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Statins and Beyond

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KAISER PERMANENTE

Statins and Beyond

- Heart attacks, strokes, and other CV complications are largely preventable.
- Screening, lifestyle, and medicines together help members live longer, healthier lives.
- Optimizing statin use and adherence is high yield, and there is room for improvement in KPSC.
- Recent evidence and guidelines show opportunities beyond statins for CV Prevention.

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MIs are preventable! Keep trend going down

Age and Sex Standardized Incidence Rates of Acute MI per 100,000 Person Years in KPSC

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Reading SR, et al. *Circ: Cardiovasc Qual Outcomes.* 2017;10(Suppl 3):A061.

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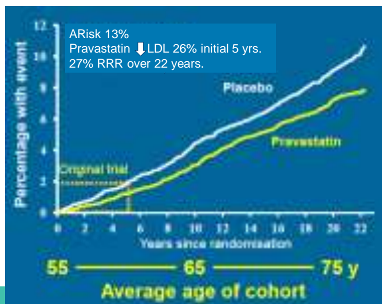
Million Hearts Key Messages:

- "Heart disease and stroke are preventable, yet they remain leading causes of death, disability, and healthcare spending in the US."
- "High yield **ABCS**: **A**spirin use when appropriate, **B**lood pressure control, **C**holesterol management, and **S**moking cessation."

KPSC: Screening, Lifestyle, and Medicines together can help people live longer, healthier lives.

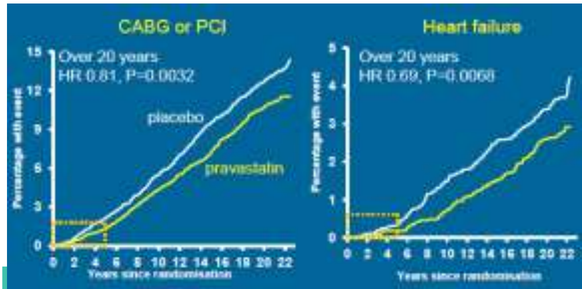
JUPITER Primary Endpoint: MI, Stroke, UA/Revascularization, CV Death

"Legacy Effect" benefits 20 years later, CHD Mortality



Packard et al
AHA 2014
WOSCPS

20 yr "Legacy Effect" on revascularizations + HF



Statin Impact, primary prevention

Randomized Clinical Trial	ARisk	RRR	NNT
MEGA Prava 10-20 mg, **LDL -17%**	**5.1%**	24%	**82**
AFCAPS Lova 20-40 mg, **LDL -27%**	**6.9%**	26%	**56**
JUPITER Rosuva 20 mg, **LDL -50%**	**7.6%**	44%	**25**
ACC Guideline "High Intensity" **LDL -50%**	**10%**	45%	**22**

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Preferred LDL lowering options

Medicine	% LDL lower	Medicine	% LDL lower
Rosuva 40 mg	63	Atorva 80 mg	53
Rosuva 20 mg	55	Atorva 40 mg	48
Rosuva 10 mg	47	Atorva 20 mg	41
Rosuva 5 mg 2x/week (Mon, Thurs) + ezetimibe			40

Rosuvastatin effective, inexpensive, great safety.
(For GFR <45, use atorvastatin)

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More LDL lowering → Lower CV event rate

Lowering LDL-C from median 63 to 21 reduced events without additional harms.

Sabatine et al. JAMA 8/1/18

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EWTOPIA75

RCT: 3,796 Japanese, age ≥75, 1 RF, no statin

(Sudden cardiac death, myocardial infarction, PCI or CABG, and/or stroke)

mean LDL-C
Control group 144
Ezetimibe group 126

Hazard Ratio:0.659 (95% CI, 0.504-0.862)
ARisk 15%, RRR 34%

Control group
p=0.002
Ezetimibe group

Incidence of the primary outcome
0.15, 0.10, 0.05, 0.00
Years
0, 1, 2, 3, 4, 5

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2019 KP Guidance draft (statins, ezetimibe)

Clinical ASCVD (age ≤75)

- Start rosuvastatin 20 mg daily (R20), aim for ≥50% reduction in LDL levels.
- If LDL remains ≥70 mg/dL on maximum tolerated statin, consider ezetimibe.

LDL >=190 (age 20-75)

- Start R20, aim for ≥50% reduction in LDL levels.
- If achieve <50% reduction, and/or LDL ≥100 mg/dL on maximum tolerated statin, consider ezetimibe.

