

POINT OF CONTACT METERS

Validations of 3 Point-of-Service Meters

- **CardioChek** – compared to venous blood
 - Total Cholesterol
 - HDL
 - 90 people age 50+
- **Cholestech** – compared to venous
 - Lipid panel (Total cholesterol, HDL, LDL, Triglycerides)
 - CRP
 - 50 people age 45-85
- **Hemocue** – compared to DBS
 - Hemoglobin
 - 90 people age 50+

Cardiochek-PA – Total and HDL Cholesterol

CHARLS pilot

MXFLS



CardioChek - Total Cholesterol

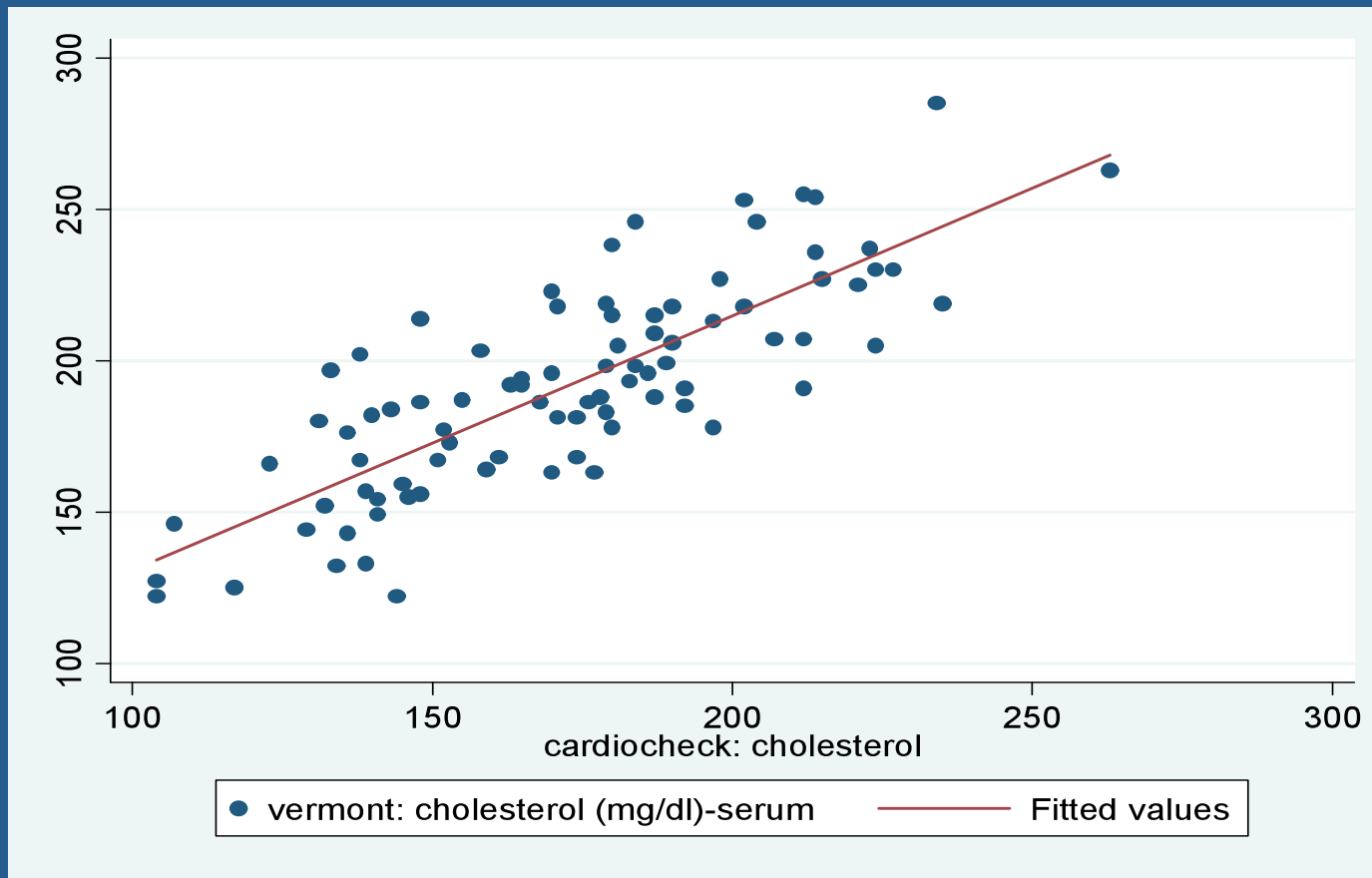
