

The RALS®-Report: U.S. Inpatient Glucose Levels in 2011

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OBJECTIVE:

Inpatient glucose management remains controversial with conflicting conclusions regarding the efficacy of controlling inpatient glucose levels, and the optimal range for various patient populations. Aggregate data from a national survey of U.S. hospitals were collected in order to gain insight into the current practice of regulating inpatient glucose. Medical Automation Systems, now known as Alere Informatics Solutions has been producing a national benchmark of inpatient glucose results since 2006. The latest data for 2011 are presented here.

METHOD:

Data were collected by streaming de-identified patient point-of-care glucose results over a secure connection to a central server located in Charlottesville, Virginia. Data from the nearly 700 participating hospitals were aggregated and parsed by ICU and non-ICU patients to provide participants with a benchmark of their hospital's results compared to the aggregate.

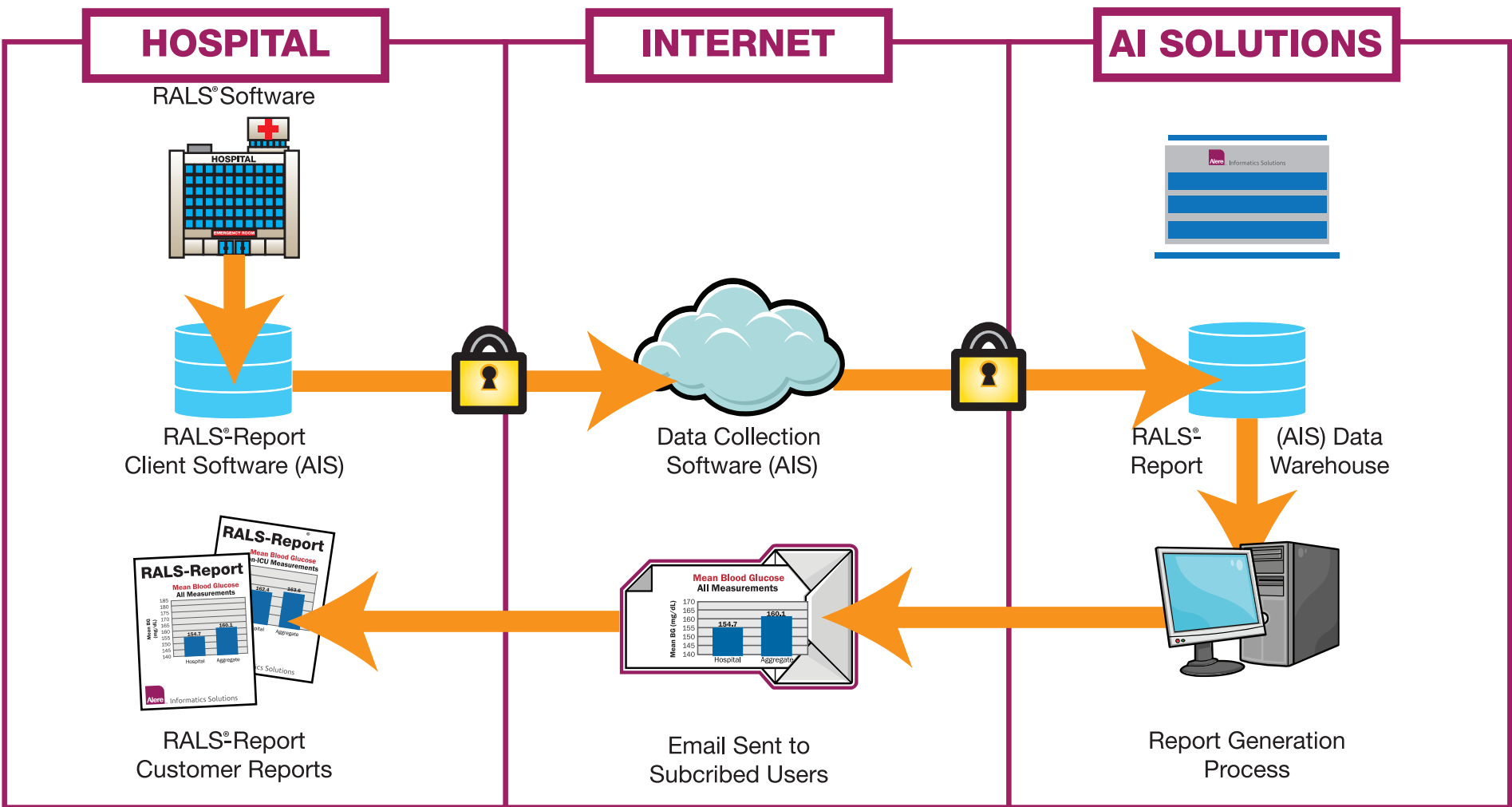
RESULTS:

The Remote Automated Laboratory System (RALS®- Report) database has approximately 1 billion inpatient data points. Trend data for the past six years reflect the changes in hospital practice as it relates to inpatient glucose control. Results include mean glucose, hypoglycemia and hyperglycemia rates in critical care and non-critical care in patient settings.

CONCLUSIONS:

Aggregate data from a national survey of U.S. hospitals provides valuable insight into the current approach in regulating inpatient glucose and a useful benchmark for individual hospitals. Ongoing studies are needed to determine whether glucose control supports better patient outcomes and to determine the optimal target range for various patient populations.

RALS®-REPORT DATA FLOW:



ANNUAL GLUCOSE LEVELS:

HOSPITAL	2006	2007	2008	2009	2010	2011
# of Hospitals	151	191	301	578	618	644
# of Results	14,077,103	18,966,435	29,771,581	49,924,503	51,746,652	52,162,463
Mean Glucose	163.2	163.5	162	165.3	167.2	166.4
Median Glucose	143	144	143	146	148	147
% Hypoglycemia (<40mg/dL)	0.56%	0.53%	0.49%	0.40%	0.33%	0.34%
% Hyperglycemia (>180mg/dL)	30%	30%	30%	31%	32%	32%

ICU	2006	2007	2008	2009	2010	2011
# of Hospitals	147	187	292	535	566	593
# of Results	3,193,600	4,680,203	7,684,118	12,345,519	12,657,433	12,362,934
Mean Glucose	153.2	149.8	151.6	157.3	160	160.3
Median Glucose	136	136	135	139	143	143
% Hypoglycemia (<40mg/dL)	0.49%	0.49%	0.46%	0.38%	0.34%	0.34%
% Hyperglycemia (>180mg/dL)	24%	24%	23%	26%	27%	28%