ABSTRACT

Title of Document:	**BUILDING A COLLECTION'S CARE INDEX: AN APPROACH TO HELPING PRESERVE OUR CULTURAL HERITAGE BEFORE IT DISAPPEARS**
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Cultural heritage is important to everyone. Whether it is family heirlooms passed down through generations, or the archaeological evidence of lost civilizations, we preserve these things to have them for future generations. To protect them, it is important that specialists have the knowledge and skills to handle the multiple challenges that can result from, or that can prevent, deterioration. These professionals perform care duties regularly in organizations such as archives, libraries and museums. Any organization with an historical, art, or circulating collection that performs these duties is a collections-based institution, and these institutions are responsible for the difficult and specialized care of the collection items.

This study analyzes data from a national survey called the Heritage Health Information (HHI) Study 2014 that asked collections-based institutions about their regular care practice. The HHI survey measured practice from U.S. institutions

resulting in a robust 1,714 responses. New analysis in this dissertation builds a collections care index from HHI, then performs a multiple regression on the index score.

The index process begins by identifying a common list of twelve key practices in collections care. Each practice is reviewed prior to the scoring in the index to ensure valid results. An original scoring rubric assigns a score to each practice, then all scores are added into a single composite index score. In a second analysis, the index score serves as the dependent variable in a multiple regression where organizational type, budget size, total staff count, and the count of collections items are independent variables to measure the effect each can have on the composite score.

The findings from the index show that the highest count of scores clustered around the mid-range of the distribution indicating that most organizations are doing some care duties. The regression findings show large budgets had the greatest effect on scores.

The index is the key contribution of this study serving as a tool to help organizations determine how their efforts to perform each responsibility contributes to their overall management. This has implications for performance management and resource allocations for cultural heritage organizations, as well as, professional associations.

BUILDING A COLLECTIONS CARE INDEX: AN APPROACH TO HELPING

PRESERVE OUR CULTURAL HERITAGE BEFORE IT DISAPPEARS

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PREFACE

In 2013, Larry L. Reger at Heritage Preservation hired me to serve as the study director of the Heritage Health Information (HHI) Study 2014. After a successful 2004 study, one that spurred additional educational programs and grant funding, Larry had planned to update the data and the findings through a second round of the survey. The timing of the ten-year anniversary was a great bookend.

What began as a straight-forward job that had an immense amount of resources in tools and money became a different task when it included delays in the collection period and the dissolution of Heritage Preservation midway through the study.

After I left the final data and report in trusted hands, the HHI 2014 study languished. It became less and less of a priority as time continued. In spite of interest in the study from the nearly 2,000 respondents, and other practitioners in the field, it was not until 2019 when this data and the final study report were released.

It is with great joy that I am able to finish the work I began those many years ago with HHI. This dissertation is not only an effort to provide tools to the field, it carries forward the tradition of Heritage Preservation to share and improve collections care anywhere for any collection.

DEDICATION

To Carlitos, there is no stronger force in my life than you. Thank you for being my guiding light on this journey and never letting me give up.

ACKNOWLEDGEMENTS

There are several people who deserve acknowledgement in this dissertation. First, HHI would not exist without the leadership, persistent fundraising and advocacy of Larry L. Reger, the former President of Heritage Preservation. If not for Larry, HHI would also not have been my responsibility. I thank him whole-heartedly for his support in hiring me and shepherding this project. I also want to thank Jess Unger and Katelin Lee for stepping up to my request for help when HHI needed it. Heritage Preservation has left its mark on us all.

To my advisor, John Carlo Bertot, I want to thank you for always trusting me and believing in my ideas. Your support has carried this project from the very beginning. To my advisor, Ricardo L. Punzalan, I want to thank you for your support and generosity that has helped me to finish. You answered my call when I needed it.

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To Carlitos, this project is for you. It would have been impossible for me to finish without you, and there is no way I can say thank you. To Mona, thank you for snoring loudly in my lap. It helped me to concentrate. Sometimes.