N=88

CardioChek mean=172.5, range 104-263

$R^2=0.65$

Venous

mean=191.7, range 122-285



CardioChek – HDL

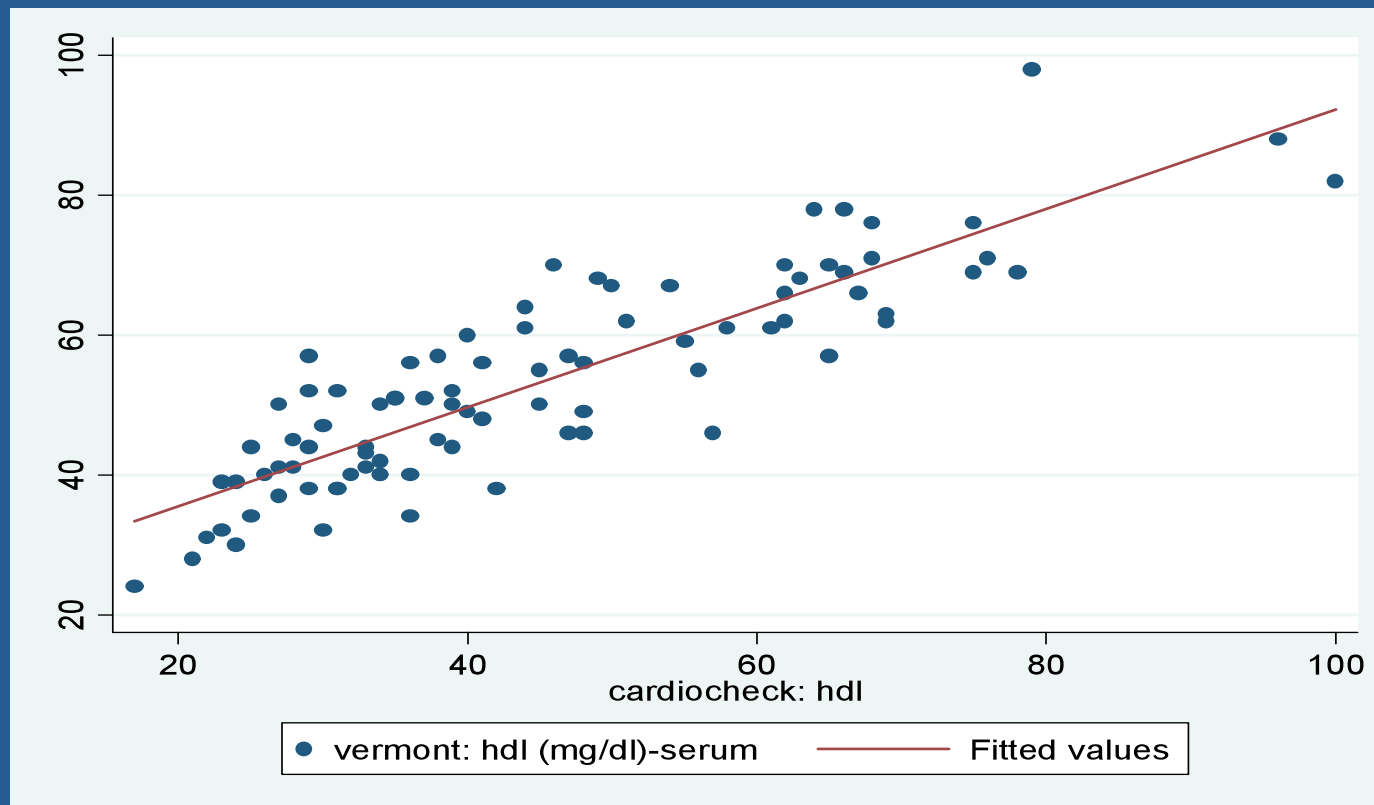
N=89

CardioChek mean=44.8, range 17-100

$R^2=0.76$

Venous

mean=53.1, range 24-98



CardioChek

- Comparability with venous is reasonable
- Portability excellent
 - Battery power possible
 - Unit and test cartridges lightweight
- Pipette collection system takes practice
- Cautions???? Josh Snodgras recommends replacing after 150 -200 uses

