danger", "threatening".

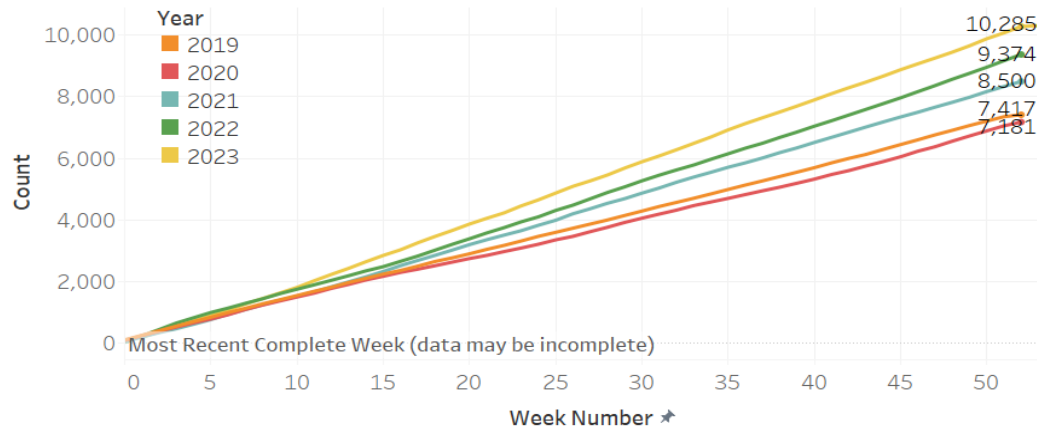
Cumulative Incidents of Behavioral Health



Language Barriers

Definition: Narrative included "lang", "transl", "interp", or barriers to care noted language.

Cumulative Language Barrier Incidents







The Medical Model



The Medical Model

How does EMS operational performance & clinical care impacts *patient & community health*?

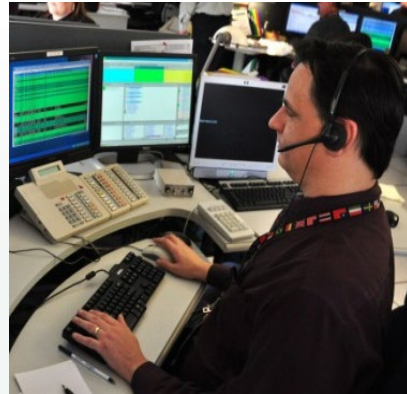
Apply evidence-based process to learn from program evaluation to inform next steps for improvement.



Aggregated evaluation
Individual case review
Training & Education

The Medical Model

EMS care is a collective activity that relies on individual excellence and team dynamics.



When Life Hangs in the Balance: Conditions of Focus

Cardiac Arrest
Drug Overdose
Serious Trauma
Anaphylaxis

Respiratory Failure
Myocardial Infarction
Sepsis
Stroke



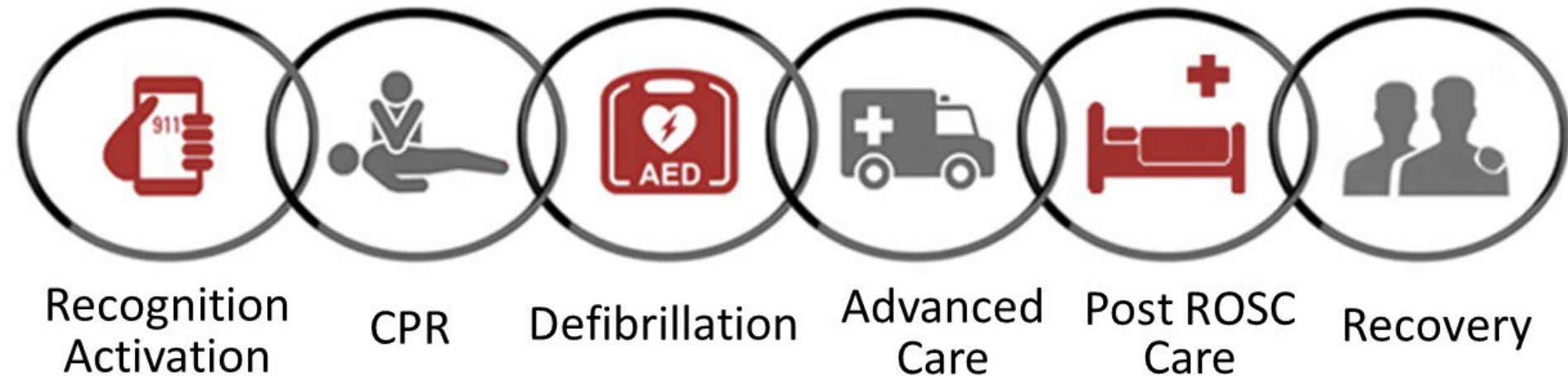
Tests all Aspects of the EMS System



Time Dynamic
Critical Thinking
Essential Individual Skills
Medication Treatment
Communication
Coordinated “Team” Care

Cardiac Arrest Resuscitation

Links in the Chain of Survival



Assessment: Cardiac Arrest

Challenges of the Pandemic

Impacts of the Telecommunicator

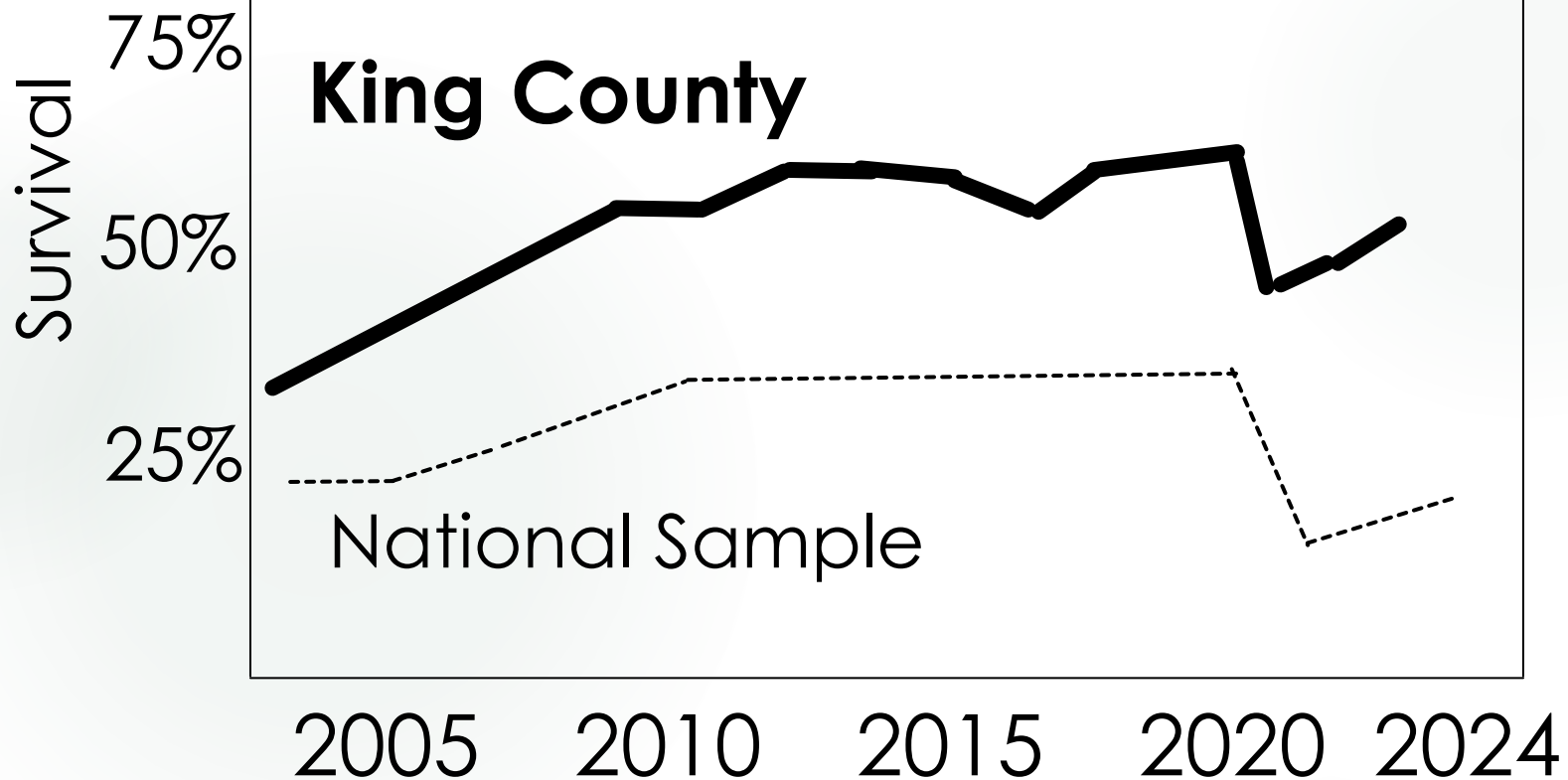
- Quality of layperson CPR
- Pediatric cardiac arrest

Best practices for EMS (BLS) CPR



Pandemic Resuscitation Challenges

288 Survivors



Evaluation: Cardiac Arrest

Challenges of the Pandemic

Impacts of the Telecommunicator

- Quality of layperson CPR
- Pediatric cardiac arrest

Best practices for EMS (BLS) CPR



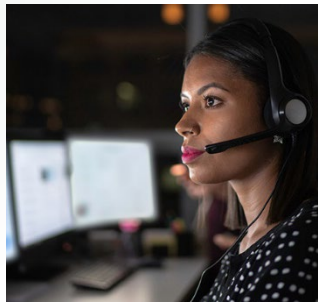
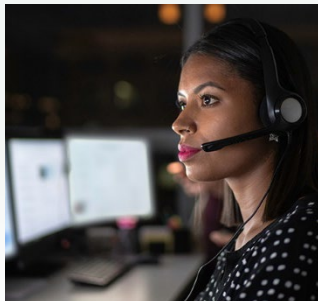
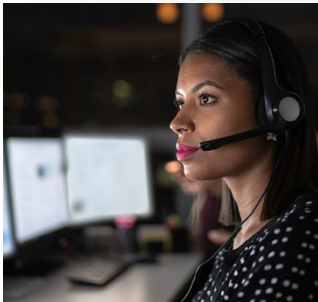
Impacts of Telecommunicator CPR

Quality of CPR coached by the telecommunicator is comparable to CPR by a trained layperson.

