

TRENDING DATA

THE MISSOURI HOSPICE MEDICAID PROJECT



Preserving
Hospice
Services
Means
Protecting
Medicaid
Funds.

HOSPICE IS...

Considered to be the model for quality, compassionate care for people facing a life-limiting illness or injury, hospice care involves a team-oriented approach to expert medical care, pain management, and emotional and spiritual support expressly tailored to the patient's needs and wishes. Support is provided to the patient's loved ones as well.

– National Hospice & Palliative Care Organization,
www.nhpc.org/about/hospice-care



Preserving Hospice Services Means Protecting Medicaid Funds

The Missouri Department of Social Services approved a research study submitted by the Missouri Hospice & Palliative Care Association (MHPCA) in 2013 to explore potential cost savings of hospice services associated with end-of-life services within the Missouri Medicaid program. This project was completed, in part, by funding from The Missouri Foundation for Health. Part One of this project included an analysis of Missouri Medicaid 2011 files and was completed in 2014. Part Two of this project replicates the previous analysis using Missouri Medicaid 2012 files to demonstrate two-year trends.

Missouri Medicaid provided MHPCA the following information for this study:		
FILES	2011 Files	2012 Files
ELIGIBILITY FILE – including all Medicaid records for Recipients who died in 2011 & 2012, regardless of whether or not the Recipient was receiving Medicaid on the date of death.	22,687 records: N = 1,258 Recipients died while under the care of a healthcare provider	23,131 records: N = 1,483 Recipients died while under the care of a healthcare provider
CLAIMS FILE – including records of all general hospital, nursing facility, home health agency, rural health clinic, and hospice claims for deceased Recipients in 2011 & 2012.	789,511 records	928,985 records

Hospice is a benefit that is currently part of the “optional” services in State Medicaid Programs. During this time of constrained budgets, Medicaid programs are asking whether certain services are worth maintaining in their benefit package. **Most states have determined that hospice should remain a part of their states’ Medicaid program.** However, two states have recently decided to curtail Medicaid Hospice services – Oklahoma opted to stop covering hospice in 2010 and Michigan eliminated the inpatient portion of its benefit in September, 2013^{1,2}. Additionally, several states have recently considered eliminating the Medicaid Hospice benefit, including AL, IL, LA, NC, SC, and WA. Given budget constraints in the state and the desire to increase patient benefit per dollar spent, Missouri is right to ask a basic question: what are the benefits and costs of maintaining hospice as a part of its Medicaid benefit package? Missouri is right to ask a basic question: what are the benefits and costs of maintaining hospice as a part of its Medicaid benefit package?

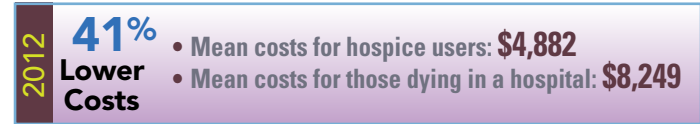
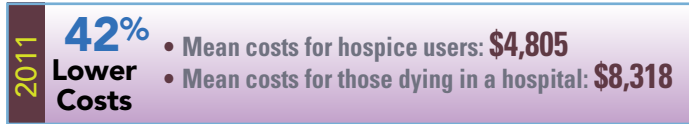
¹ The Henry J. Kaiser Family Foundation Website: <http://kff.org/medicaid/state-indicator/hospice-care/>, accessed 11/12/13.

² Detroit New Website: <http://www.detroitnews.com/article/20130930/BIZ/309300108>, accessed 11/12/13.

Missourians Choosing Hospice Cost Medicaid Less Than They Otherwise Would

Missouri had 1,202,060 Medicaid Recipients and spent a total of \$6.2 Billion on Medicaid payments in 2010, including \$72.9 Million on Medicaid Hospice.³ Missouri's overall Medicaid expenditures from 2009-2010 is higher than the national average (7.4% vs. 4.0%, respectively) while our spending on hospice is lower (5.4% vs. 4.8%, respectively).

An analysis of 2011-2012 Missouri Medicaid data shows that hospice actually reduces spending for Medicaid beneficiaries near death as compared to what it would have been without hospice.



