



# Clinical Application of a Solution Set of Clinical Decision Support Tools Improves Quality of Care in Hyperlipidemia Patients: Baseline Results from the statewide Florida Cardiovascular Quality Network

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## BACKGROUND

In patients with hyperlipidemia (HL), there is a need for improvement in quality of cardiovascular (CV) care in the out-patient clinic.

The Florida Cardiovascular Quality Network-HL (FCQN-HL) Hypothesis: The systematic utilization of a specific HL Solution Set with clinical decision support (CDS) apps at the point of care will assist in provider clinical decisions and improve patient quality of care.

## OBJECTIVES

FCQN-HL Objectives

- (1) In HL patients, the systematic use of a HL Solution Set at the point of care will increase provider and patient awareness of CV risk (ASVD Risk and U-Prevent calculators).
- (2) In HL patients, the systematic use of a HL Solution Set at the point of care will assist providers to improve adherence with guideline-based care. (LDL Manager, Statin Intolerance).
- (3) An interactive visual patient education app utilized at the point of care will improve understanding of HL, ASCVD disease, lifestyle modifications, importance of medication adherence, and improve overall CV risk profile (ACC Cardiosmart app).

## METHODS

The FCQN-HL is a prospective quality outcomes registry. In eight diverse clinical sites in Florida, a large number of patients referred for CV evaluation of HL were enrolled in this pilot state-wide quality project. Providers utilized a mobile platform (iPAD) at the point of care in a systematic protocol that directed application of multiple CDS apps – known as a “HL Solution Set”. The HL Solution Set apps including the following: ASCVD Risk Estimator, U-Prevent, LDL Manager, Statin Intolerance and ACC Cardiosmart.

The FCQN-HL is based on the 2018 ACC guidelines for evaluation and treatment of HL patients.

## METHODS

FCQN-HL Clinical Sites

Statewide Clinical Sites with HL Interest  
National IRB Oversight

Patients

n = 476 HL patients enrolled (to date)  
Group A = Primary Prevention, 259 pts  
Group B = Secondary Prevention, 217 pts

HL Solution Set Clinical Decision Support (apps)

ASCVD Risk Estimator - Primary Prevention  
U-Prevent - Secondary Prevention  
LDL Manager  
Statin Intolerance  
Cardiosmart Explorer

Clinic Visits: Baseline, 3 M, 6 M, 12 M  
iPAD utilization of all apps at each visit  
Clinical data with secure iPAD -> cloud