(Chocron *JAHA* 2023)

In pediatric arrest, the telecommunicator is responsible for identifying and coaching timely layperson CPR in ~two thirds of cases.

(Lewis et al, *JAHA* 2024)



Evaluation: Cardiac Arrest

Challenges of the Pandemic

Impacts of the Telecommunicator

- Quality of layperson CPR
- Pediatric cardiac arrest

Best practices for EMS (BLS) CPR



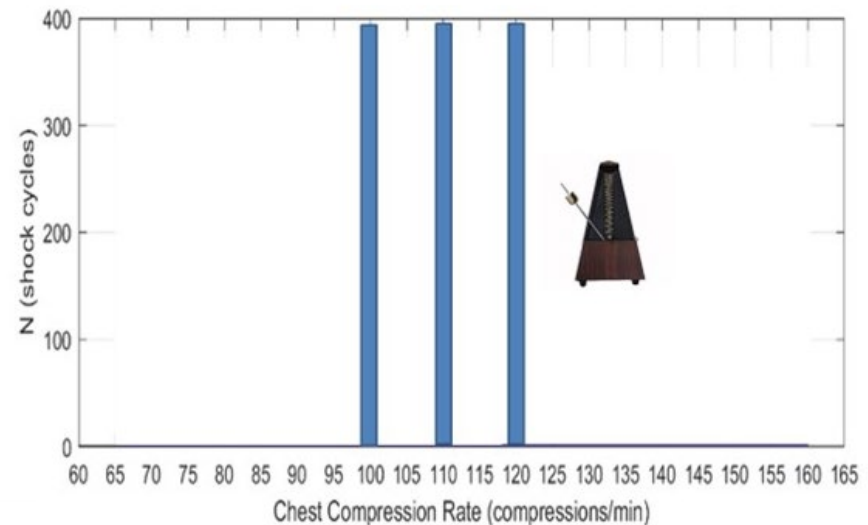
Basic Life Support Resuscitation

Rigorous comparison of approved BLS strategies

Primary EMT airway
i-gel vs BVM



Compression Rates
100 vs 110 vs 120



Seattle and
King County

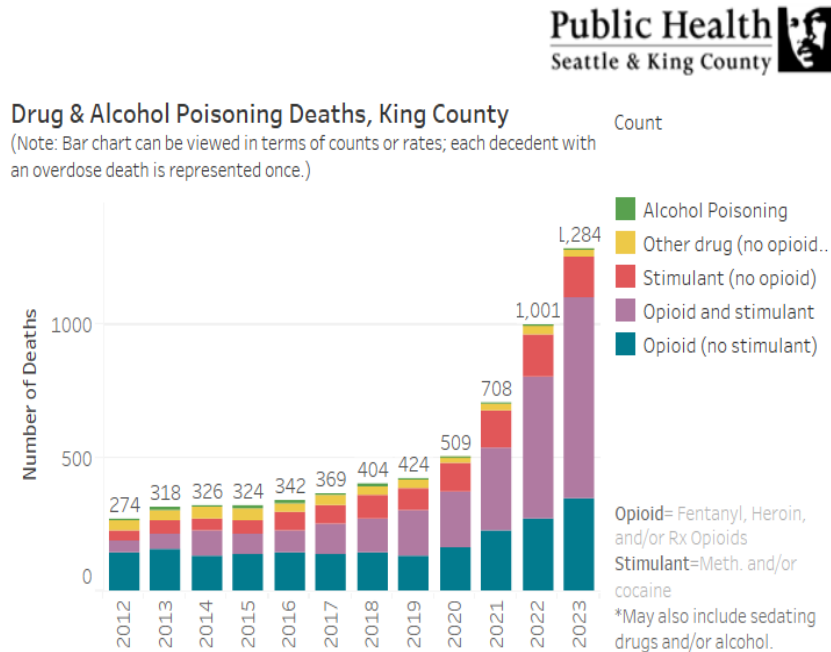
When Life Hangs in the Balance: Conditions of Focus

Substance Use Disorder & Drug Overdose



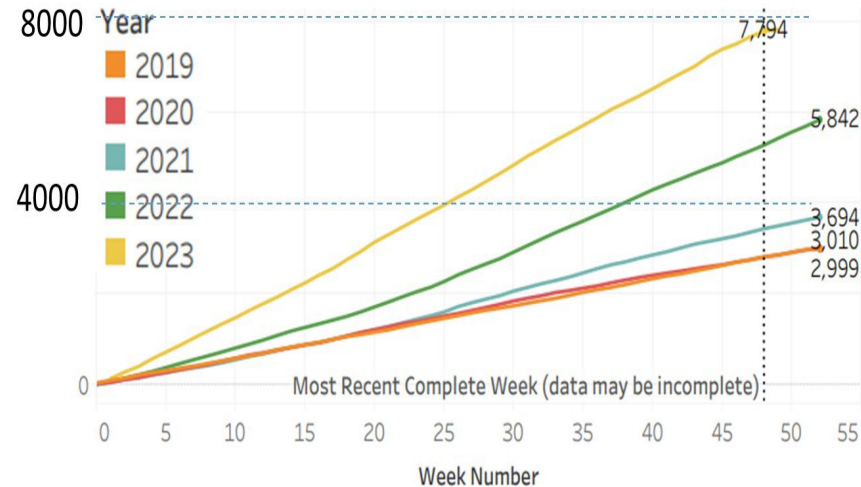
Substance Use Disorder, Overdose, & EMS

Overdose Deaths



EMS-Treated OD

Cumulative Incidents of Opioid Overdose



Progress is challenging.

King County Care for OD

King County BLS Guideline

EMT Intra-nasal Naloxone Algorithm

Use universal precautions to include eye protection, gloves and establish scene safety

Perform Primary Assessment
(A.B.C.D's)

Are pulses present?

YES

NO

Begin CPR Immediately

Decreased respiratory rate?
Inadequate ventilatory effort?

YES

NO

Complete Exam & Evaluate
History

Manage Airway
BVM ventilations for at least 1 minute
(12-16 breaths/minute)
Apply oxygen
Monitor oxygen saturation

Evaluate signs of Opioid Overdose

- Slow Respirations (Patient's rate <8 per minute)
- Depressed LOC (Minimal or no response)
- Pinpoint Pupils
- High-risk clinical scene (Hx of use and /or drug paraphernalia)
- No Hypoglycemia (BS >60mg/dl)

If positive signs of overdose, EMT may administer nasal Naloxone

Open and assemble the Naloxone Kit
Insert the soft tip atomizer (MAD) into one nostril
Deliver approximately half of the volume (1 ml)
Resume BVM ventilations
Monitor vital signs and patient status



Please Document:

1. Time of Naloxone administration
2. Vital signs, GCS, and O2 sat at 5 minutes after Naloxone administration
3. Time of Paramedic arrival
4. Patient disposition
5. Send copy of completed MIRF to department EMS officer with patient name and address redacted for HIPAA purposes

≥ 3 predicts opioid overdose



↓ Respirations



↓ Level of consciousness



Pinpoint Pupils



History or Scene Evidence



No confounders (BS > 60)