An analysis of Missouri Medicaid recipient total healthcare costs in 2011 showed that those dying while under the care of hospice had mean Medicaid costs of \$4,805 compared to those dying while under the care of a hospital with mean Medicaid costs of \$8,318. This demonstrates total Medicaid healthcare costs 42% lower⁴ for recipients dying while under the care of hospice. These findings were replicated in 2012, when mean Medicaid costs for recipients dying under the care of hospice were \$4,882 compared to \$8,249 for recipients dying while under the care of a hospital – a 41% savings to Medicaid⁵.

It is important to keep in mind that the costs of both of these groups were relatively high because Medicaid was responsible for the care of seriously ill Missourians who were dying. Accounting for the fact that those dying in hospice were older (age 81) than those who died in the hospital (age 66), then the cost savings that accrued to Missouri's Medicaid program due to hospice as compared to a hospital death would be even larger (as demonstrated in the Methods section) National research has confirmed cost savings associated with hospice, again as compared to what costs would have been had an individual who subsequently died did not choose to use this service 2003^{6,7} and found hospice saves Medicaid – \$282 Million per year nationally.

MISSOURI IS RIGHT TO ASK A BASIC QUESTION:

What are the benefits and costs of maintaining hospice as a part of its Medicaid benefit package?

³ Centers for Medicare & Medicaid Services Website: <http://www.cms.gov/Research-Statistics-Data-and-Systems/Computer-Data-and-Systems/MedicaidDataSourcesGenInfo/MSIS-Mart-Home.html>, accessed 11/12/13.

⁴ Calculation: $\$8,318 - \$4,805 = \$3,513$; $\$3,513 / \$8,318 = 42.2\%$.

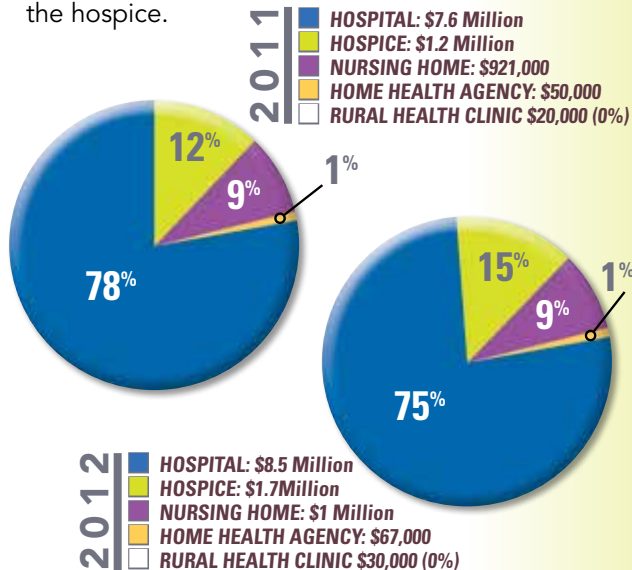
⁵ Calculation: $\$8,249 - \$4,882 = \$3,367$; $\$3,367 / \$8,249 = 40.8\%$.

⁶ Milliman USA, "Value of Hospice Benefit to Medicaid Programs", 5/2/2003.

⁷ Pyenson B, et. al, "Medicare Cost in Matched Hospice and Non-Hospice Cohorts"; *Journal of Pain & Symptom Management*, 2004: 28:3, 200-210.

THE most important question to answer is not how much Medicaid spent on hospice, but rather how spending on persons who choose to use hospice would differ from those not choosing hospice.

Also important, Medicaid pays for a much broader array of services for the elderly and terminally ill than does the Medicare program. For example, whereas Medicare pays for very little nursing home care, Medicaid pays for a great deal of it. In fact, when a Medicaid recipient receives hospice services in a nursing home, most state Medicaid programs pay hospice the nursing home Room & Board and the hospice passes this payment through to the nursing home – i.e., while these Room & Board payments are accrued to hospice, it is not revenue realized by the hospice.



Conclusions:

A key issue for Missouri's Medicaid program is to look closely at recipients with advanced, life limiting illnesses and disabilities, and seek to make hospice care available as early as is legitimately allowed by the program (patients must be believed to be in their last 6 months of life to access the hospice benefit). This study demonstrates significant cost savings to Missouri's Medicaid program (over 40% across 2011-2012). Seeking to expand such care to a broader group of Medicaid patients who are approaching death could both reduce the cost to Medicaid, as well as improve quality of life for patients.