## Clinical Decision Support Apps



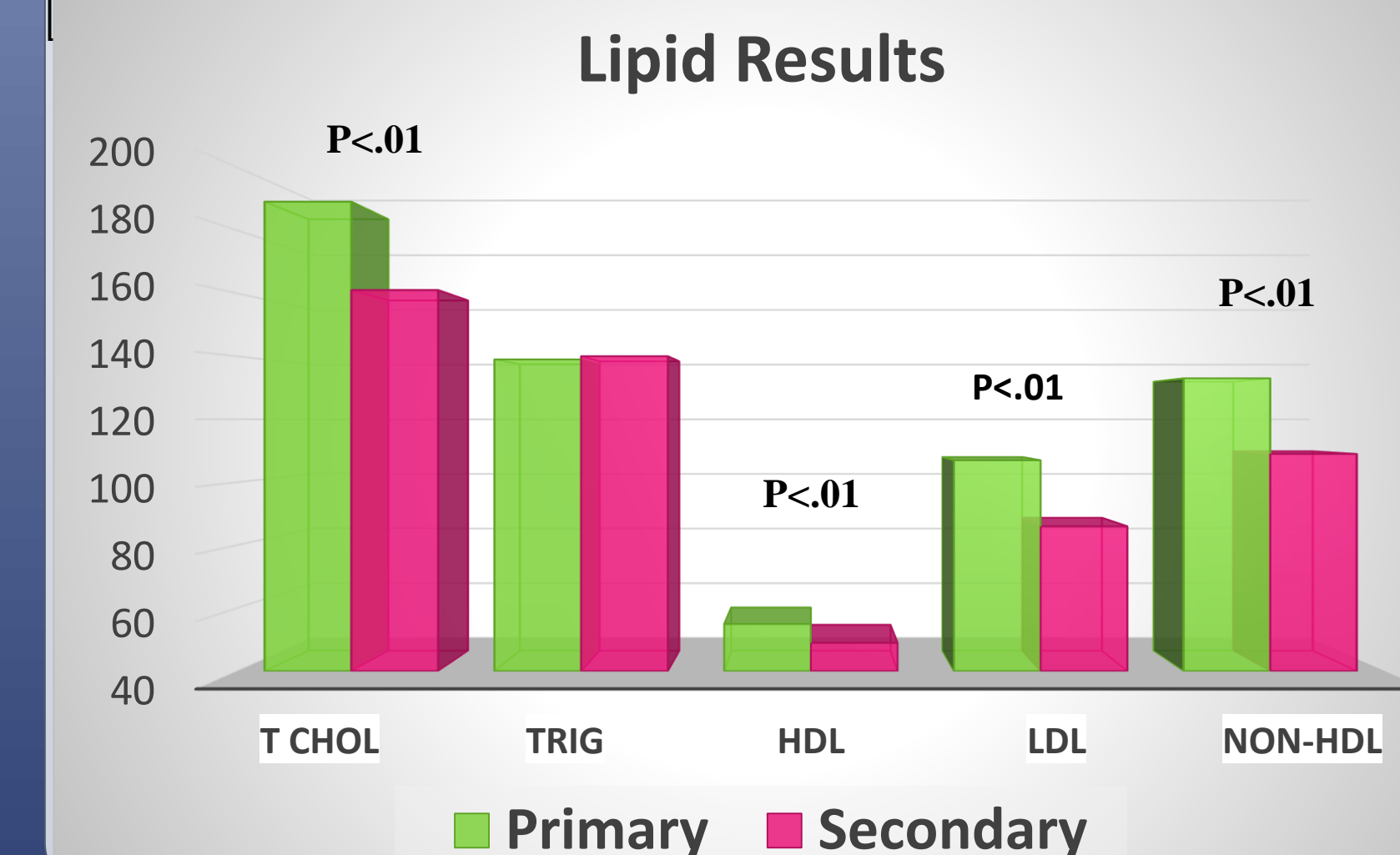
## RESULTS

### Baseline Demographics – Florida HL Registry

	Primary Prevention n=259	Secondary Prevention n=217	p
<b>Demographics</b>			
Age (mean)	65+/-14	71+/-10	<.001
Gender n (%)			<.01
Male	110 (42)	127 (59)	
Female	149 (58)	90 (41)	
<b>Risk Factors n (%)</b>			
Hypertension	186 (72)	186 (86)	<.001
Diabetes	60 (23)	78 (36)	<.01
Smoking	44 (17)	57 (26)	<.01
Family Hx CVD	101 (39)	98 (45)	ns
Obesity	122 (47)	81 (37)	ns
<b>BMI (kg/m<sup>2</sup>)</b>	30+/-6	30+/-6	ns