Active Efforts: Mapping Drug OD

Public Facing Dashboard

Seattle



Kent



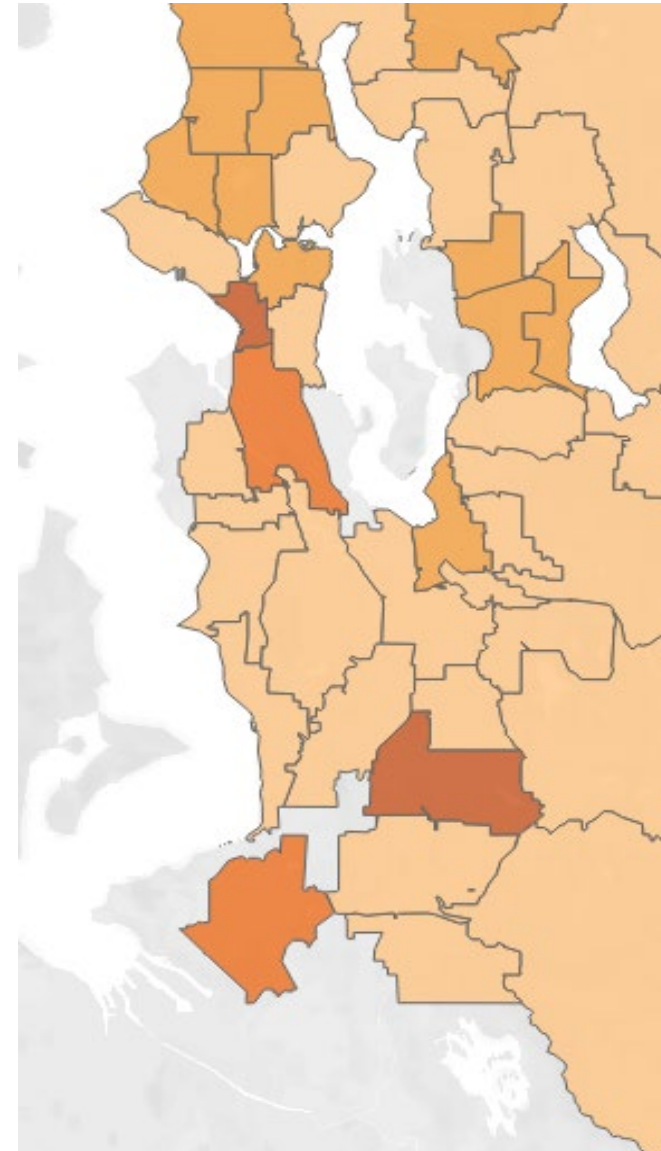
Renton



Shoreline

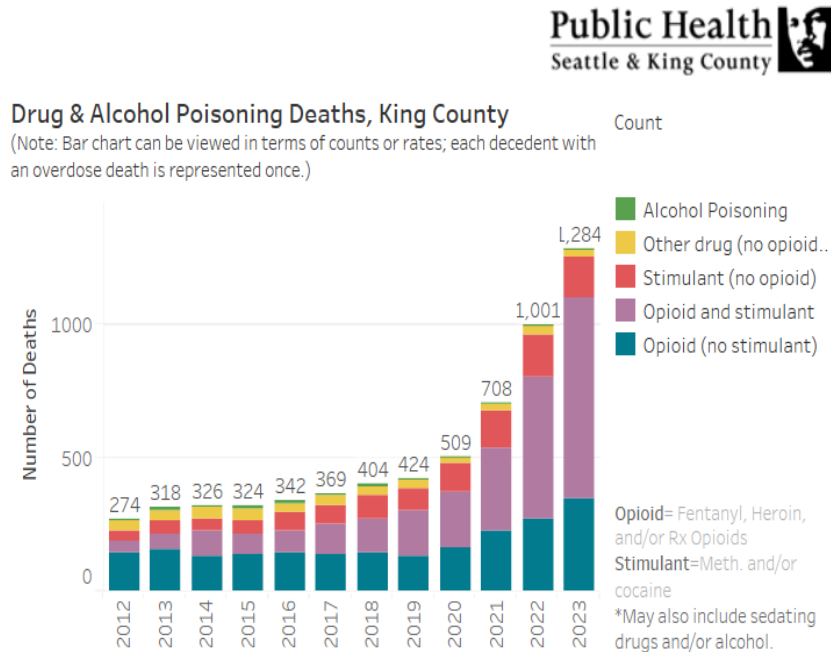


Federal Way



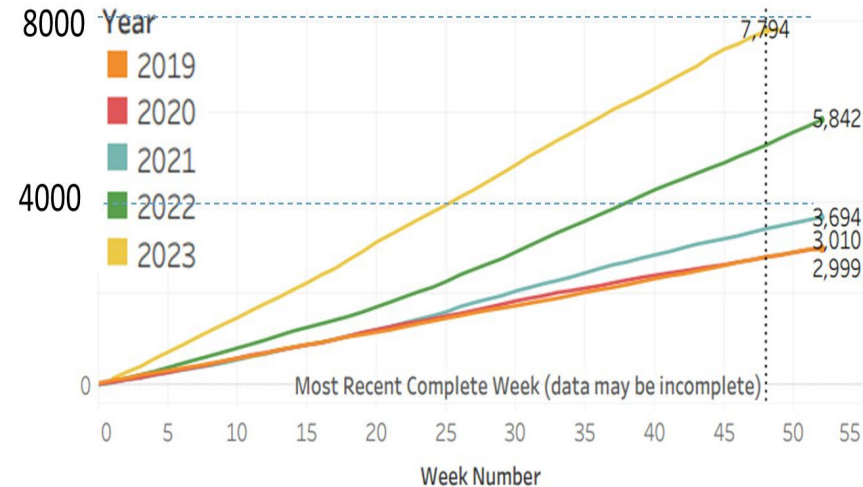
Substance Use Disorder, Overdose, & EMS

Overdose Deaths



EMS-Treated OD

Cumulative Incidents of Opioid Overdose



Progress is challenging.

EMS Next-Step Strategies

EMS initiatives to address substance use crisis:

1. Awareness and Education
2. Naloxone leave behind by EMS
3. Advanced addiction therapies

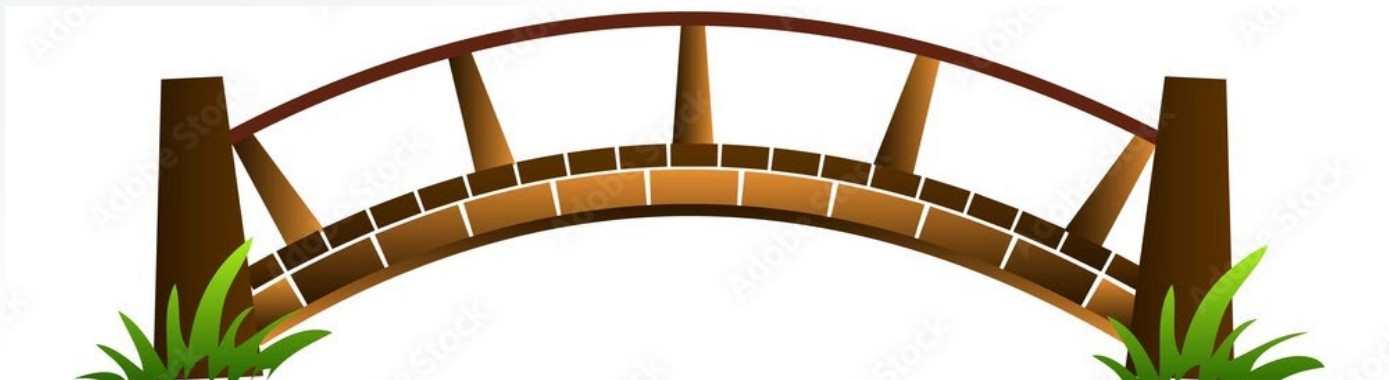


EMS Next-Step Strategies

Treat the overdose & then..?

Bridge patients to recovery potentially with initial advanced treatments from EMS.

Emergency Departments (now)
Washington Recovery Help Line (now)
Telehealth (Live February 2024)
Crisis Centers (6-24 months)



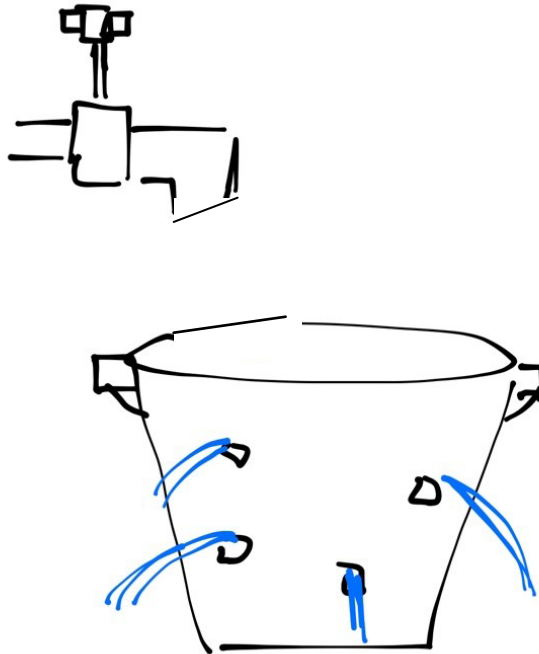
When Life Hangs in the Balance: Conditions of Focus

Trauma and Shock



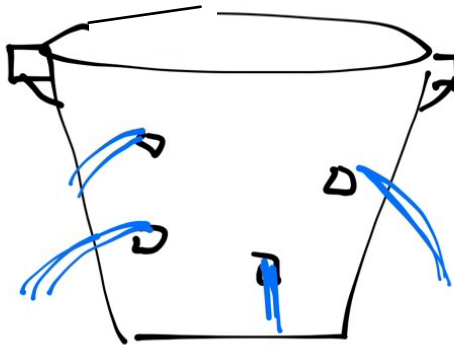
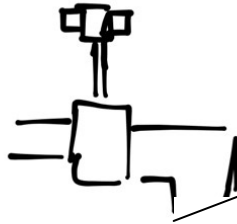
Bleeding Control and Treatment

Model to Treat Hemorrhagic Shock



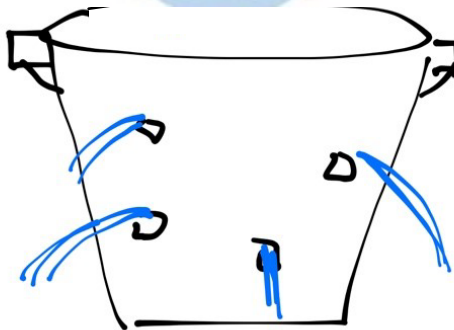
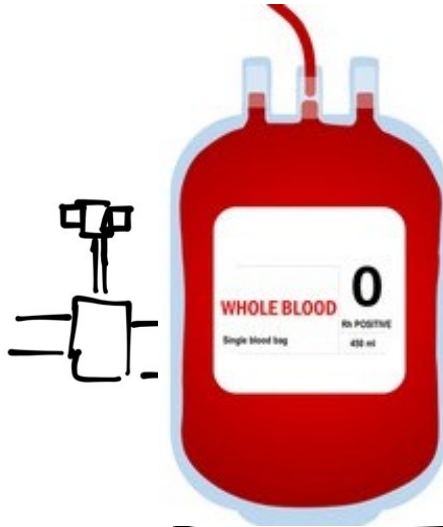
Bleeding Control and Treatment

Model to Treat Hemorrhagic Shock



Bleeding Control and Treatment

Whole Blood to Treat Hemorrhagic Shock



Many Partners



Whole Blood Field Transfusion: King County

Eligibility Criteria

Traumatic injury

AND

Systolic blood pressure < 70

OR

SBP <90 and Pulse > 110

Consideration for hemorrhagic shock without trauma(GI bleeding)