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Chapter 1: Introduction

1.1 Motivation and Goals

This dissertation engages data from the 2014 Heritage Health Information Survey
(HHI) in order to construct a tool for assessing how cultural heritage
professionals perform collections care within their own institutions and to have
the ability to compare their performance with their peers. To accomplish this, this
study creates an original index that identifies the key responsibilities of
collections care that can serve as the benchmark for practice, while also distilling
a single score for each respondent in the HHI survey that can be tested for the
organizational attributes that contribute to increasing the index score above what
improvements can be made to performance. Several index studies have shown
that the scoring process, while valuable, is not enough. This dissertation provides
both the index method and a regression model to cultural heritage practitioners
as tools to review, monitor and improve their practice at any time and for any
purpose.

The HHI is the only comprehensive survey about object and collections
preservation in nonprofit cultural institutions in the United States. The study
began as a means to benchmark the state of preservation in the U.S. taking a
360-degree scan of collections care and preservation practice. Topics range from
staffing resources, budget allocations, disaster planning, both physical and digital
storage systems, and the number of objects by type and condition of

deterioration. It was collected in two different rounds, once in 2004 and once in 2014. Because HHI covers the most comprehensive range of topics in preservation practice, it represents the best data source for any analysis, and indeed, proved so important as a resource to the conservation, preservation and cultural heritage sectors that it was collected twice. Until now, analysis of the data has provided the respondents and researchers with an overview that describes how practice is performed at the national level with descriptive statistics by question. Some question comparisons between 2004 and 2014 are also possible at the national level. This overview analysis is indispensable to many key actors that provide funding and educational resources to preservation practitioners, however, it is not specific enough for organizations to measure their own performance. In order for practitioners in preservation to identify where to improve their work, or where to dedicate additional resources within their organization, the analysis must be at the respondent level.

It is for this reason that this dissertation performs the first analysis that seeks to provide practitioners with such necessary tools. The methods proposed here include two new approaches aimed at the practitioner audience: 1) to build an index that scores HHI respondents by the performance metrics on comprehensive collections care which would allow organizations to compare their preservation work to others; and, 2) to identify which organizational characteristics have the biggest impact on the index score, using a multiple linear regression on the index scores. This analysis, and its emphasis on the

practitioners, unlocks more detail than is present in the reports on HHI findings from the 2004 study and the 2014 study. As is shown in the literature section, it also serves as the first analysis at the respondent level in the U.S.

Constructing an index not only establishes a baseline for contributing factors to "good enough" practice, but also tests some of the assumptions held by the cultural sector, including major funders that assume smaller organizations are at a disadvantage. Large institutions responding in 2004 had some of the most at-risk objects in our country in their vast collections, while small institutions reported small or no budget resources to support staff (AIC, 2018, Heritage Health Index). It is the score in context of its ranking that can help to test these persistent assumptions and further our collective understanding of the need for comprehensive care across the country.

The method described in chapter 3 relies on the core standards for collections care taken from previous studies and core competencies for collections care professionals. It also serves as a means to measure performance across collections type (i.e., organizational type). Where libraries, archives, museums and historical societies overlap in their work performance is caring for collections and serving the public. Of these two, collections care demands the same coordinated efforts across an institution to accomplish, where users and patrons can be served in different ways.

1.2 HHI History and Background

In 1997, the President's Committee on the Arts and Humanities issued a call to action in their report *Creative America: A Report to the President* for "public agencies and the private sector to support a national assessment of the nation's preservation needs and a plan to protect our cultural legacy" (PCAH, n.p.). Until that time, there was no way to understand the magnitude needed to care for objects in collections at museums, libraries and archives across the country. As materials and objects continued to be acquired, it became a very real possibility that their longevity was under threat at organizations that care for inanimate objects preserved for future use and study. In 2001, Heritage Preservation, formerly the National Institute for the Conservation of Cultural Property,[1] answered the call to action to develop a national study. The result was the HHI study.