### Baseline Lipid Results

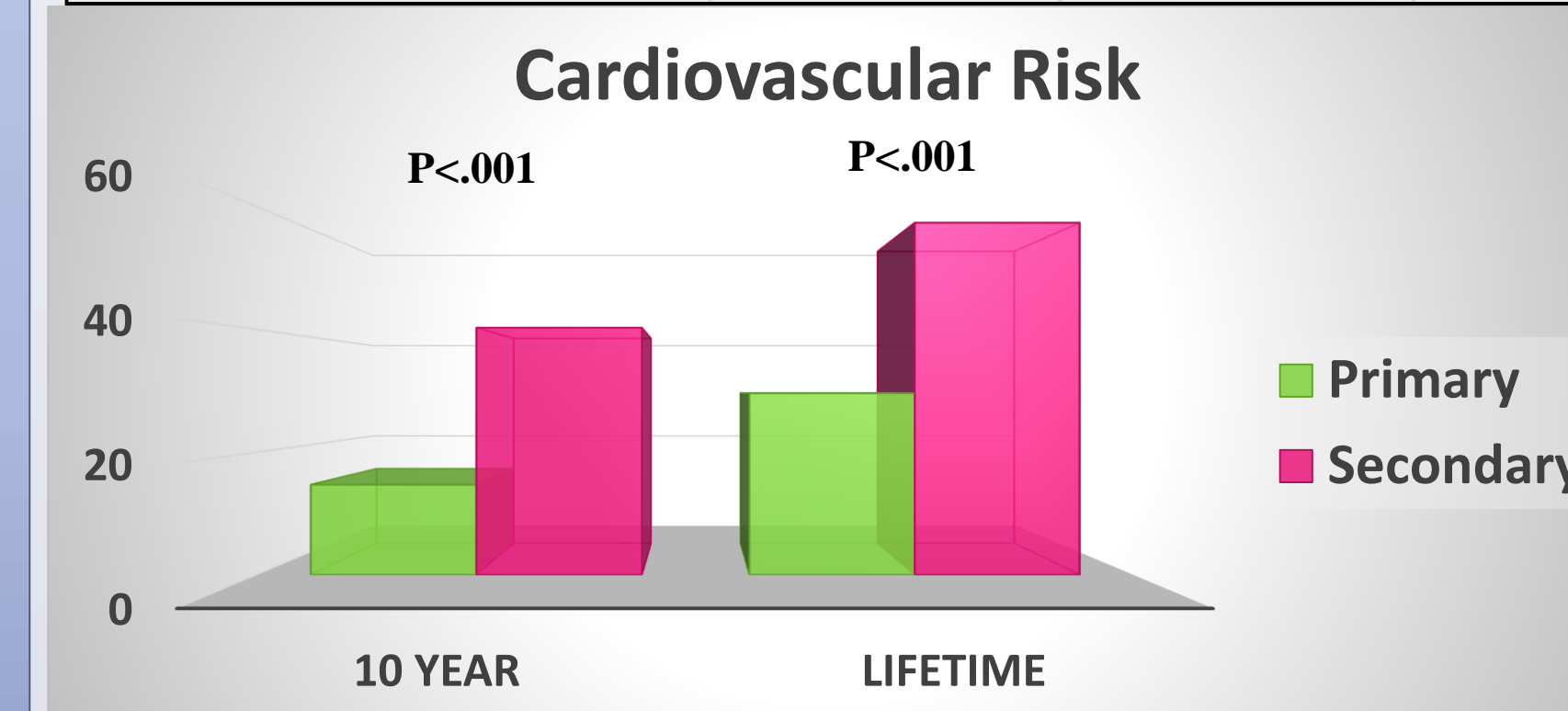
	Primary Prevention n= 259	Secondary Prevention n= 217	p
<b>Lipid Results (mg/dl)</b>			
Total Cholesterol	189+/-50	161+/-48	<.01
Triglycerides	139+/-81	140+/-89	ns
HDL Cholesterol	55+/-16	49+/-14	<.01
LDL Cholesterol	107+/-43	86+/-40	<.01
Non-HDL Cholesterol	133+/-48	109+/-49	<.01