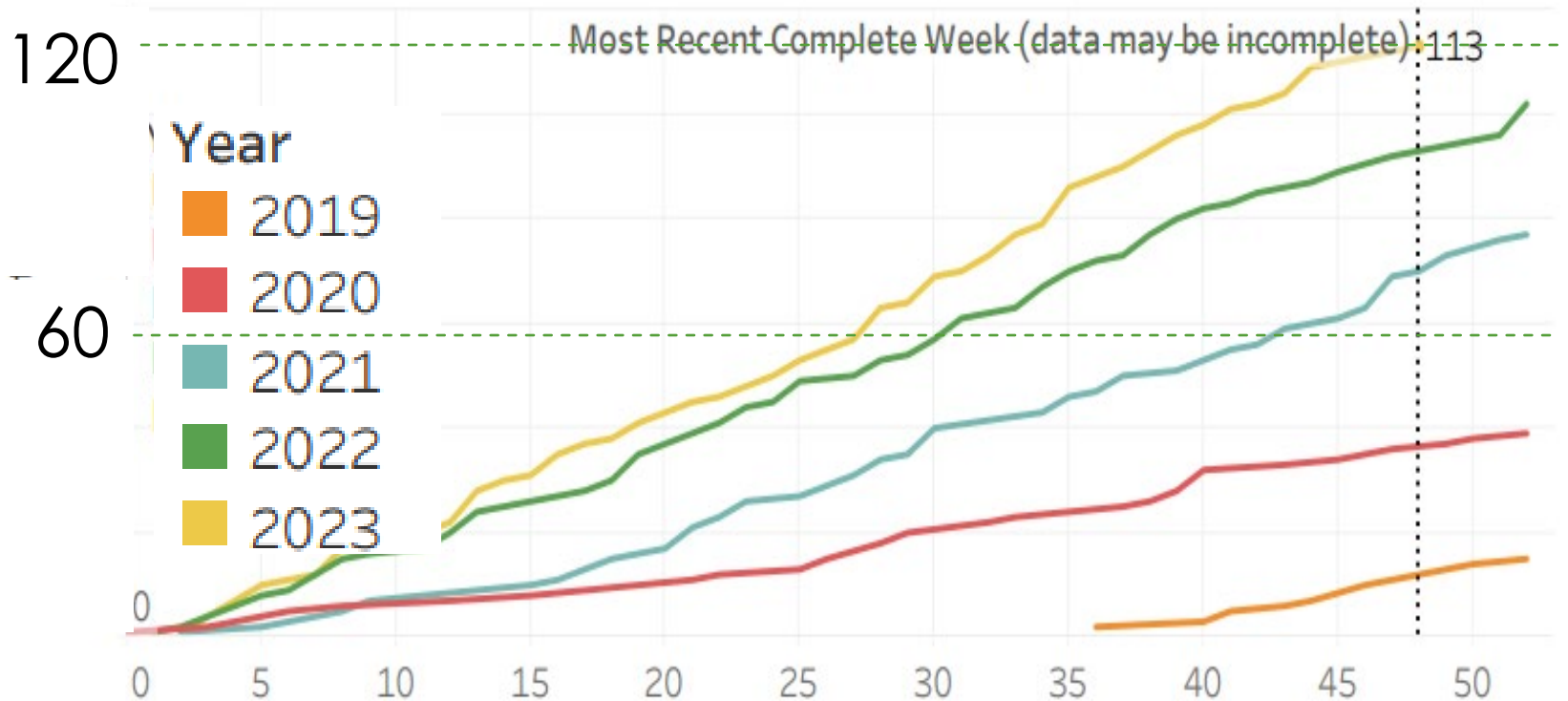


shutterstock.com - 1130809286



Whole Blood Patients: Year over Year

Total 354 patients have received field transfusion



Cumulative Weeks

Field Transfusion: Assessment & Improvement

Physician case review & feedback

Aggregated assessment to determine
“clinical effects” of the program

Addition and evaluation of new coagulation
therapies as “a bundle” for field transfusion.



The Medical Model

When Life Hangs in the Balance:

Cardiac Arrest

Drug Overdose

Serious Trauma

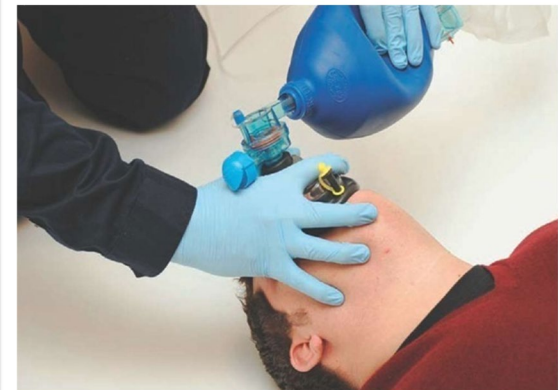
Anaphylaxis

Respiratory Failure

Myocardial Infarction

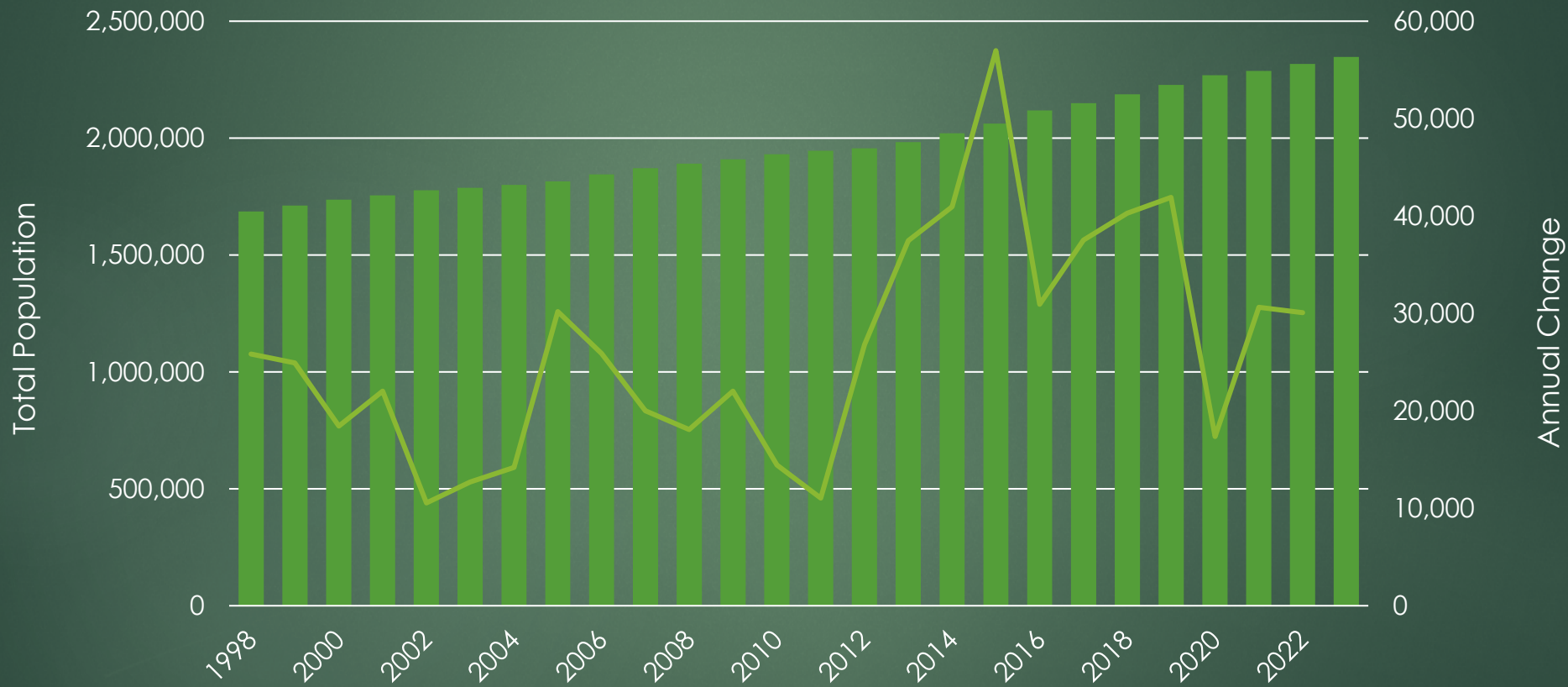
Sepsis

Stroke

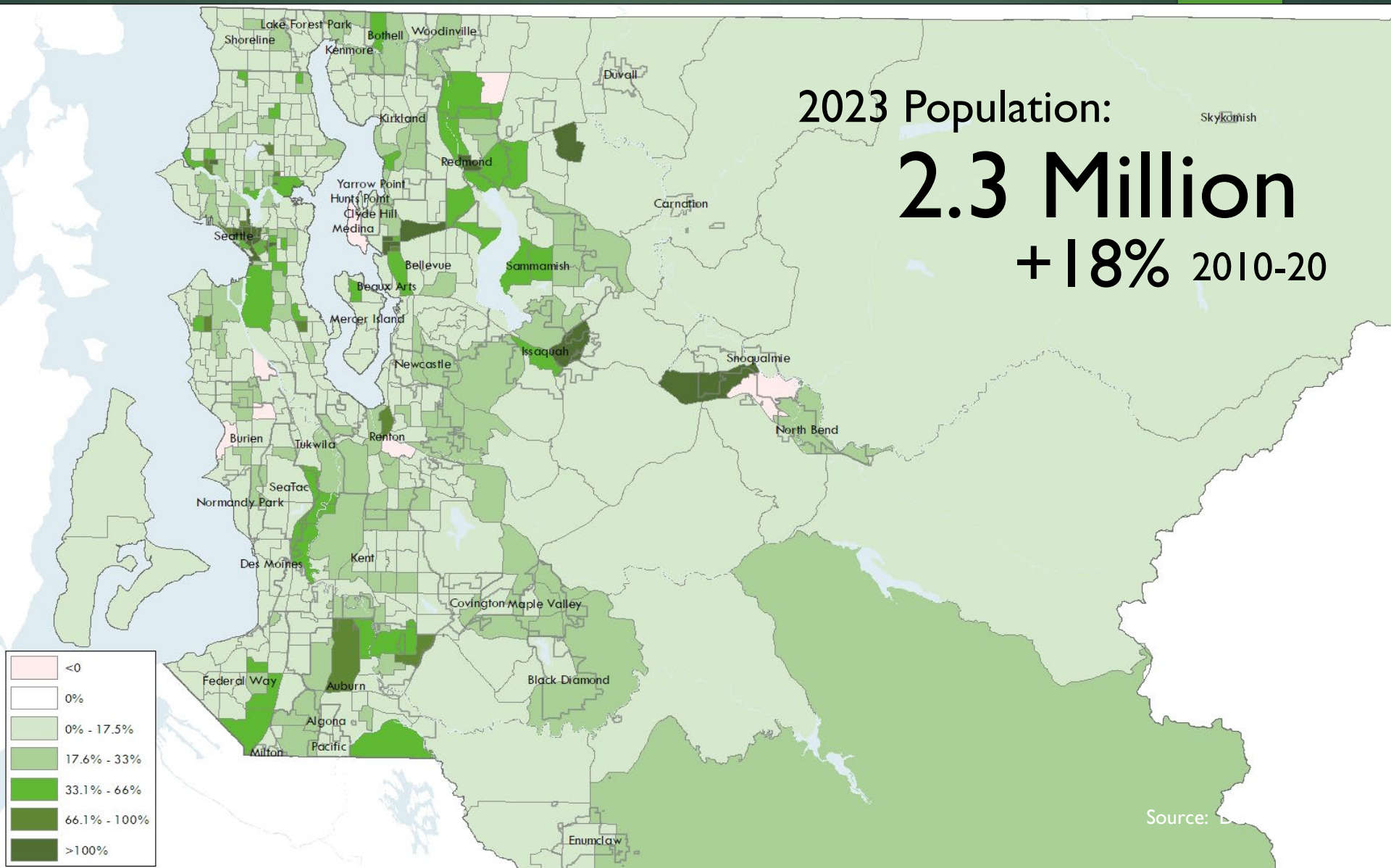


Demographic Trends in King County

Recent Historic Population Growth



Population Growth (% increase over 2010)