Cholestech

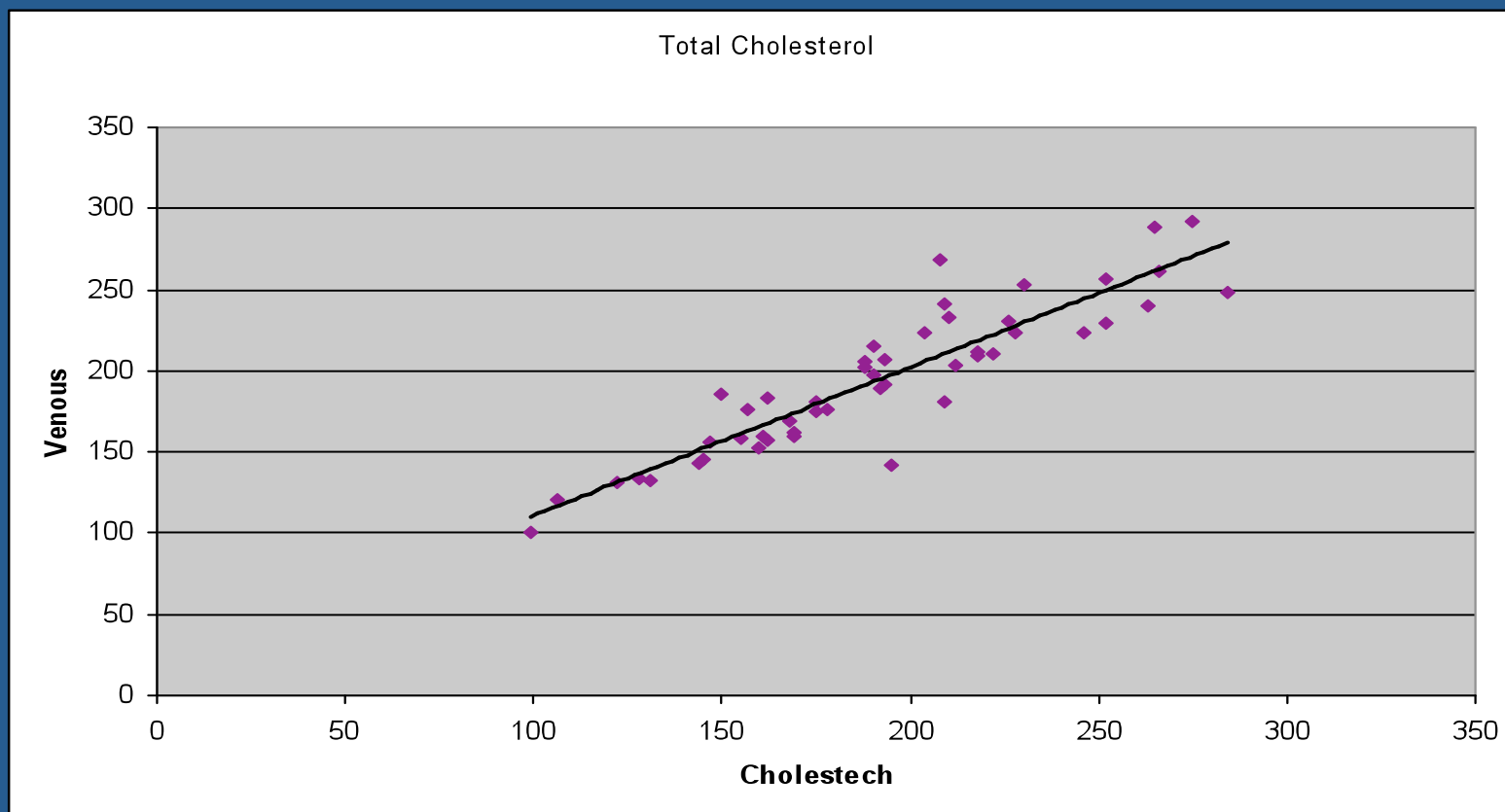


Total Cholesterol - Cholestech

$R^2=0.82$

Cholestech mean=191.6, range 99-284

Venous mean=194.7, range 101-292



Cholestech Summary

Measure	Cholestech Mean (Range)	Venous Mean (Range)	R ²
Total Cholesterol	191.6 (99-284)	194.7 (101-292)	0.82
HDL	46.5 (22-77)	50.6 (31-79)	0.72
LDL	103.2 (35-187)	109.7 (31-196)	0.88
Triglycerides	191.1 (60-487)	197.0 (55-551)	0.87
C-reactive Protein*	1.7 (0.3-5.1)	1.3 (0.2-3.9)	0.92