Missouri Medicaid provided MHPCA with a 2011 Eligibility File including 22,687 records accounting for all Medicaid Recipients who died in 2011, regardless of whether or not the Recipient was receiving Medicaid on the date of death. Additionally, Missouri Medicaid provided a 2011 Claims File including 789,511 records of all 2011 general hospital, nursing facility, home health agency, rural health clinic, and hospice claims for deceased Recipients. Therefore, outpatient and other charges are not represented in these results. The Eligibility File included Eligibility Start and Stop Dates (month and year). The Claims File included First and Last Dates of Service, Date of Birth, and Date of Death (year). Therefore, when matching the Claims and Eligibility Files, MHPCA could match dates based on year only. In order to examine trends across a two-year period, Missouri Medicaid also provided MHPCA with a 2012 Eligibility File including 23,131 records accounting for all Medicaid Recipients who died in 2012, and a similar 2012 Claims File including 925,985 records.

2011-2012 Results: Combining the Eligibility and Claims Files, and limiting the database to include only those active Medicaid Recipients during the year of death, MHPCA found:

Of the 22,687 Total Recipients:

- 14,080 (62%) were included in the analysis
- 8,415 (37%) were excluded because they had no 2011 claims
- 192 (1%) were excluded because their Eligibility Stop Date was prior to 2011

Of the 789,511 Claims:

- 782,009 (99%) were included in the analysis
- 7,502 (1%) were excluded because their Eligibility Stop Date was prior to 2011

Of the 782,009 eligible claims, provider types included:

- 532,099 (68%) General Hospital
- 195,707 (25%) Nursing Home
- 24,487 (3%) Hospice
- 18,517 (2%) Rural Health Clinic
- 11,199 (1%) Home Health Agency

Of the 23,131 Total Recipients:

- 14,440 (62%) were included in the analysis
- 8,688 (38%) were excluded because they had no 2012 claims
- 3 (0%) were excluded because their Eligibility Stop Date was prior to 2012

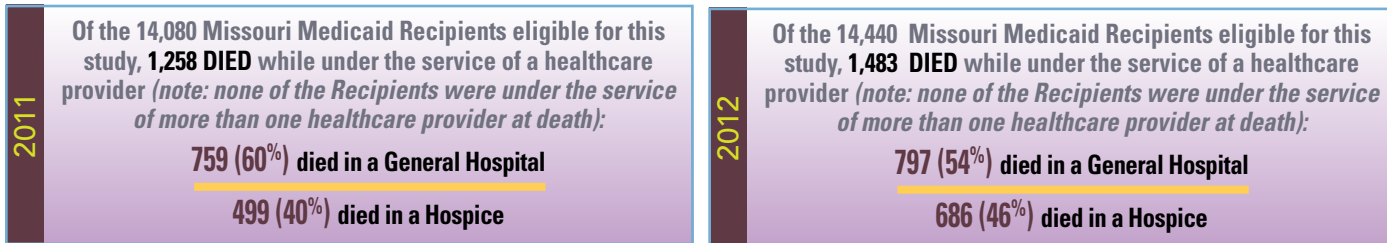
Of the the 925,985 Claims:

- 925,929 (99%) were included in the analysis
- 56 (0%) were excluded because their Eligibility Stop Date was prior to 2012

Of the 925,929 eligible claims, provider types included:

- 624,809 (68%) General Hospital
- 230,137 (25%) Nursing Home
- 40,543 (4%) Hospice
- 18,860 (2%) Rural Health Clinic
- 11,580 (1%) Home Health Agency

The purpose of this study is to examine healthcare costs associated with end-of-life care, therefore Missouri Medicaid records were limited to Recipients who died while under the service of a healthcare provider.



When examining all eligible Recipient demographics (Tables 2A and 2B), Recipients dying in hospice were older with less racial diversity compared to Recipients dying in the hospital. International Classification of Diseases, Revision 9 (ICD-9) categories were used to identify disease categories for the primary diagnosis field in claims (Tables 3A and 3B). Recipients dying in hospice had higher percentages of cancer, ill-defined conditions, and nervous system diagnoses – and lower percentages of circulatory system and “all other” diagnoses – compared to Recipients dying in the hospital.