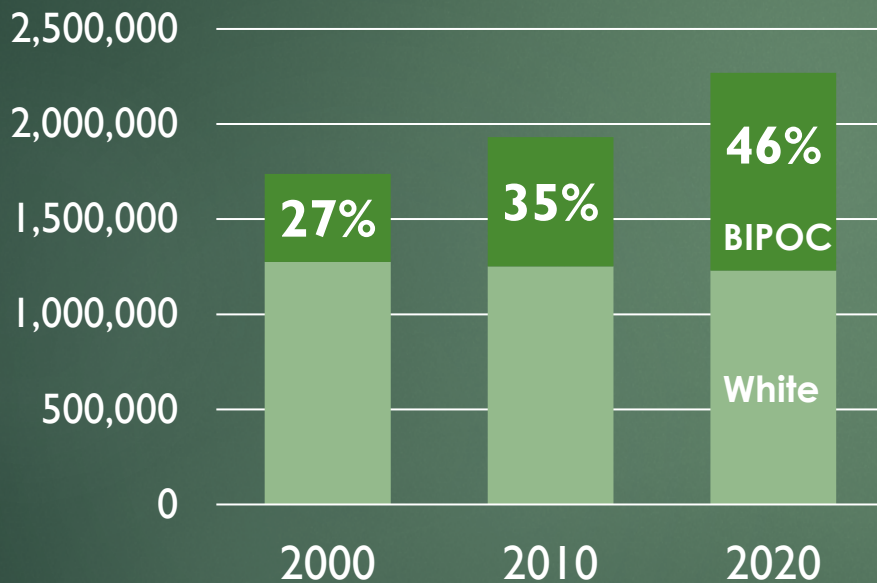


King County Countywide Growth 2010-2020

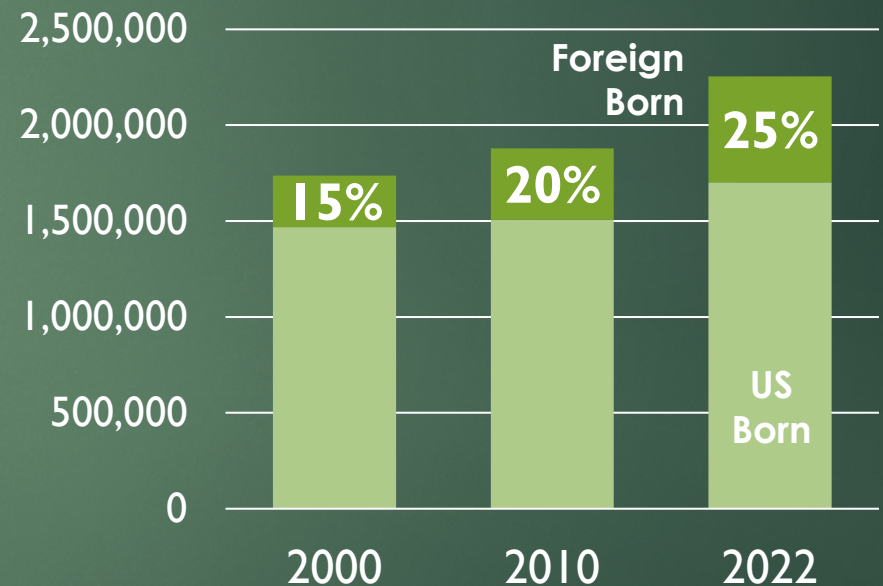
- 94% of population growth happened in cities
- 41% growth concentrated in central King Co.
 - 28% South County
 - 31% East County
- Fastest growing cities:
 - Redmond 34%
 - Milton 34%
 - Snoqualmie 32%
 - Issaquah 32%
 - North Bend 29%
 - Newcastle 25%
- Most Growth*:
 - Seattle 128,300
 - Bellevue 24,000
 - Redmond 18,700
 - Kent 18,100
 - Renton 14,700
 - Auburn 14,500

Increasing Diversity

100% of net population growth
2010-20 was in Communities of
Color, particularly Asian, Hispanic,
and Multiracial communities



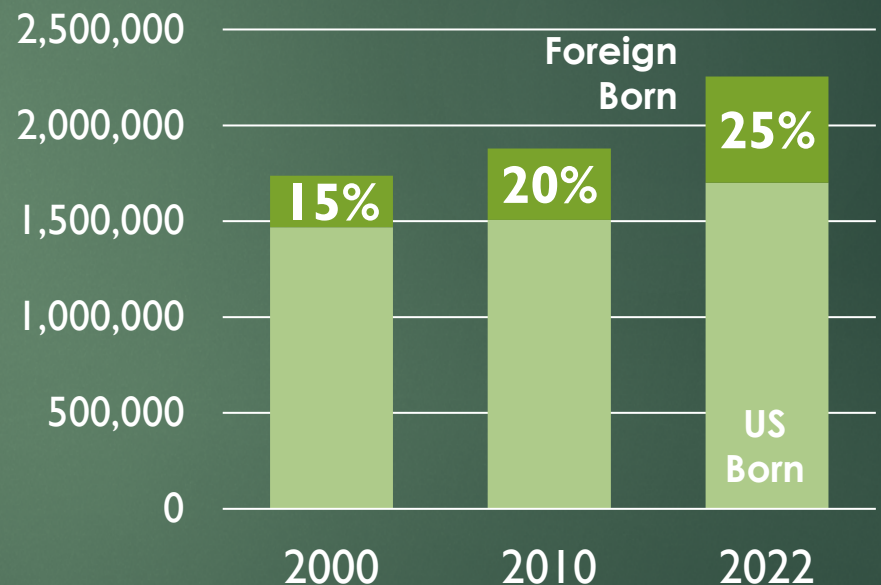
King County Residents born
outside the US increased 48%
2010-22



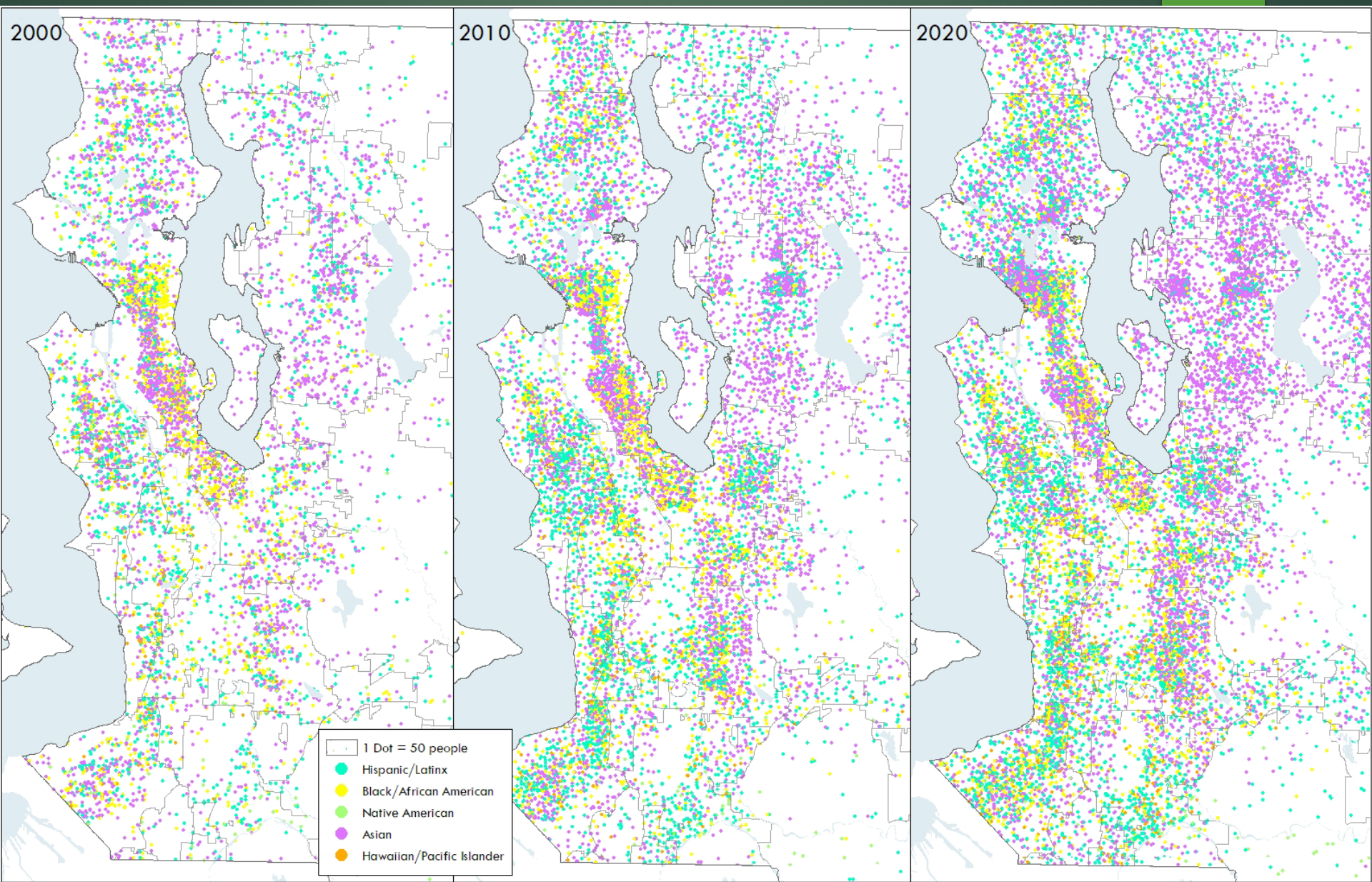
Increasing Diversity

- Top 5 places of birth **2010**:
 - Mexico: 52,500
 - China: 41,400
 - Vietnam: 29,600
 - India: 27,500
 - Philippines: 26,800
- Top 5 places of birth **2022**:
 - China: 84,800 +105%
 - India: 75,900 +176%
 - Mexico: 54,000 +3%
 - Vietnam: 34,500 +17%
 - Philippines: 32,000 +16%
- Places with notable growth:
 - Eastern Africa (33,200 +66%)
 - Eastern Europe (41,500 +31%)