Heritage Preservation led the development of the 2004 study and started by convening professional working groups. They consulted conservation and collections care professionals to determine which collections care topics to include, and the viability of collecting a nationally representative survey of practice in the field (Heritage Preservation, 2005). These meetings began as

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[1] Heritage Preservation was a nonprofit service organization for cultural institutions that aimed to improve collections care practice across the U.S. Their programs and services included Save Outdoor Sculpture (SOS) partnering with Girl Scouts and Boy Scouts troops to learn about how to preserve public monuments, Connecting to Collections (C2C) targeting improving knowledge, skills and collections care work with free webinars and tutorials, and the Conservation Assessment Program that provided professional conservation assessments for small cultural organizations in order to design a plan that organizations could employ to improve care. It shuttered its doors in 2015.

early as 1998 and continued until 2001 (Heritage Preservation, 2005). Heritage

Preservation also turned to the core competencies for conservators, librarians,

and archivists outlined by professional associations to look at similar skills across

practitioners (AIC, 2018, Core Documents; SAA, 2018, Standards; ACRL, 2018,

Guidelines). Professional standards, specifically for educational attainment, legal

standards for appraisal or regulation, and item disposition, can require training

that is specific to a career in one type of institution, but there is overlap,

specifically in collections care that affects only tangible objects like books,

paintings, scientific specimens, and computer databases because of the

similarity of standards for all of these types of items. Living collections, like zoo

animals, demand much different types of conservation treatment, with standards

for habitat, breeding and feeding. Similarly, historic preservation for architecture

includes restoration and preservation, like paintings, but regulations and

standards for buildings are taken from the National Historic Preservation Act of

1966 requiring that organizations and government agencies can and should be

involved in the process of preservation (National Historic Preservation Act, 1966).

Tangible objects held at collecting institutions are cared for using best practices

to the best of the organization's ability with little to no oversight or intervention.

The focus on the objects most commonly available, the ones that tell the history

of peoples and ideas, that up until 2001 received less attention for their long-term

preservation, was a first.

Another first to come from HHI's development was the building of a universal

data file of all cultural heritage organizations in the United States that held

collections of tangible objects. Non-living, portable (i.e., not architecture) objects

can be cared for at several institutions making the universe of eligible institutions

quite expanse. Mailing and membership lists were compiled for museums, public

libraries, historic houses, university libraries, special collections, arboretums,

zoos, and scientific collections at university biology departments. While the study

did not include living collections or historic buildings, many zoos and historic

buildings were included in the universe because they care for non-living

collections like research materials, historic furniture, lab specimens, and research

texts within their own libraries, archives, and databases that require the same

treatment and procedures for care.

To develop the survey questionnaire, the HHI study team used previous reports

written on commission by conservators assessing small and mid-sized

collections all over the country, localized reports commissioned by foundations,

and a slew of evaluations from professional associations about their members'

work. With the guidance of a statistician working for the Smithsonian Institution,

Heritage Preservation compiled and distilled a set of 48 questions that would

measure the entire spectrum of collections care practice for building safety,

portable structures and preservation procedures regardless of the size or type of

an organization (AIC, 2018, Collection Care). This included specifically:

environmental controls; security; storage; planning; cataloging; conservation

practices; community and board engagement; budgeting and fundraising; staff;

digital preservation and digitization; accessibility of the items; and the estimated

number of items in a collection by the object material and need of care for those

items.

In 2014, Heritage Preservation sought to collect comparative data to the 2004

study with the purpose of describing how practice had changed in the intervening

ten years. I was hired to manage the survey including, reviewing the

questionnaire, updating the survey universe and methods, and speaking to

funders and stakeholders about the study. Details about the methods of HHI

2014 and the national findings are found in Appendix A as they serve as

background to this dissertation.

1.3 Defining Key Concepts

The following terms are drawn from sources across the professional literature in

the cultural sector. The terms are used by archives, libraries, and museums

primarily, but are often adapted or related to terms common in architectural and

historic preservation, archaeological conservation, and cultural resource

management fields. HHI uses the term "collections-based institution" to describe

any eligible organization that can participate in the survey, and using that as the

guiding principle, this dissertation uses terms that describe a collections-based

institution's work and function.

1.3.1 Objects, collections, cultural property, cultural heritage

The terms objects, collections, materials, material culture, cultural heritage and cultural property are often interchanged. While they all refer to the same items, usage of each depends on the professional training within the field. For example, museum professionals refer to the items in their collections as objects because the material of the item can vary wildly, and so the most generic term for anything in the collection is object. Library professionals, by contrast, can refer to their collections as holdings or materials. The term collections – synonymous with holdings – refers to the entirety of objects or materials as they are collected by an institution either through subscription, purchase, or donation.

