

HEART FAILURE CENTERS OF AMERICA

The Key to Marketing CVP Diagnostics & The VeriCor Monitor

I. Heart Failure May Be Biggest Medical Problem In U.S. Today

Heart Failure (HF) May Be Biggest Unmet Medical Need In U.S. Today. With 5 million known HF patients, 60 million at-risk for HF, 1 million HF hospitalizations, 300,000 deaths and care-costs of \$39 billion a year in U.S., HF may be the biggest unmet medical need in the U.S. today.

CVP Diagnostics Marketing Plan. Clinical studies have shown that supplementing clinical assessment with the VeriCor® monitor could reduce HF hospitalizations and care-costs by more than 80% and deaths by more than 60%.

CVP Diagnostics' marketing plan is to educate leaders in the cardiology, medical and public health communities as well as HF patients and the public-at-large that enhancing clinical assessment with the new VeriCor® monitor could:

- reduce HF hospitalizations by 80% from 1 million a year to 200,000 a year;
- reduce deaths by 60% from 300,000 a year to 120,000 a year;
- reduce HF care-costs by 80% from \$39 billion a year to \$7.8 billion a year.

VeriCor® Monitoring Could Reduce HF Outcomes & Costs By at Least 50%. Since supplementing clinical assessment with the VeriCor® monitor has reduced HF deaths by more than 60% and hospitalizations and care-costs by more than 80%, it is reasonable to believe that a comprehensive VeriCor® monitoring program in the U.S. could reduce HF hospitalizations, deaths and care-costs initially by at least 50% and this level of reductions will be used to project the likely human and financial benefits of a VeriCor® monitoring program in the U.S.

CVP Diagnostics Has Projected Potential Reductions In HF Outcomes & Costs For All 50 States. Political and public health decision-makers will need to know the potential human and financial benefits as well as the costs of the monitoring program in order to make an informed decision regarding comprehensive monitoring in their states.

Expected reductions in HF deaths, hospitalizations and care-costs as well as projections of the likely costs of VeriCor® monitoring will be provided to assist any state in deciding if treatment guided by clinical assessment should be replaced by treatment guided by the VeriCor® monitor in their state.

Reductions In Deaths & HF Care-Costs Will Encourage VeriCor® Monitoring. CVP Diagnostics believes that the major reductions in HF deaths and care-costs will assure the adoption of VeriCor® monitoring in many states in the short-term and eventually in all states.

II. Reductions In HF Outcomes & Costs Will Be Significant In All States

Table 1 shows the number of states in which HF deaths could be reduced by 4,800 to >15,000, hospitalizations could be reduced by 15,000 to >40,000 and care-costs could be reduced by \$300 million to \$2 billion.

Table 1. Annual Reductions In HF Outcomes & Costs In States With VeriCor® Monitoring

Deaths	(N)	(%)	Hospitalizations	(N)	(%)	Care-Costs	(N)	(%)
> 4,800	12	24	>15,000	10	20	>\$300M	19	38
> 6,000	11	22	>20,000	8	16	>\$500M	10	20
> 8,000	7	14	>25,000	7	14	>\$700M	7	14
>10,000	4	8	>30,000	4	8	>\$800M	3	6
>12,000	4	8	>35,000	4	8	>\$1B	4	8
>15,000	3	6	>40,000	3	6	>\$2B	1	2

Deaths. VeriCor® monitoring is expected to reduce deaths by >4,800 a year in 12 states, by >6,000 in 11 states, by >8,000 in 7 states, by >10,000 in 4 states, by >12,000 in 4 states and by >15,000 in 3 states.

Hospitalizations. VeriCor® monitoring is expected to reduce hospitalizations by >15,000 a year in 10 states, by >20,000 in 8 states, by >25,000 in 7 states, by >30,000 in 4 states, by >35,000 in 4 states and by >40,000 in 3 states.

Care-Costs. VeriCor® monitoring could reduce care-costs by >\$300 million a year in 19 states, by >\$500 million in 10 states, by >\$700 million in 10 states, by >\$800 million in 3 states, by >\$1 billion in 4 states and by >\$2 billion in 1 state.