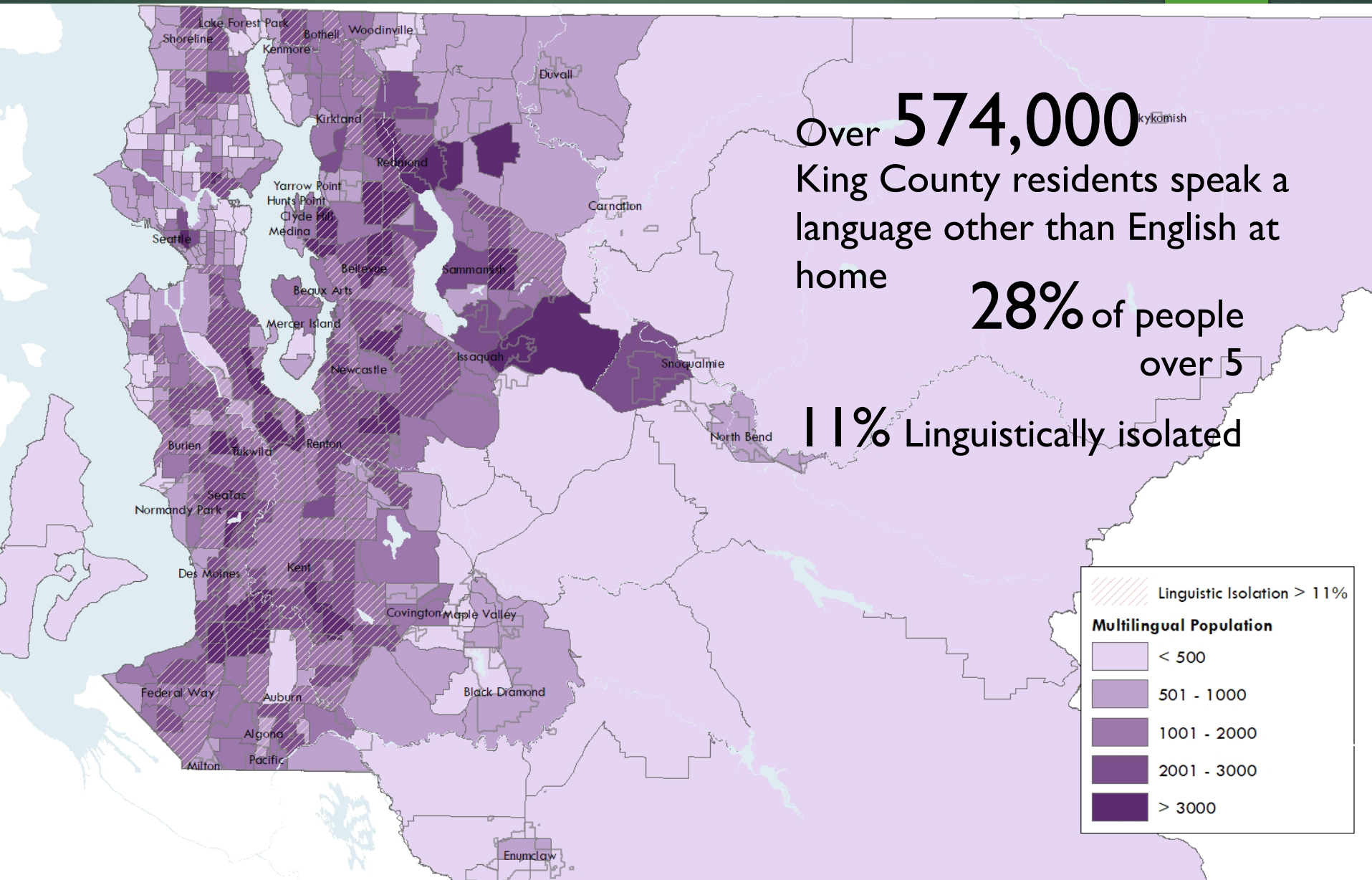
70% of immigrants and refugees who moved to King County between 2010-22 were born in Asia