When referring to collections across museums, libraries, and archives, all collections can take on several names, including cultural heritage or cultural property. In most instances, cultural heritage or cultural property are terms used in government identification, legislated policy, and regulations. As memory institutions that collect items of historical or informational import, archives, libraries and museums are referred to as cultural heritage organizations, thereby identifying the objects they collect as cultural heritage. Cultural property is a very similar term to cultural heritage. There is no firm distinction between these two terms, other than cultural heritage appearing more commonly associated with collections items within institutions, while cultural property is a more inclusive term referring to any object that is small enough to be collected, as well as archaeological sites and historical architecture. Additionally, cultural property is more commonly used in the United States. Europeans, and other countries, often

refer to their cultural heritage as cultural patrimony as it represents national history and customs. Americans have a less cohesive concept of cultural patrimony – except in the case of national monuments and sites – and generally do not use the term when referring to cultural property collected by cultural heritage organizations.

1.3.2 Conservation, Preservation, Collections Care

Conservation is the profession dedicated to preserving objects of cultural property or heritage for the future. This includes a host of activities like, examination, documentation, treatment, and preventative care supported by chemical and historical research findings and professional education. Preservation, a similar term, is the protection of cultural heritage that minimizes chemical and physical deterioration and damage. A conservator is a highly technical professional, often with the combined skills of a chemical engineer, a fine arts painter, and an archivist. A preservationist is an advocate for the conservation of cultural heritage, and this differs from a conservationist who is an advocate for preserving the environment and wildlife. Collections care is an umbrella term to describe how conservation, environmental controls inside buildings, building security, archiving, and budgeting all contribute to the preservation of cultural heritage. In large organizations, collections care takes place across several departments with specialized staff in each. At smaller institutions, the need or requirements for collections care might be less

demanding and the responsibility of a single individual who can outsource technical aspects as needed.

Comprehensive collections care is an institution's attention to and support for collections care. That means a cultural heritage organization is engaging in comprehensive care when there are efforts to prevent deterioration through prevention means, as well as, providing conservation to items that need treatment. It includes efforts to monitor collections regularly, and to ensure that they survive for future generations.

1.3.3 Indexes

Indexes - the method used in the dissertation - combine data to make a composite calculation of measures; they are a construct of multiple ideas that can be distilled into one data point (Babie, 2004). They can distill this data point (or score) from either a single data source like a survey with multiple items or multiple data sources selecting items from each (Babie, 2004). The craft of creating an index encompasses source selection, the data items selected (or question topic addressed), question response rate, the relationship between the items, and the normality of the score (Crossman, 2018). Famous examples of indexes include the Consumer Price Index (CPI) and the Dow Jones Industrial Average. Indexes in social science are powerful tools that help us relate a concept that is complex down to a single number that has context and a scale for comparisons (Babie, 2004).

The CPI, for example, takes pricing data from many sources, including point-of-purchase data from individuals and field data collected in stores in urban and rural areas, then tabulates a composite score for the average price of a good or service (BLS, n.d.). Urban and rural market prices can vary quite a lot for different reasons. In some cases, the scarcity of an item drives up the price in both, but there are instances where an item costs less in rural markets than in urban markets, or vice versa. Measures such as the CPI, while more complex in their design, distill a single average number that helps economists, policy-makers, and researchers monitor the rate of inflation in the U.S. economy (BLS, n.d.). Scores like this have a broader impact, and while not the only indicator of inflation or the health of the U.S. economy, it is an important one.

With other analyses available to measure performance, indexes are one of several statistics. The overview below highlights that collections care is studied in myriad ways, and indexes are sometimes abandoned. This is not to disregard the importance they hold, but rather to emphasize the uniqueness of this study and what it contributes.

1.4 Research Questions

This dissertation constructs an index using the HHI 2014 data. The resulting index scores survey respondents by the sum of several core functions of collections care practice. Testing the index for its validity requires testing the

assumptions about collections care practice. The research questions guiding the tests of the index are:

RQ1:　　What are the characteristics of a comprehensive collections care organization?

　　　　Hypothesis 1: Large total budgets are positively correlated with a higher index score.

