

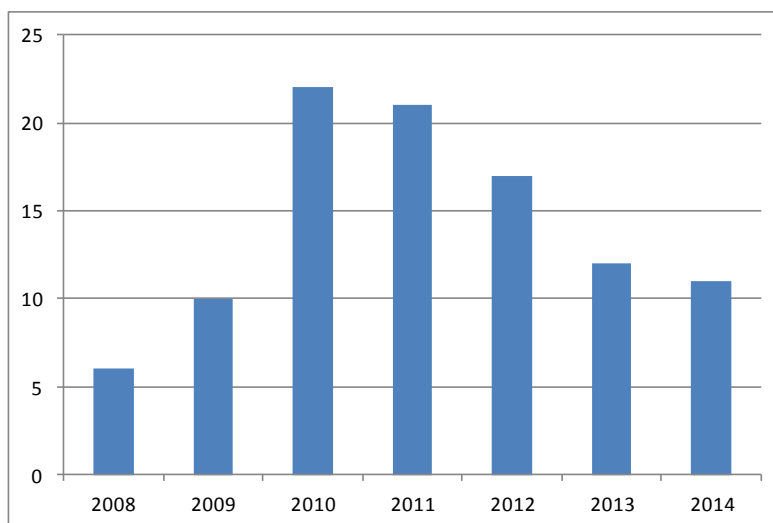
## **A Preliminary Evaluation of the Impact of the Healthy Church Initiative on Worship Attendance**

With any formal program that seeks to improve local church vitality, it is important to subject such programs to empirical testing to determine if a program does what it intends to do. Some program designs have made it impossible to subject its results to empirical testing since their respective designed outcomes are not measurable. The few others have as their designed outcomes, measurable, available indicators. The Healthy Church Initiative (HCI) is one of those programs for which there are measurable indicators of the designed outcome.

The HCI program consists of three stages: the training stage that takes place during a weekend consultation, the prescription stage which presents for consideration the developed prescriptions, and the acceptance/implementation stage in which the prescriptions are implemented. In evaluating HCI outcomes, the church must have sufficient time to benefit from the completed program. This evaluation gives the church at least one year following the consultation weekend to demonstrate, through reported worship attendance figures, the outcome of its participation.

The HCI was first implemented in the Missouri Annual Conference with its first six local churches completing their respective weekend consultations in 2008. Through May 2014, there have been 99 local churches in the Missouri Annual Conference that have reached this milestone. The Figure 1 below provides a count of local churches having completed their weekend consultations—the 2014 total being incomplete.

**Figure 1**  
**Healthy Church Initiative Participating Churches**  
**Completion of Weekend Consultations**  
**Missouri Annual Conference**



In 2012, there were 820 reporting local churches in the Missouri Annual Conference. The 99 participating churches represents 12.1% of all local churches—an impressive overall level of participation.

For our purposes, local churches are categorized into six tiers, each representing a size category according to the most recent reported average worship attendance. The defined categories are as follows:

**Table 1**  
**Categories of Church Sizes**

Tier	Attendance
1	1 to 59
2	60 to 124
3	125 to 349
4	350 to 499
5	500 to 999
6	1,000 and over

Separating the participating churches into size categories is necessary since the benefits from any revitalization program will differ by size of church.

Although there were 99 churches that had completed their weekend consultation by the cut-off date for this evaluation, many had not accumulated sufficient time to fully benefit from the program. This time restriction eliminated 31 churches, giving the fact that the most recent national end-of-year reports available represent 2012 figures. Thus, 68 HCI churches are included in the evaluation.

The distribution of HCI churches included in the evaluation among tiers, compared to the distribution of all Missouri Annual Conference churches as of the end of 2012, is presented in the following table:

**Table 2**  
**HCI Participation by Tier**

Tier	HCI		All	
	Churches	Percent	Churches	Percent
1	6	8.8%	527	64.3%
2	23	33.8%	150	18.3%
3	31	45.6%	102	12.4%
4	3	4.4%	16	2.0%
5	4	5.9%	17	2.1%
6	1	1.5%	8	1.0%
<b>Total</b>	<b>68</b>	<b>100.0%</b>	<b>820</b>	<b>100.0%</b>

The HCI churches are largely concentrated in tiers 2 and 3, relative to the very heavy concentration of all Missouri churches in tier 1. A total of 57.4% of HCI churches fall into tiers 3 through 6, leaving 42.6% of

the HCI churches in tiers 1 and 2. The importance of participation in tiers 1 and 2 will become clear shortly.