All general hospital, nursing home, hospice, rural health clinic, and home health agency claim payments were totaled and reported by provider type based on whether the Recipient died in the hospital or hospice setting (Tables 4A and 4B).

Mean Medicaid payments per Recipient were calculated (Tables 5A and 5B). In 2011, mean

Missouri Medicaid payments across all these provider groups for Missouri Medicaid Recipients averaged \$4,805 compared to \$8,318 for Recipients dying in the hospital – *therefore 2011 Recipients dying in hospice had 42% lower mean payments compared to Recipients dying in the hospital.* This trend was replicated in 2012, where mean Missouri Medicaid payments across all these provider groups for Missouri Medicaid Recipients averaged \$4,882 compared to \$8,249 for Recipients dying in the hospital – *therefore 2012 Recipients dying in hospice had 41% lower mean payments compared to Recipients dying in the hospital.*



2011 – All Eligible Recipient Demographics:

Table 2A:	Age	Sex		Race		Medical Eligibility Code		
	(Mean Years)	Female	Male	White	Black & Other	Permanently & Totally Disabled	Old Age Assistance	All Other
	HOSPITAL	48	362 (48%)	397 (52%)	517 (68%)	242 (32%)	607 (80%)	52 (7%)
HOSPICE	75	325 (65%)	174 (35%)	425 (85%)	74 (15%)	155 (31%)	294 (59%)	50 (10%)
TOTAL	59	687 (55%)	571 (45%)	942 (75%)	316 (25%)	762 (61%)	346 (28%)	150 (12%)

2012 – All Eligible Recipient Demographics:

Table 2B:	Age	Sex		Race		Medical Eligibility Code		
	(Mean Years)	Female	Male	White	Black & Other	Permanently & Totally Disabled	Old Age Assistance	All Other
	HOSPITAL	48	344 (43%)	453 (57%)	538 (68%)	259 (32%)	441 (55%)	18 (2%)
HOSPICE	74	431 (63%)	255 (37%)	597 (87%)	89 (13%)	236 (34%)	343 (50%)	107 (16%)
TOTAL	60	775 (52%)	708 (48%)	1,135 (77%)	348 (23%)	677 (46%)	361 (24%)	445 (30%)

2011 – All Eligible Recipient Diagnoses Groups:

Table 3A:	Circulatory System	Cancer	Respiratory System	III-Defined Conditions	Nervous System	All Other
	HOSPITAL	274 (36%)	79 (10%)	83 (11%)	18 (2%)	12 (2%)
HOSPICE	89 (18%)	101 (20%)	62 (12%)	61 (12%)	58 (12%)	128 (26%)
TOTAL	363 (29%)	180 (14%)	145 (12%)	79 (6%)	70 (6%)	421 (33%)

2012 – All Eligible Recipient Diagnoses Groups:

Table 3B:	Circulatory System	Cancer	Respiratory System	III-Defined Conditions	Nervous System	All Other
	HOSPITAL	271 (34%)	85 (11%)	84 (11%)	7 (1%)	33 (4%)
HOSPICE	102 (15%)	151 (22%)	58 (8%)	87 (13%)	73 (11%)	215 (31%)
TOTAL	373 (25%)	236 (16%)	142 (10%)	94 (6%)	106 (7%)	532 (36%)

Table 4A:	2011 – All Claim Payments by Provider Types:														
	Hospital Payments			Nursing Home Payments			Hospice Payments			Rural Health Clinic Payments			Home Health Agency Payments		
	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum
HOSPITAL	759	\$8,251	\$6,262,636	93	\$2,620	\$243,619	21	\$2,392	\$50,242	116	\$117	\$13,515	118	\$340	\$40,129
HOSPICE	238	\$5,720	\$1,361,364	273	\$2,482	\$677,571	495	\$2,328	\$1,152,331	72	\$87	\$6,248	23	\$414	\$9,529
TOTAL	997	\$7,647	\$7,624,001	366	\$1,517	\$921,190	516	\$2,331	\$1,202,573	188	\$105	\$19,763	141	\$352	\$49,658