　　　　Hypothesis 2: Mid-size institutions of all types score higher than small and large institutions.

　　　　Hypothesis 3: Organizational collections type for archives is positively correlated with a higher score.

RQ2:　　Is an index the best method for measuring overall comprehensive collections care?

Based on the method outlined in chapter 3, the method assigns a score to each organization that responded to HHI 2014. A higher score indicates more comprehensive care is performed at the organization. These sections also explore the usefulness of the method.

1.5 Methodology and Study Limitations

1.5.1 Dissertation Methods

To construct the index, this dissertation follows a standard stepwise process in the following order: item selection, examining empirical relationships, index scoring, and index validation. Questions that affect collections care are considered first, along with select questions from HHI 2014 from these core areas: environmental controls, staff, storage, emergency planning, security, digital preservation, and budgets. These topics are consistent in every comprehensive study on preservation. Then questions are selected from this core set based on the response rate by question. The next step tests the relationship between these questions through crosstabulations. The final step, scoring, assigns each a score to a response for each question that counts "yes" responses, "no" responses, and "don't know" differently. The sum of these scores are totaled by each respondent with the total serving as the comprehensive collections care score for each respondent. The methods used to create the index are then validated and lessons learned are discussed.

The second analysis in this dissertation performs a linear multiple regression of four organizational characteristics where they serve as the independent variables in the regression model and the rank score of the index is the dependent variable. Through a series of tests, by changing the value of the independent variables, this model shows which characteristic influences an organization's

score. This test can predict the variation in the index score of each organization while accounting for the other factors that might also affect performance.

1.5.2 Limitations

Due to the fact that such indexes are rare in the cultural sector, building one for preservation is a unique and experimental contribution. This dissertation explores the feasibility of developing an index with the HHI 2014 data. The method designed and used in this dissertation explores how to use the HHI 2014 data for this type of analysis, though other methods are discussed as alternatives if an index method does not provide satisfactory results.

Additional limitations might arise from the respondent pool. While the universe was inclusive of all museums, libraries, and archives, the overall response rate was 20% with at least a 70% response rate per item (Frehill, et al, 2019). While the overall rate is low by most standards, survey responses are in decline, and with such a high response rate by each item there are no significant data quality issues or response bias (Frehill, et al, 2019). The low response rate overall resulted from museums and historical societies - large subgroups in the cultural sector - responding at rates lower than expected. This should not affect the scoring because subgroup designation does not factor into the indexing scoring, however, it may impact the second analysis that predicts what organizational characteristics are associated with index scores. Institutional type is one hypothesis tested and with low representation of some subgroups there might not be enough valid responses to determine the exact effect.

Indexes are rough estimates that measure performance of respondents, which means the score produced here is only useful for the purposes of indicating collections care competency in the U.S. amongst the universe of institutions sampled for HHI. The method used here cannot be adapted to a different sector. This is a limitation of the overall study.

1.6 Significance and Contributions of the Study

The impact of the results of HHI almost surpasses the study itself. While preservation efforts have always been underway, books, art objects, digital copies, county records, and resource manuals are often packed away or left on the shelf assuming they will be there again when interest piques. Unlike the National Register for Historic Places and the Endangered Species List, popular inventories that bring attention to the prescient need for preservation and conservation, there is no national recognition or program that designates endangered status for objects that are collected. Certainly, the prices of fine art and the significance of historical objects like the Enola Gay (the first U.S. airplane to drop an atomic bomb) bring attention to the importance of collected and preserved objects, but no one national organization or law governs their future. To raise the profile of these objects and engage more in the cultural policy discussion around preserving U.S. cultural property and national patrimony, awareness is the first step. After the release of study findings from the first HHI in 2005 many news outlets including the *Associated Press* and the *New York Times*

printed articles that demonstrated that the need for object preservation was as big an issue as protecting historic architecture and endangered animals.

The significance of an index like this is its importance for the collections care field. Index scoring performed on respondents in this dissertation allow organizations to benchmark their score to others, and to measure the comprehensiveness of their performance for collections care. Organizations seeking to raise funds or improve their practice can use assessments like their index score as a launching point for setting new goals and designing programs or positions that take on responsibilities that need improvement. Likewise, associations and funders in the cultural sector can see where organizations are falling behind and push resources, training or funding to those areas.