As age to ≥76 years, shift to consider statin. For GFR <45 use atorvastatin.

DM (age 20-75)

- Age 40-75, KPARE ≥7.5% and LDL ≥70, R20.
- Age 40-75, KPARE <7.5% or LDL <70, R10.
- Age 20-39 with DM of long duration, or with complication, consider R10.
- If statin intolerance or low response, and KPARE ≥7.5%, consider ezetimibe.

By Risk (age 40-75, LDL 70-189)

- KPARE ≥10%, R20
- 7.5-9.9%, consider R20.
- 5-7.4%, consider discussing R10.
- If statin intolerance or low response, and KPARE ≥7.5%, consider ezetimibe.

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KPSC strategies

- In KPSC for ASCVD, start most on rosuvastatin 20 mg daily. After 4 – 12 weeks lipid panel.
  - if LDL ≥70, increase R20→R40 if no safety concerns. If still LDL ≥70 on max tolerated statin, consider ezetimibe.
- Ezetimibe acquisition cost <$50/year, generic.
- Statin only guidance promotes “fire and forget” tactics, decreases adherence. Follow up lipid panel to see if qualify for intensification of therapy promotes adherence.

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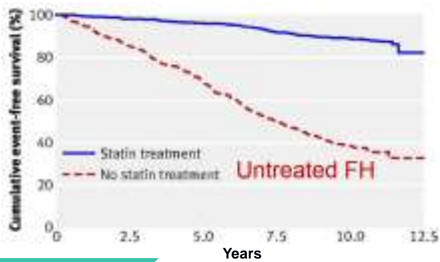
Statins Severe Hypercholesterolemia (LDL ≥190)



BMJ 2008; 337:a2423

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Feedback, show lipid trends

- Rosuvastatin 20 mg lowers LDL about 50%.
- Use lipid panel trends to promote adherence, celebrate results.
- Measure Lipid Panel 4-12 weeks after change in therapy, and annually thereafter in people on therapy.

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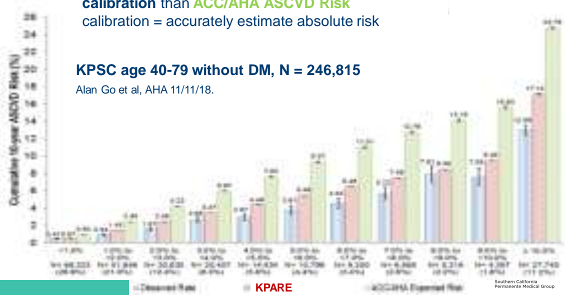
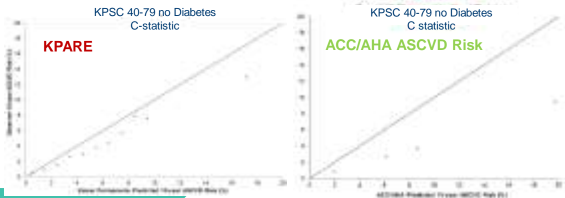
KPARE (**KP ASCVD Risk Estimator**) with better **calibration** than ACC/AHA ASCVD Risk
calibration = accurately estimate absolute risk

KPSC age 40-79 without DM, N = 246,815
Alan Go et al, AHA 11/11/18.



KPARE (KP ASCVD Risk Estimator) with better discrimination than ACC/AHA ASCVD Risk
Discrimination = correctly sorts higher vs. lower risk adults

- **KPARE includes Hispanic and Asian/Pacific Islanders options.**
- **NRI (Net Reclassification Index) improved 21% KPNC, 24% KPSC, 33% KPNW, 24% Ontario, Canada.**



Alan Go et al, AHA 11/11/18.

KPARE in KP clinician guides

- KP Aspirin, Blood Pressure, and Cholesterol (ABC) clinician guides with **KPARE** posted on KP Clinical Library.
- **KPARE** of **10%** correlates approximately with ACC Risk of 16% at the population level, and ~ SPRINT inclusion criteria.

KPARE use in care:

- **A**spirin: **KPARE ≥10%,** age 40-59 → consider aspirin.
- **B**lood Pressure: **KPARE ≥10%** → consider SBP <130 mm Hg.
- **C**holesterol: **KPARE ≥10%** → treat with statin; 7.5-9.9% consider statin; 5-7.4% consider discussing statin.
- Controlled clinical ASCVD 10-yr event rates ~15%.