Table 4B:	2012 – All Claim Payments by Provider Types:														
	Hospital Payments			Nursing Home Payments			Hospice Payments			Rural Health Clinic Payments			Home Health Agency Payments		
	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum
HOSPITAL	797	\$8,202	\$6,537,081	88	\$2,175	\$191,399	29	\$2,364	\$68,547	119	\$120	\$14,282	112	\$418	\$46,852
HOSPICE	345	\$5,546	\$1,913,355	365	\$2,408	\$878,770	673	\$2,394	\$1,611,454	187	\$84	\$15,741	53	\$389	\$20,604
TOTAL	1,142	\$7,400	\$8,450,436	453	\$2,362	\$1,070,169	702	\$2,393	\$1,680,002	306	\$98	\$30,023	165	\$409	\$67,456



Table 5A:	2011 – All Claim Payments – Mean Payments per Recipient:		
	Total Payments		
	N	Mean	Sum
HOSPITAL	759	\$8,318	\$6,313,093
HOSPICE	499	\$4,805	\$2,397,879
TOTAL	1,258	\$6,924	\$8,710,972

Table 5B:	2012 – All Claim Payments – Mean Payments per Recipient:		
	Total Payments		
	N	Mean	Sum
HOSPITAL	797	\$8,249	\$6,574,647
HOSPICE	686	\$4,882	\$3,348,935
TOTAL	1,483	\$6,692	\$9,923,582

Refine Results by Age:

Note the difference in mean age between the groups above – this is significant and an important driver of end-of-life costs. Therefore, MHPCA limited this sample from 1,255 Recipients to only Recipients age 60+ years (N=595; 47%), resulting in the following (*at right*):

	2011	2012
Total Sample	1,258	1,483
Sample Limited to 60+ Years	596	710
Died in General Hospital	202 (34%)	181 (25%)
Died in Hospice	394 (66%)	529 (75%)

When examining eligible Recipients 60+ years old demographics (Table 6), Recipients dying in hospice were still older with less racial diversity compared to Recipients dying in the hospital. International Classification of Diseases, Revision 9 (ICD-9) categories were used to identify disease categories for the primary diagnosis field in claims (Table 7). Recipients dying in hospice had slightly higher percentages of cancer, ill-defined conditions, and nervous system diagnoses – and lower percentages of circulatory system and “all other” diagnoses – compared to Recipients dying in the hospital.

All general hospital, nursing home, hospice, rural health clinic, and home health agency claim payments were totaled and reported by provider type based on whether the Recipient died in the hospital or hospice setting (Table 8). Mean Medicaid payments per Recipient were calculated (Table 9). Recipients dying in hospice had mean total Missouri Medicaid payments across these provider groups of \$56,936 compared to \$262,805 for Recipients dying in the hospital – **therefore Recipients aged 60+ years dying in hospice averaged 21.7% of total payments compared to Recipients dying in the hospital.**

Table 6A:	2011 – Recipients 60+ Years Old Demographics:							
	Age	Sex		Race		Medical Eligibility Code		
	(Mean Years)	Female	Male	White	Black & Other	Permanently & Totally Disabled	Old Age Assistance	All Other
HOSPITAL	66	96 (48%)	106 (52%)	136 (67%)	52 (33%)	140 (69%)	52 (26%)	10 (5%)
HOSPICE	81	268 (68%)	126 (32%)	332 (84%)	42 (16%)	53 (13%)	294 (75%)	47 (12%)
TOTAL	76	364 (61%)	232 (39%)	468 (79%)	94 (21%)	193 (32%)	346 (58%)	57 (10%)

Table 6B:	2012 – Recipients 60+ Years Old Demographics:							
	Age	Sex		Race		Medical Eligibility Code		
	(Mean Years)	Female	Male	White	Black & Other	Permanently & Totally Disabled	Old Age Assistance	All Other
HOSPITAL	66	84 (46%)	97 (54%)	126 (70%)	55 (30%)	133 (73%)	18 (10%)	30 (17%)
HOSPICE	81	358 (68%)	171 (32%)	469 (89%)	60 (11%)	128 (24%)	343 (65%)	58 (11%)
TOTAL	77	442 (62%)	268 (38%)	595 (84%)	115 (16%)	261 (37%)	361 (51%)	88 (12%)