The evaluations require a considerable assembly of information. Fortunately, this assembly was completed for other research projects and is directly usable for this evaluation. The categories and descriptions of information are as follows:

End of Year Church Reports	Including worship attendance and spending levels across selected categories: programs, non-clergy staff, and facilities
Pastoral Appointments	Identity of senior pastor for each year, including the pastor's age, gender, and years in current appointment
Affinity Populations	Identification of local church street addresses, purchase of demographic data by census tracts, counts of persons within the same racial/ethnic category as the church congregation, within a 3-mile radius of the church

Other research indicates that there are four main drivers of worship attendance in the local church: the senior pastor, changes in the affinity population, changes in spending for programs, changes in spending for non-clergy staff, and changes in spending on facilities. To avoid confounding influences, these all had to be taken into account through statistical methods in order to isolate the impact of HCI participation. HCI churches had to be identified and their respective dates of completion of the consultation weekends.

To eliminate the impact of a change in pastor, worship attendance figures included in the evaluations were limited to those churches for which the senior pastor had served at least three years and no more than 12 years in the appointment. That is, the only worship attendance figures included in the evaluations are from churches for which there was no change in the senior pastor appointment and that new appointments and "permanent" appointments were excluded. Additionally, local churches were excluded if the senior pastor could not be identified (e.g., part time local pastor). To eliminate the impact of regional differences, the comparison churches were all drawn from the South Central Jurisdiction.<sup>1</sup>

To properly evaluate the impact of HCI on worship attendance, a panel of churches was constructed, including HCI participating churches and non-participating churches. Using both participating and non-participating churches, worship attendance figures could then be compared in order to measure the differences, if any. The statistical tool selected for the evaluation is called

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<sup>1</sup> The results were not significantly different when using comparable churches from all jurisdictions.

regression analysis, designed for use with panel data. This tool is designed to statistically separate multiple influences upon worship attendance and thereby isolate the impact of HCI participation.<sup>2</sup>

In any evaluation of this type, one must carefully ensure that the cause and effect relationship is properly observed. For example, in evaluating the impact of program expenditures upon worship attendance, one must ensure that the results obtained are not demonstrating the impact of growing worship attendance upon program expenditures instead of the desired evaluation of the impact of programs expenditures upon worship attendance. The design of the evaluation purposely lags expenditures one year when recording worship attendance. For example, the observation of 2012 worship attendance figures is linked to 2011 local church expenditures. In doing so, it is not possible for the recorded worship attendance figure to influence the level of local church expenditures. Thus, all expenditures are lagged one year.

The influence of HCI participation is unlikely to be uniform across churches. To account for this possibility, participation is measured by the number of days lapsed between the completion of the weekend consultation and the end-of-year reporting time. For example, a church that completed its weekend consultation on June 30, 2010 would have approximately 182 days accumulated between the weekend and the end-of-year reporting time (December 31, 2010). The church would have accumulated 547 days since completion of the weekend (365 plus 182 days) by December 31, 2011. One would expect that HCI would have had a larger influence on worship attendance on the December 31, 2011 report day than on the December 31, 2010 report day.

Casual evidence suggests that the impact of HIC participation is likely to be different in small churches compared to that of larger churches. To account for this possibility, a statistical interaction term is included in the regression equation. This allows the measured influence of HCI participation to vary between and among the tiers. For example, worship attendance growth after (say) 574 days since the consultation weekend might be larger for a tier 5 church than the same number of days for a tier 3 church. The inclusion of the interaction term enables us to examine this potential difference.

The evaluation is based upon a single regression equation, the results of which are included in the following table.

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<sup>2</sup> Separating multiple influences can be demonstrated in a simple examination of incomes of adult males in the U.S. Studies prove that at least two influences are at play—education and age. Regression analysis statistically separates the influences of education and age so that one can measure the importance of education, without the confounding influence of age.

**Table 3**  
**Regression Results**  
**Worship Attendance**

Variable	Coefficient	Std		Prob
		Error	t-value	
affinity_3mi	0.0012344	0.000114	10.81	0.0000
hci_days	-0.0775139	0.029421	-2.63	0.0080
inter2	0.0318766	0.009563	3.33	0.0010
rpgmexp_1	0.0007698	4.09E-05	18.81	0.0000
rstafcomp_1	0.0014694	2.29E-05	64.16	0.0000
rdebt_church_1	8.44E-06	2.64E-06	3.19	0.0010
rbuilding_1	-4.96E-07	5.97E-06	-0.08	0.9340
male	10.33921	2.758379	3.75	0.0000
age	-0.6364682	0.134788	-4.72	0.0000
years_at_appt	1.541319	0.35796	4.31	0.0000
year	-2.049953	0.346286	-5.92	0.0000
Constant	4234.723	695.0259	6.09	0.0000