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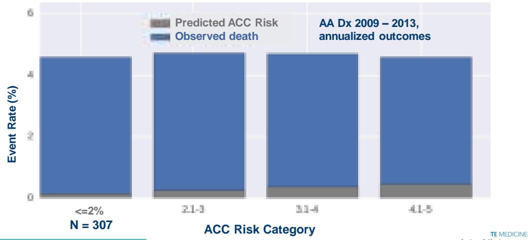
Observed Death Rate in KPSC Aortic Atherosclerosis is high (even when predicted ACC risk is very low)



Brar, et al, AHA 2016

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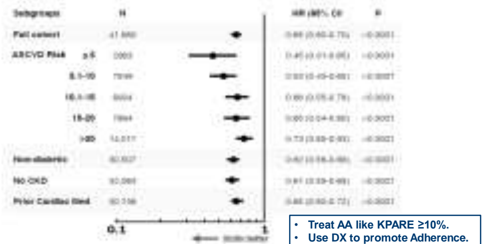
Statin Users With Lower Mortality Aortic Atherosclerosis in KPSC



Brar, et al, AHA 2016

CMS and NCQA Statin Metric Overview:

CMS (mostly age ≥65, pharmacy claims)

- Statin Adherence:
  - Filled statin twice in the last year, **regardless of indication**.
  - Numerator: PDC ≥80%
- SUPD – Statin use in Persons with Diabetes,
  - includes those without DM filling metformin.
  - Numerator: Filled any statin in last year
- Myalgia coding does NOT exclude.
- **Triple weighted in 5 STAR evaluation, impacts reimbursement and year round enrollment status.**

NCQA / HEDIS

- ASCVD: m 18-75, w 40-75 years old.
  1) Filled mod to high intensity statin in last yr
  2) PDC ≥80%.
  - Does not include aortic atherosclerosis
- DM: 40-75 years old.
  1) Filled any statin in last year
  2) PDC ≥80%
- Myalgia code at face to face visit during the calendar year excludes a member.

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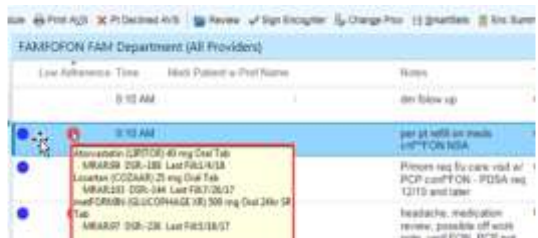
Coding "Myalgia" at face to face visit each year excludes from NCQA metrics (not CMS)

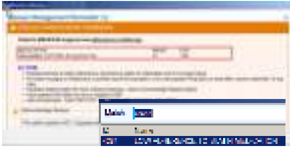
- ASCVD or DM missing statin is high risk with opportunity for improved care. At visit can work myalgia cofactors / statin barriers, and code exclusion as appropriate.
- Mark myalgia with chronic pushpin, and place in top 6 of problem list to This facilitates annual coding as appropriate.
- **"Allergy"** to statin does NOT exclude from NCQA nor CMS metrics.

schedule low adherence column



Proactive Care / POE flag

Statin Adherence BPA



.pistatinsp, In Spanish too!

Adherence Tactics (1 of 3)

- Leveraging BPA in encounters (Office Visits, TAVs).
- Impart risk of disease, benefit of medicine using artery graphic. Most KPSC nonadherent members believe statins will do more harm than good.
- *"To help keep arteries open" "To reduce risk of heart attack, stroke" "To help live a long healthy life"*
- Measure Lipid Panel 4-12 weeks after change in therapy, and annually thereafter.

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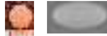
Adherence Tactics (2 of 3)

- Use "golden opportunities" when more receptive to behavior change: new diagnosis (ASCVD, Diabetes).
- Explore adherence **Barriers**. Promote dialogue if they hit barriers (myalgia).
- Atorvastatin and rosuvastatin very long acting, can take any time of day. With or without food, other medicines, or coffee. Help plan a consistent routine.
- Couple stopping aspirin for primary prevention age $\geq$70 with increased statin adherence to reduce MI, strokes.
- Grapefruit juice: Rosuvastatin: may have as much grapefruit juice as like. Atorvastatin may have up to 1 qt daily – I tell people 1 serving.
- Pillbox "gift" builds bond. Train to use and learn from.
- R20 smaller, easier to swallow than A40.