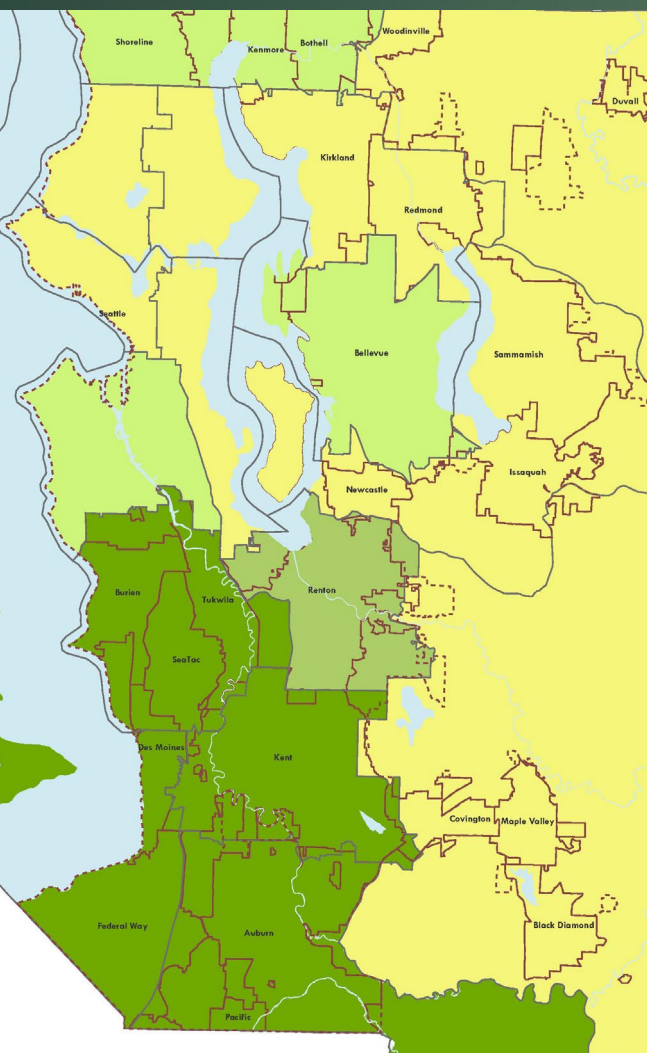


Population by Race and Ethnicity

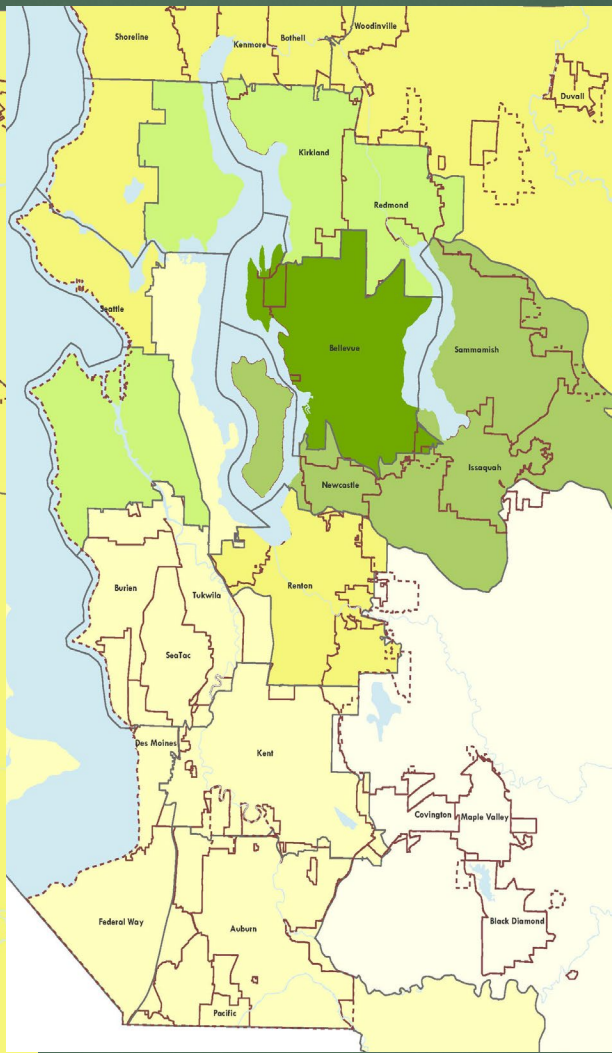


Multilingual Population

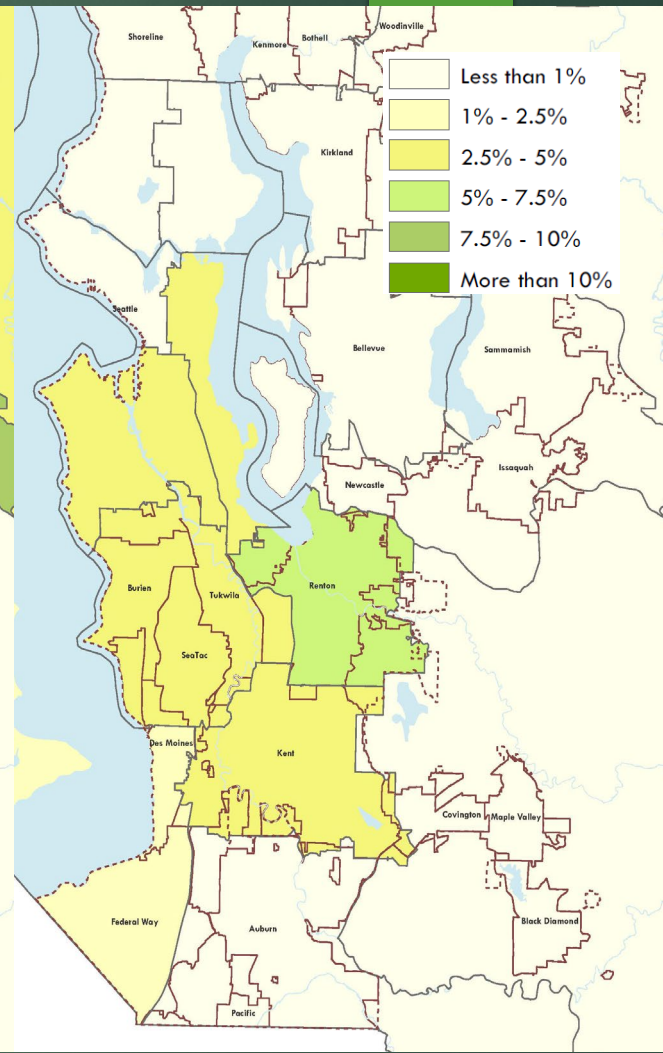




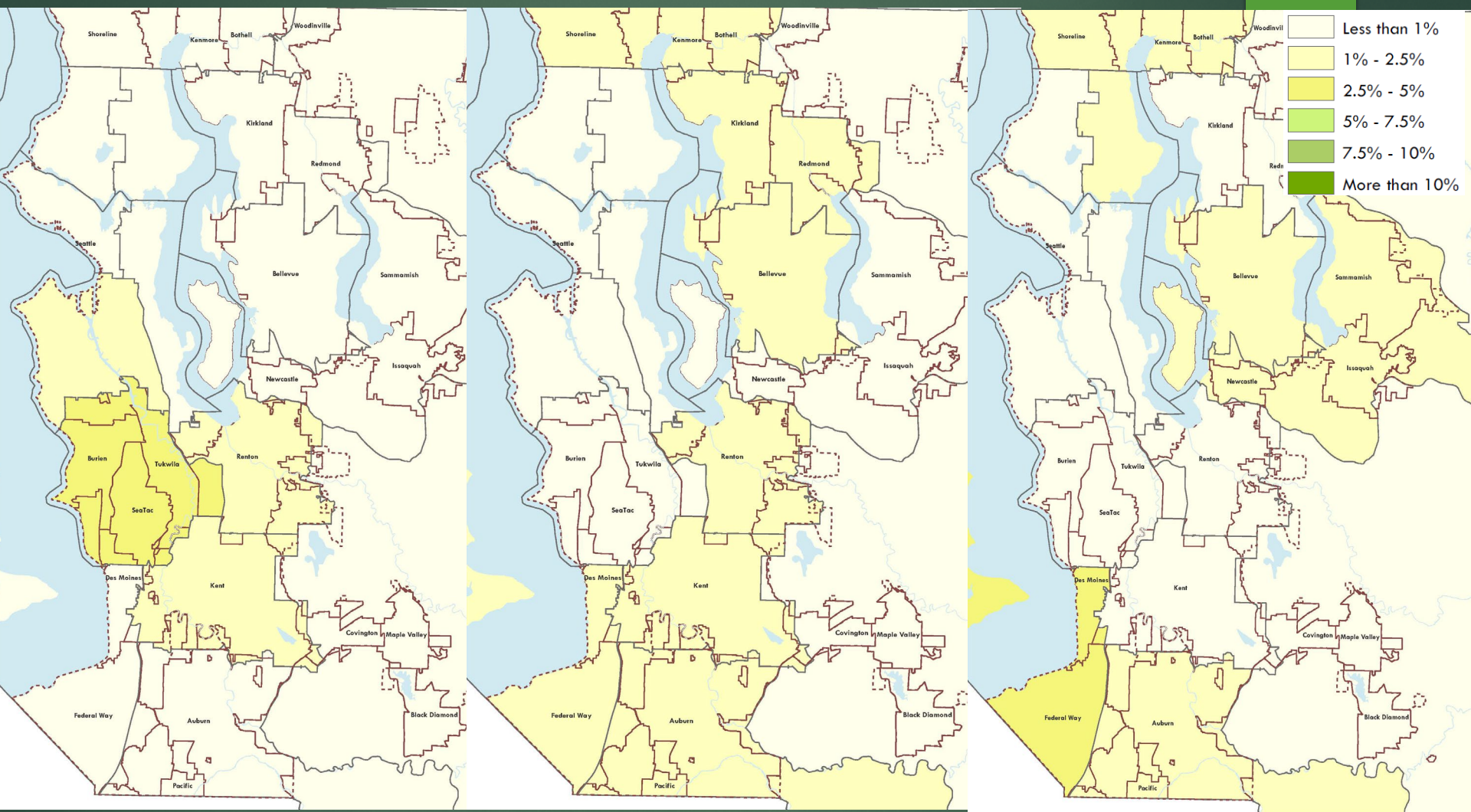
Spanish Speakers



Chinese Speakers



Vietnamese Speakers



Somali Speakers

Russian Speakers

Korean Speakers

Age Trends

Median Age in King County: 37.2

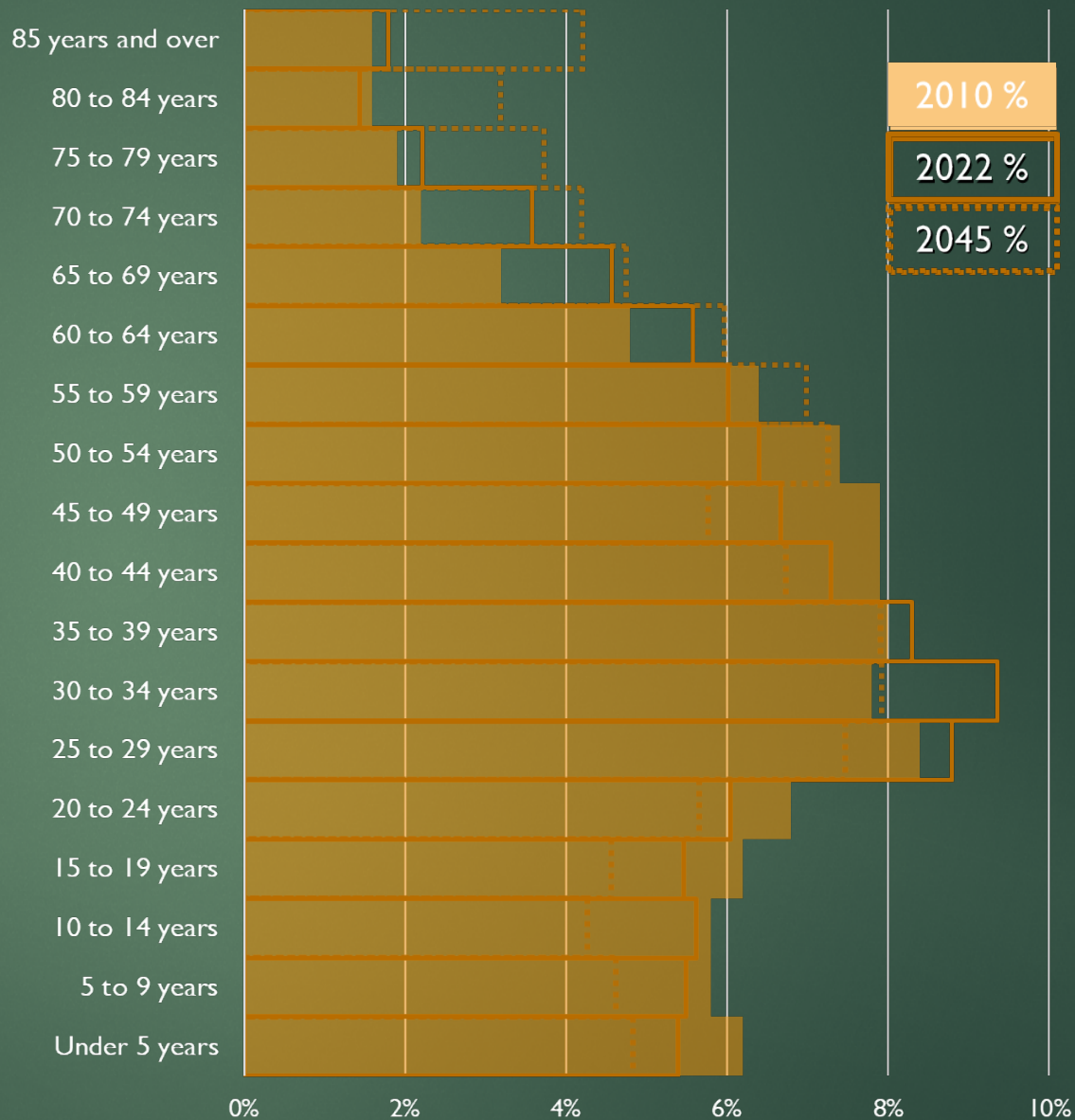
- ▶ Median ages for BIPOC residents are younger

In 2020:

- ▶ 20% of people were under 18
- ▶ 13% of people were over 65

In 2045:

- ▶ 18% under 18
- ▶ 20% over 65



Household Trends

King County median household size:
2.42 persons/household

- ▶ Relatively stable, forecasted to decrease

Multigenerational households make up 7% of King County households


- ▶ 13% of households in South King County

Same-sex couples represent 2% of King County households

- ▶ This is an undercount of LGBTQIA+ residents

Average Household Size





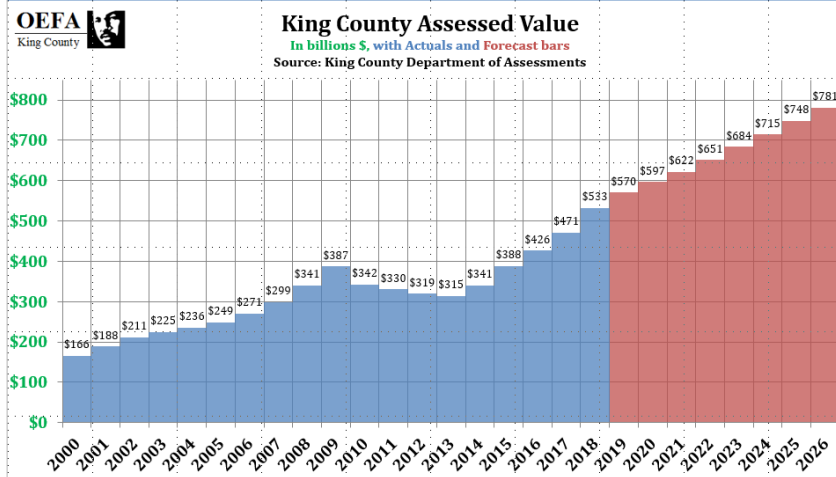
Financing the Medic One/EMS System

RCW 84.52.069 - EMS Levy statute

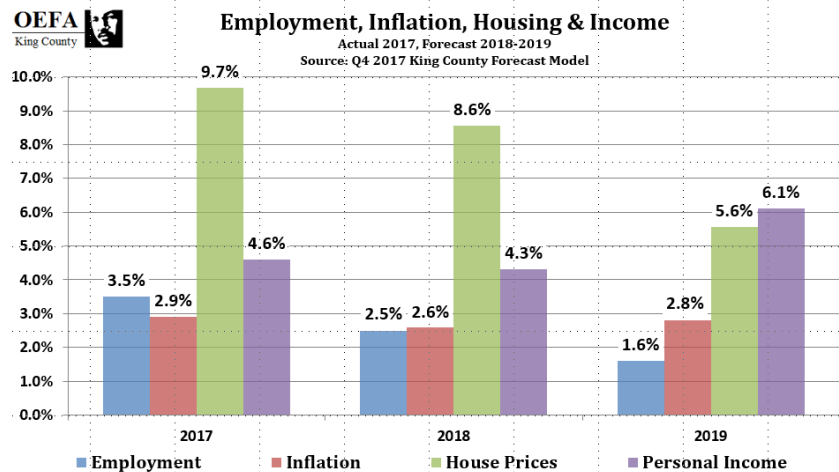


...a taxing district may impose additional regular property tax levies in an amount equal to fifty cents or less per thousand dollars of the assessed value of property...

King County Assessed Value



The KC forecast for 2018-2019 calls for growth but at a little slower pace



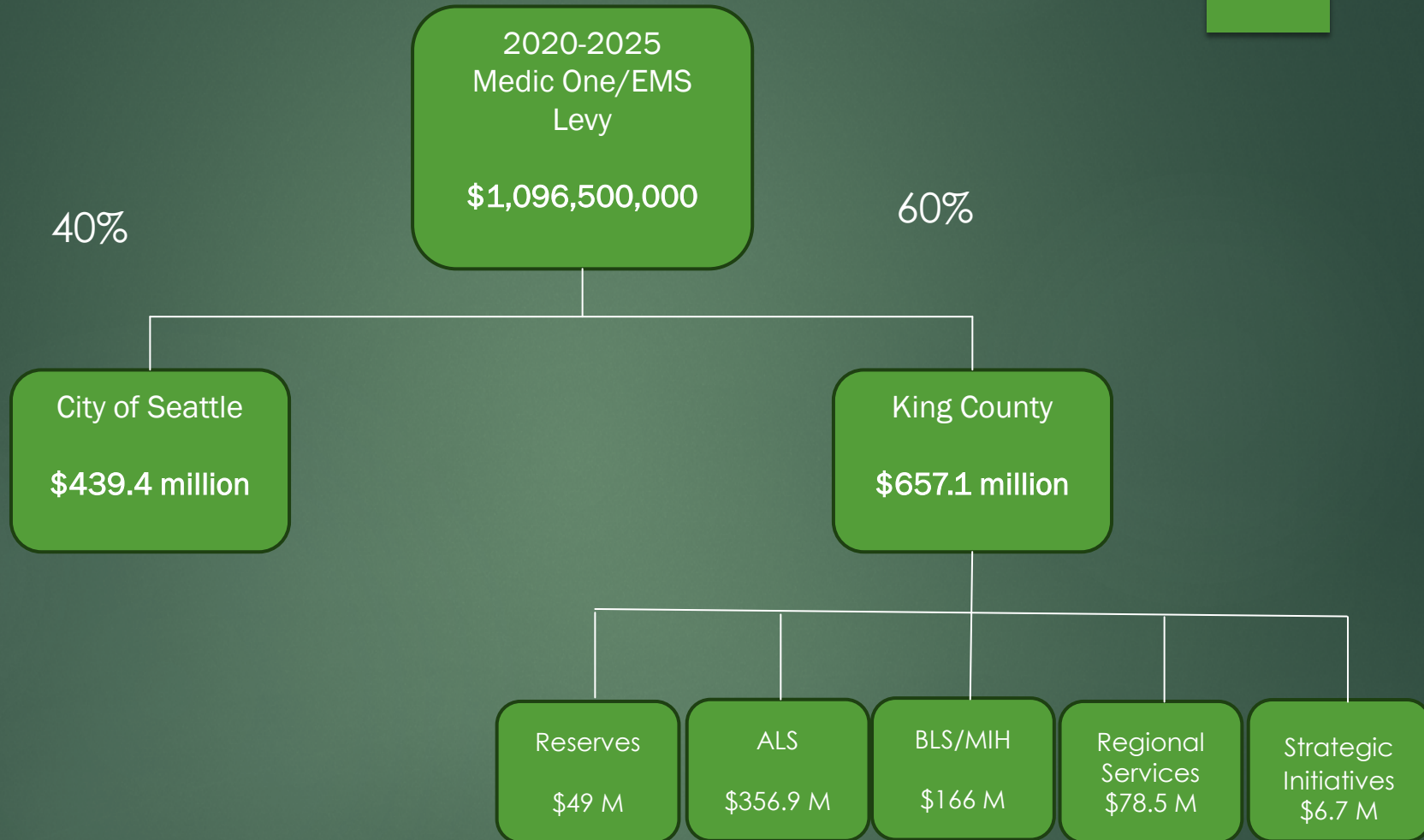
Planning the 2020- 2025 levy

2020-2025 Medic One/EMS Overview

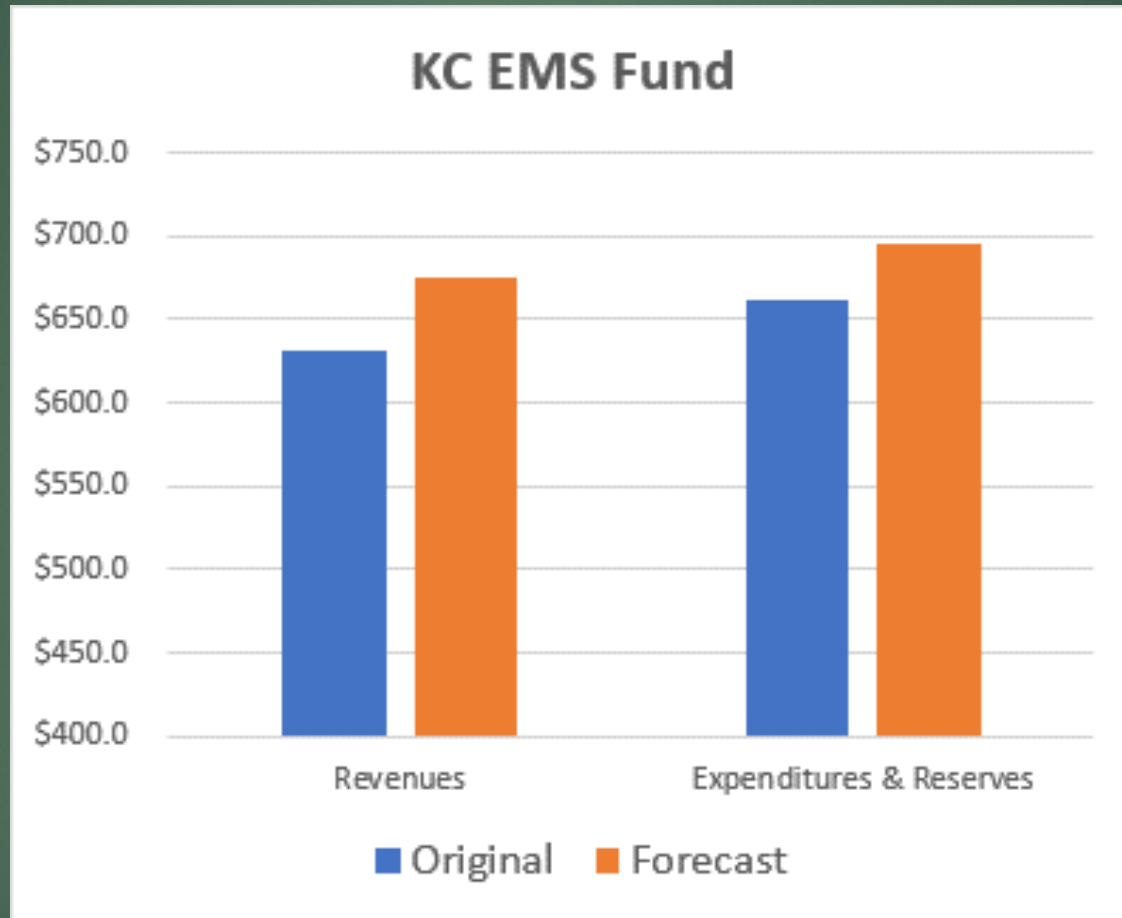
- **6-year levy**
- **Starting rate of 26.5 cents/\$1,000 AV**
 - As AV increases, levy rates decrease:
 - 2021 levy rate: 26.5 cents
 - 2022 levy rate: 24.8 cents
 - 2023 levy rate: 20.9 cents
 - 2024 levy rate: 22.7 cents
- **Annual cost to the homeowner: \$193***
- **Will generate \$1.1 billion over 6 years**
- **Seattle and King County split**

* \$730,000 King County median home price in 2020 per UW Washington Center for Real Estate Research

The 2020-2025 Levy Plan



Original vs Forecast Revenues and Expenditures - 2020-2025 levy



EMS Levy as a Funding Source



\$167 on average in 2023