Of significance are the coefficients and the t-values listed in the table, each pair assigned to each of the variables listed. The definitions of the variables are as follows:

affinity_3mi	The affinity population of the local church, measured by a 3-mile radius
hci_days	The number of days passed since the completion of the weekend consultation
inter2	The interaction term: hci_days times tier
rpgmexp_1	Church program expenditures, adjusted for inflation, lagged one year
stafcomp_1	Church non-clergy staff expenditures, adjusted for inflation, lagged one year
rdebt_church_1	Change in the local church facility debt level, adjusted for inflation, lagged one year
rbuilding_1	Church expenditures on facilities from savings, adjusted for inflation, lagged one year
male	Binary variable representing the gender of the senior pastor, 1 = male, 0 = female
age	Current age of the senior pastor
years_at_appt	Number of years the senior pastor has been in the current appointment
year	Calendar year
Constant	Constant term in the equation (no useful interpretation)

The statistical results from the regression equation estimations offer important information from which one can evaluate the overall usefulness of the results. There were 2,186 local churches used for supporting data. To limit the impact of temporal changes, observations were limited to 2008 through 2012.

All coefficients were found to be statistically significant, with the single exception of the coefficient of rbuilding\_1.<sup>3</sup> All other coefficients are statistically significant at the 1% level of confidence or better. This simply means that one is very confident in the results, with the single exception of the impact of church expenditures on facilities, funding from savings, on worship attendance. For our purposes, this insignificant result is of no consequence.

The variables of interest are hci\_days and inter2. The combination of these two variables measures the impact of additional days (if any) after the completion of the HCI weekend consultation. The calculated effects of an additional day and year of time after the weekend consultation upon worship attendance, relative to that of a church that did not participate, are presented in the following table.

**Table 4**  
**HCI Outcomes**  
**Worship Attendance**

			<b>Average</b>	<b>Percentage</b>
<b>Tiers</b>	<b>Daily</b>	<b>Annual</b>	<b>Attend</b>	<b>Gain</b>
1				
2				
3	0.02	7	202	3.27%
4	0.05	18	407	4.48%
5	0.08	30	668	4.47%
6	0.11	42	1,786	2.32%

First, there was no positive effect of HCI participation found among tier 1 and tier 2 churches. This includes churches with worship attendance less than 125. There could be a positive effect, but this evaluation found it too small for measurement. However, among tier 3 churches (worship attendance between 125 and 349), at the end of one year after completion of the weekend consultation, worship attendance is expected to increase on average by seven attendees.

For tier 3 churches, the expected gain by the end of the first year after completion is seven attendees. The average attendance for tier 3 churches is 202. Thus, by the end of the first year after completion, the local church can expect an increase in worship attendance of 3.27%. For tier 4 churches, the average gain is expected to equal 18 attendees by the end of the first year, which represents an increase of 4.48%, on average. For tier 5 churches, the expected gain is 30 attendees, representing an increase of 4.47% in worship attendance by the end of the first year. For tier 6 churches, the average gain is expected to equal 42 attendees, representing an increase in worship attendance of 2.32% by the end of the first year after completion.

The evaluation does not include a determination of the tenure of the positive effect from participation. The results are reasonable strong enough to conclude that the impact from participation

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<sup>3</sup> This specific coefficient was statistically significant with churches from all jurisdictions included.

lasts at least two years. The evaluation did not include a determination of the pattern of decay of impact after one year. This extended evaluation must await further study.

## **Summary**

The evaluation examined the end-of-year records among 2,186 local churches within the South Central Jurisdiction, over the period between 2008 and 2012. Although a total of 99 churches had completed the weekend consultation by the time the information was delivered for this study, only 68 churches had enough experience after the weekend consultation to be included in the evaluation. All churches that had completed the weekend consultation were from the Missouri Annual Conference.

The results from the study are significant. On average, local churches that completed the weekend consultation, accepted the prescriptions, and implemented the changes significantly benefited from the program but only among churches with average worship attendance greater than 124. The results failed to indicate a positive benefit from participation among churches smaller than 125 in worship attendance. For churches with worship attendance greater than 124, the expected gain in worship attendance ranges from a low of 2.27% to a high of 4.48%, differing by the size of the church. Of course, these are average results, and the results for a particular church could be larger or smaller.

The evaluation benefits from statistical methods designed to account for other confounding influences upon worship attendance. The comparisons of worship attendance figures exclude those from churches that had a change in pastoral appointment. The influence from changes in affinity populations is taken into account. The influences from changes in spending patterns are also taken into effect. The influence from differences in personal characteristics of the pastor ( age, gender, and years in the present appointment) are taken into account. The time period was narrowed to include worship attendance figures between 2008 and 2012.

This type of evaluation of a local church program that is designed for church growth is not that common since the necessary data required for an evaluation are not often assembled. This is one of the exceptions. Within the limitations of the data, one should have confidence in these results. With no change in the senior pastor's appointment, one should expect increases in worship attendance upon completion of the weekend consultation and successful implementation of the prescriptions for those churches with worship attendance greater than 124.

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