Conclusion. These data strongly suggest that clinical assessment must be supplemented by the VeriCor monitor in all states if HF is to be optimized as soon as possible in the U.S.

III. Projected Reductions In Outcomes & Costs With VeriCor®

Potential Reductions In Hospitalizations, Deaths & Costs In HF Patients With Comprehensive VeriCor® Monitoring. Projected reductions in hospitalizations, deaths and care-costs with treatment guided by the VeriCor® monitor are shown in Table 2.

Table 2. VeriCor® Monitoring Compared to Clinical Assessment for HF Control

	Current Status With Clinical Assessment	Reductions (50%) In Outcomes & Costs*	Outcomes Prevented & Cost-Savings
Hospitalizations	1 Million	500,000	500,000
Deaths	300,000	150,000	150,000
Costs	\$39 Billion	\$19.5 Billion	\$19.5 Billion

*With VeriCor®

Comments on Table 2.

- 1. Current Annual Levels of Hospitalizations, Deaths & Costs With Clinical Assessment.** As shown under “Current Status With Clinical Assessment” in Table 2, there were 1 million hospitalizations, 300,000 deaths and care-costs of \$39 billion a year in 2008.

- 2. Supplementing Clinical Assessment With VeriCor® Monitoring Could Reduce HF Hospitalizations, Costs & Deaths by at Least 50%.** Clinical studies with the VeriCor® monitor have shown that supplementing clinical assessment with treatment guided by the VeriCor® monitor could produce the following reductions in HF outcomes and costs:
- Hospitalizations could be reduced by 50%, preventing 500,000 a year.
 - Deaths could be reduced by 50%, preventing 150,000 deaths a year.
 - Costs of care could be reduced by 50%, saving \$19.5 billion a year.

IV. The VeriCor® Monitor Will Be Cost-Effective In 50 States

Supplementing Clinical Assessment With VeriCor® Monitor Will Decrease HF Outcomes & Costs In 50 States & Be Cost-Effective. Table 3 shows VeriCor® monitoring costs (“Monitoring Costs”), “Cost Savings With VeriCor® Monitor” and “Net Cost-Savings” (cost savings minus monitoring costs in each state).

“Net Cost-Savings” indicate that replacing clinical assessment with the VeriCor® monitor will be cost-effective in every one of the 50 states.

Table 3. VeriCor® Monitor Will Be Cost-Effective In 50 States

Population	High LVEDPs (K)	VeriCor Monitoring Costs (\$M)	Cost Savings	
			With VeriCor® Monitor (\$M)	Net Cost Savings (\$M, \$B)
Alabama	47	63	279M	216M
Alaska	7	9	40M	31M
Arizona	55	74	322M	248M
Arkansas	29	38	168M	130M
California	361	488	2.1B	1.6B
Colorado	45	62	270M	208M
Connecticut	36	49	214M	165M
Delaware	8	11	49M	38M
Florida	170	230	1.0B	770M
Georgia	87	118	514M	396M
Hawaii	13	17	77M	60M
Idaho	14	19	81M	62M
Illinois	132	179	779M	600M
Indiana	65	88	381M	293M
Iowa	31	42	184M	142M
Kansas	29	39	169M	130M
Kentucky	43	58	254M	196M
Louisiana	48	64	280M	216M
Maine	14	18	80M	62M
Maryland	56	76	332M	256M
Massachusetts	68	91	398M	307M

Population	High LVEDPs (K)	VeriCor Monitoring Costs (\$M)	Cost Savings	
			With VeriCor® Monitor (\$M)	Net Cost Savings (\$M, \$B)
Michigan	106	143	623M	480M
Minnesota	52	71	309M	238M
Mississippi	30	41	178M	137M
Missouri	60	81	351M	270M
Montana	10	13	57M	44M
Nebraska	18	25	107M	82M
Nevada	21	29	125M	96M
New Hampshire	132	18	78M	60M
New Jersey	90	121	528M	407M
New Mexico	19	26	114M	88M
New York	202	273	1.2B	927M
North Carolina	86	116	505M	389M
North Dakota	7	9	40M	31M
Ohio	121	163	712M	549M
Oklahoma	37	50	216M	266M
Oregon	36	49	215M	166M
Pennsylvania	131	177	770M	593M
Rhode Island	11	15	66M	51M
South Carolina	43	58	252M	194M
South Dakota	8	11	47M	35M
Tennessee	61	82	357M	275M
Texas	222	300	1.3B	1B
Utah	24	32	140M	108M
Vermont	6	9	38M	29M
Virginia	76	102	444M	342M
Washington	63	85	370M	285M
West Virginia	19	26	113M	87M
Wisconsin	57	77	336M	259M
Wyoming	5	7	31M	24M