* Smaller sample due to change in lab assay

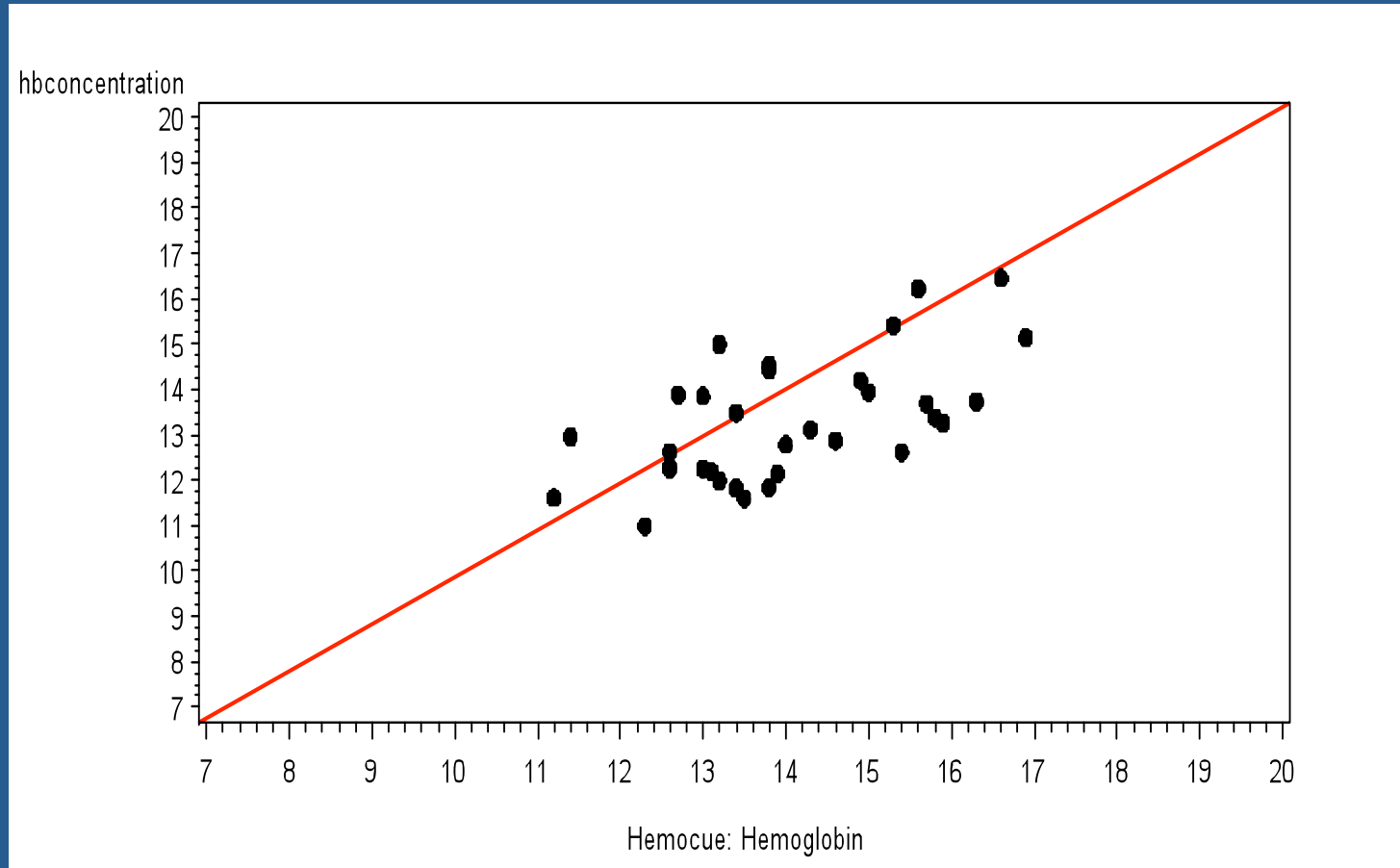
Cholestech

- Comparability with venous quite good
- Validation test occurred within community research clinic under ideal conditions
 - Air conditioning
 - Refrigeration available for test cassettes
- Field use less practical
 - Requires DC power (no battery pack)
 - Test cassettes can be costly
 - Control samples must be run each day of use (requiring test cassettes & control liquid)
 - Pipette collection system takes practice

Hemocue - Hemoglobin Analyzer



Hemocue Meter versus CHARLS DBS



Equation: Hemocue value = 5.4 + 0.7 x CHARLS value

R² for regression equation: 0.36

Hemoglobin – CHARLS DBS vs. HemoCue meter

	Average (SD) (mg/dL)	Range (mg/dL)
CHARLS DBS	13.3 (1.4)	11.0 - 16.5
HemoCue	14.0 (1.5)	11.2 – 16.9