Table 7A:	2011 – Recipients 60+ Years Old Diagnoses Groups:					
	Circulatory System	Cancer	Respiratory System	III-Defined Conditions	Nervous System	All Other
HOSPITAL	73 (36%)	24 (12%)	23 (11%)	7 (3%)	3 (1%)	72 (36%)
HOSPICE	83 (21%)	52 (13%)	54 (14%)	55 (14%)	54 (14%)	96 (24%)
TOTAL	156 (26%)	76 (13%)	77 (13%)	62 (10%)	57 (10%)	168 (28%)

Table 7B:	2012 – Recipients 60+ Years Old Diagnoses Groups:					
	Circulatory System	Cancer	Respiratory System	III-Defined Conditions	Nervous System	All Other
HOSPITAL	60 (33%)	23 (13%)	30 (17%)	1 (1%)	9 (5%)	58 (32%)
HOSPICE	91 (17%)	77 (15%)	46 (9%)	83 (16%)	61 (12%)	171 (32%)
TOTAL	151 (21%)	100 (14%)	76 (11%)	84 (12%)	70 (10%)	229 (32%)

Table 8A:	2011 – All Claim Payments by Provider Types:														
	Hospital Payments			Nursing Home Payments			Hospice Payments			Rural Health Clinic Payments			Home Health Agency Payments		
	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum
HOSPITAL	202	\$7,590	\$1,533,137	43	\$2,695	\$115,867	7	\$3,849	\$26,946	37	\$111	\$4,099	37	\$359	\$13,271
HOSPICE	153	\$2,823	\$431,858	253	\$2,496	\$631,370	390	\$2,255	\$879,537	51	\$76	\$3,897	9	\$374	\$3,364
TOTAL	355	\$5,535	\$1,964,995	296	\$2,524	\$474,237	397	\$2,283	\$906,483	88	\$91	\$7,995	46	\$362	\$16,634

Table 8B:	2012 – All Claim Payments by Provider Types:														
	Hospital Payments			Nursing Home Payments			Hospice Payments			Rural Health Clinic Payments			Home Health Agency Payments		
	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum	N	Mean	Sum
HOSPITAL	181	\$8,715	\$1,577,340	41	\$2,348	\$96,264	4	\$976	\$3,905	31	\$131	\$4,049	35	\$350	\$12,265
HOSPICE	209	\$3,180	\$664,705	340	\$2,441	\$829,801	516	\$2,336	\$1,205,275	146	\$72	\$10,447	14	\$483	\$6,768
TOTAL	390	\$5,749	\$2,242,045	381	\$2,431	\$926,066	520	\$2,325	\$1,209,179	177	\$82	\$14,496	49	\$388	\$19,033

Table 9A:	2011 – All Claim Payments – Mean Payments per Recipient:			Table 9B:	2012 – All Claim Payments – Mean Payments per Recipient:		
	Total Payments				Total Payments		
	N	Mean	Sum		N	Mean	Sum
HOSPITAL	202	\$7,742	\$1,563,869	HOSPITAL	181	\$8,833	\$1,598,796
HOSPICE	394	\$3,521	\$1,387,158	HOSPICE	529	\$3,707	\$1,961,214
TOTAL	596	\$4,951	\$2,951,027	TOTAL	710	\$5,014	\$3,560,010

Conclusions:

When examining all possible Missouri Medicaid healthcare records of deceased Recipients in 2011 and 2012, total Medicaid payments across available providers found mean payments per Recipient for those dying in hospice 42% lower in 2011 and 41% lower in 2012 compared to those dying in hospitals (2011 \$4,805 vs. \$8,318; 2012 \$4,882 vs. \$8,249, respectively).

However, there was a significant age difference when examining all possible records of deceased 2011 & 2012 Missouri Medicaid Recipients. To adjust for this age difference, MHPCA limited participants to those 60+ years old. Hospice cost savings continued to be impressive. Mean payments per Recipient across available providers found payments for those dying in hospice 55% lower in 2011 and 58% lower in 2012 compared to those dying in hospitals (2011 \$3,521 vs. \$7,742; 2012 \$3,707 vs. \$8,833, respectively).

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MISSOURI HOSPICE

*& Palliative Care
Association*

*Walking Beside You.
Navigating the Way. Since 1980.*

*600 Monroe Street, Suite 300
Jefferson City, MO 65101
Phone: 573-634-5514 Fax: 573-635-0659*

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