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Adherence Tactics (3 of 3):

- Promote 100 day supply! Easier to fill less often.
- Promote mail order pharmacy.
  - No line to wait in, free shipping, correlates with better adherence, outcomes, and member satisfaction.
  - Many members get 100 day supply for cost of 2 monthly copays.
- Medical Financial Assistance – 6 months no copay for (<$42,210 annual for 1). .mfa with local number and thresholds.
- Pill / hassle burden: try to use one pill once a day.
  - Change from 2 tabs or ½ tab to 1 tab to make easier.
  - Ensure sig and quantity match what member is doing to improve performance.

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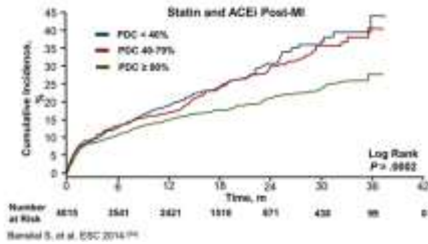
Time to MACE by Adherence Levels



Myalgia

- Often “multifactoral”. Can treat hypothyroidism, low vitamin D, pain syndromes, and depression to improve statin tolerance / adherence.
- “Nocebo effect” patients with past statin intolerance, randomized to placebo or statin. > 25% of each reported muscle pain.
- Post MI patients have much higher rates of statin tolerance. Shows importance of understanding benefit of medicine.
- Not tolerated protocol: R20→ R5 daily→ R5 twice/WEEK→stop statin and start ezetimibe.

Statin benefit outweighs risk of glucose rise

JUPITER → Rosuvastatin 20mg daily:

- In those **without** RF for DM: 86 CV events prevented, and 0 cases of new DM.
- In those **with** RF for DM: 134 CV events prevented (MI stroke, death) and 54 new cases of DM. (28% increase)
- 40 day acceleration of progression to DM in those with prediabetes.

Compare to: **55%** reduced MI; **44%** reduced combined endpoint; **20%** lower mortality.

Lancet 2012; 380: 565-571.

Aura tool drives smartphrases, BPAs

KP ASCVD Risk Estimator (KPARE)

KPARE (ARisk): 16.7% .kpare, .arisk

KPARE (ARISK)
KPARE (ARisk): 16.7% .kparerec, .ariskrec
Recommend starting Rosuvastatin 20mg daily
Patient has not had AST/ALT drawn in the last 2 years, consider ordering appropriate blood work.

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Aura – clinician view

KPARE Model Detail

Estimated 10 year risk for MI and/or stroke

14.8%

INTERPRETATION

Model Information

KP ASCVD Risk Estimator (KPARE)

Patient Variables

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Aura – Patient View

What is my 10 year risk for ASCVD?

KP ASCVD Risk Estimator (KPARE)

Current Risk of having a heart attack or stroke within the next 10 years

Future Risk with Treatment of having a heart attack or stroke within the next 10 years

85

15

85

8

7

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Aspirin guidance (current draft)

- Age 40-59 with KPARE >10%, consider aspirin to prevent ASCVD (low % of members).
- Age 60-69, no recommendation for or against aspirin therapy.
- Age >70, stop or do not start aspirin for primary prevention of ASCVD.
- In those at increased risk of bleeding, stop or do not start aspirin for primary prevention of ASCVD.
- In clinical ASCVD, use thrombus prev, (such as aspirin)

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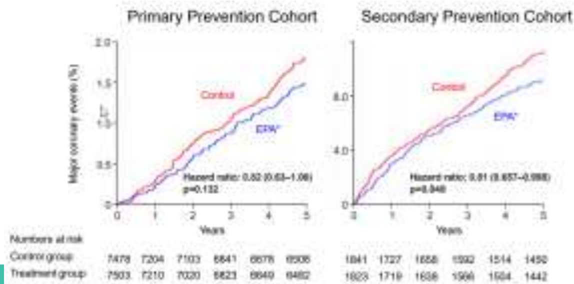
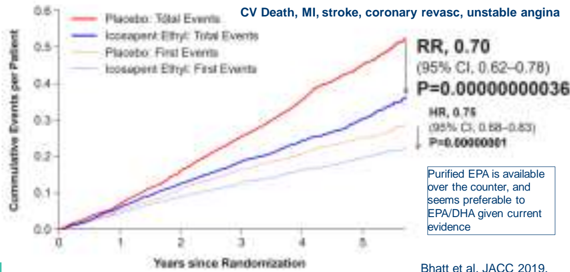
JELIS Purified EPA, 1.8 gms, added to statins

Yokoyama et al. Lancet 2007



REDUCE-IT: Purified EPA, 4g in TG>150



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