Comment On Table 3

Highs & Lows of “Cost-Savings” & “Net Cost Savings” in 50 States With VeriCor®.

After clinical assessment has been supplemented by the VeriCor® monitor in 50 states, “Cost Savings” are expected to range from a low of \$31 million in Wyoming to a high of \$2.1 billion in California. “Net Cost Savings” are expected to range from a low of \$24 million in Wyoming to a high of \$1.6 billion in California.

“Net Cost Savings” are calculated by subtracting “VeriCor® Monitoring Costs” from “Cost Savings With VeriCor®”. Thus, “Net Cost Savings” represent revenues to each state after all the costs of the monitoring program are paid.

Supplementing Clinical Assessment With VeriCor® Monitoring Expected to Be “Cost-Effective” In 50 U.S. States. While “Net Cost Savings” vary with the number of HF patients in each state, every state from those with the fewest HF patients to those with the most HF patients are expected to experience “Net Cost Savings”, indicating that comprehensive HF monitoring in every state could be cost-effective.

V. Marketing of “Heart Failure Monitoring Centers of America”

1. Studies with the VeriCor monitor have shown that the limitations of clinical assessment may be responsible for a large majority of the 1 million hospitalizations, 300,000 deaths and the \$39 billion spent annually on HF in the U.S.
2. The VeriCor® monitor could prevent as many as 800,000 hospitalizations and 160,000 HF deaths while saving \$31 billion in annual HF care-costs.
3. HF deaths, hospitalizations and care-costs could be reduced dramatically in every state by the VeriCor® monitor.
4. As shown in Table 3, comprehensive VeriCor® monitoring will be not only save millions of dollars in every state but is expected to be cost-effective in every state.

VI. Implementation of “Heart Failure Monitoring Centers of America”

A range of analyses will be required before sufficient HF patient data is available to design and construct a *VeriCor HF Monitoring Module*. Once a *VeriCor HF Monitoring Module* that satisfies defined performance criteria has been completed and its efficacy validated, these modules will be reproduced in volume and made available to states across the U.S.

The result will be a network of ***HF Monitoring Centers*** sufficient to control HF in every U.S. state.

Determining Number & Costs of HF Monitoring Centers to Control HF In 50 States. Prominent among the analyses that will be needed to determine the number and costs of *HF Monitoring Centers* are the following.

- Number of *VeriCor HF Monitoring Modules* needed in each state.
- Costs of producing and implementing one *VeriCor HF Monitoring Module*.
- Time to full implementation.
- Costs of HF care & expected number of HF deaths from now to full implementation *HF Monitoring Centers*

Since these numbers will need to reflect the actual monitoring and cost requirements in the states, a sampling of representative HF populations in each state will need to be evaluated before reliable projections can be completed. This will provide the data required for an informed decision on replacing clinical assessment with the VeriCor monitor in each state.

VII. Preventable Deaths & Care-Costs Monthly In U.S.

	HF Outcomes With Clinical Assessment		HF Outcomes With VeriCor Monitor	
	Per Year	Per Month	Per Year	Per Month
Deaths	300,000	25,000	150,000	12,500
Costs	\$39 Billion	\$3.3 Billion	19.5 Billion	\$1.7 Billion

Conclusion. Each month that clinical assessment has not been supplemented by the VeriCor monitor to guide the treatment of HF patients in the U.S., 12,500 HF deaths occur that could have been prevented and \$1.7 billion in care-costs that could have been saved are lost.