## RESULTS

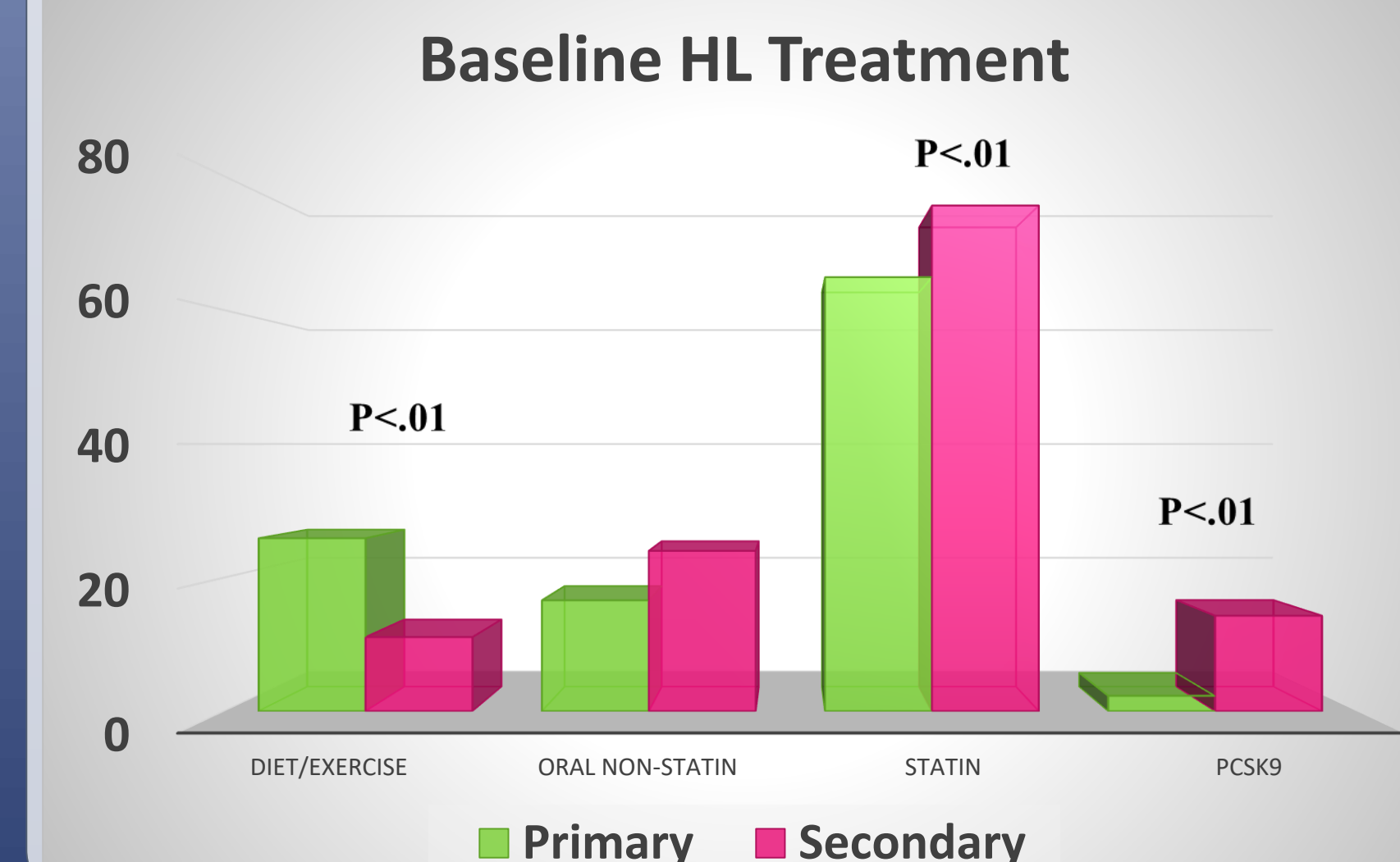
### Baseline Cardiovascular Risk

	Primary Prevention n=259	Secondary Prevention n=217	p
<b>Cardiovascular Risk (%)</b>			
10-Year Risk	15+/-12	40+/-15	<.001
Lifetime Risk	29+/-23	57+/-15	<.001



### Baseline HL Treatment

	Primary Prevention n =259	Secondary Prevention n=217	p
<b>Baseline Tx n (%)</b>			
Diet / Exercise only	67 (26)	24 (11.1)	<.01
Oral Non-Statins	43 (17)	52 (24)	ns
Statin	168 (65)	164 (76)	<.01
PCSK9	6 (2.3)	31 (14)	<.01



## CONCLUSIONS

- (1) The FCQN-HL state-wide quality registry demonstrates that in diverse clinical sites, utilization of a HL Solution Set of multiple CDS and patient education apps in a tablet format at the point of care has proven clinically feasible.
- (2) FCQN-HL registry baseline demographics, baseline lipid parameters, and baseline 10-year risk and lifetime risk identify a population of HL patients with a high risk for CV events.
- (3) The systematic utilization of a HL Solution Set facilitated appropriate decisions on guideline-based HL treatment as well as clinical assessment of drug efficacy and safety.
- (4) ACC CardioSmart was effectively used in HL patients to facilitate patient education and teaching with the goal of reduction of CV risk.
- (5) The FCQN-HL demonstrates an innovative system of care utilizing a novel systematic point of care application of a HL Solution Set with the objective to significantly improve overall CV quality of care.

## DISCLOSURES

Authors (Seals, Bramlet, Ziajka, Kienle, Freidrich, Maniscalco, Kreul, Failkow, Davis, Torricelli and St. Clair) have all reported that they have no disclosures relevant to the contents of this research presentation disclose.

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