The present study also contributes to the broader literature on performance metrics and evaluation, while not drawing on previous evaluations of collections care. Performance metrics in the cultural sector serve a necessary function for institutions, particularly nonprofit ones, where profits are not a measure that improves business practice. For this reason, libraries, archives and museums have all developed unique performance evaluations that serve as a means to measure ongoing improvements, and while they serve as an inspiration for this dissertation, any study of collections care requires original analysis due to the rare attention it is paid in research and evaluation.

1.7 Dissertation Overview

Chapter 2 provides a review of the major literatures addressed in this study, including research on collections care practice and an overview of indexes in the cultural sector.

Chapter 3 outlines the methods used to address the research questions, namely the item selection, empirical relationships, index scoring, and index validation steps taken to construct the index to answer RQ2. To answer RQ1, this dissertation performs a linear multiple regression analysis to test what organizational characteristics impact an organization's score in the index.

Chapter 4 discusses the results of constructing the index, modifications to the index method and the results of the regression analysis in predicting the organizational attributes associated with scores in the index. At the end, there is a discussion of the limitations of the study. This chapter also addresses areas of future research.

Chapter 5 concludes the dissertation with a summary of the study and its results. It describes the study's key contributions to collections care and what factors contribute most to collections care practice.

Chapter 2: Literature Review

This chapter synthesizes the literature on prior research that provides the groundwork for building an index of comprehensive collections care, and lays the groundwork for the two research questions: 1) what are the characteristics of a comprehensive collections care organization?; and 2) is this the best method for measuring comprehensive collections care? This is accomplished by providing an overview of the practice of collections care – the focus of this dissertation, collections care studies, and what constitutes comprehensive practice then followed by summaries of studies that collect data on care practices. Most of the studies discussed below cover several aspects of practice, although their scope, universe, or design vary, including HHI 2014. The next section reviews past methods for index construction, and examples for how they work, providing comparisons for the methodological approach for this study laid out in Chapter 3. After the review, it is concluded that the best approach is the simplest: using a single comprehensive data source to make a composite score of comprehensive collections care practice. Comparing this index against others in the arts and culture sector illustrates that this index is sufficient based on the data validity and study methods.

2.1 Collections Care

As early as 1977, in the inaugural year of the *Journal of the American Institute for Conservation*, professionals in the field of conservation recommended that preventative care is as important to maintaining cultural heritage objects as

conservation treatments to repair damage (Stolow, 1977). Standards for storage, environmental effects on different materials, and increased conservation budgets are among the recommendations that would help to prevent damage that becomes expensive to repair over time (Stolow, 1977). Not long after, the term collections care appears as a concept in the conservation and museum literature, specifically calling attention to the myriad processes and staff required for better preventive care. But what is collections care and how is it carried out? According to the American Institute for Conservation of Historic and Artistic Works, collections care is technically a "systematic mitigation of all risks to all strategically managed values of a collection" (AIC, 2018, Collection Care). A systematic mitigation takes into account that there are always factors that affect collections items in different ways, and that the preventative treatment to an object may depend on an independent evaluation of all the factors that can cause damage. It also means that the review is systematic for all risk factors regardless of the damage they pose, so no one part of the process supersedes another, and the monetary value, state of deterioration, or other sentimental value of the object is not favored over risk factors.

Practically, that means that with collections care, many perspectives, and sometimes many actors, are being brought to bear within an organization to combine skills in conservation, environmental controls, building security, archiving, and budgeting to contribute to the preservation of cultural heritage. This helps to ensure specialists conduct independent evaluations, and that

working together, the process maintains a distributed sense of value for each component.

Years of combined standards across collecting institutions, professional training, and evaluations like the studies below have distilled three major buckets that taken together comprise collections care practice within and across a single institution:

- Requirements for building features
- Requirements for portable fittings
- Procedures (Michalski, 2018).

Steps taken to address all three are considered comprehensive and preventative. While the first two – building features and portable fittings – can be described and practiced in almost any institution, there is no general consensus on the procedures that should be taken to care for collections. Some practices, and responsibilities, are cropping up at institutions as practice becomes a priority or as staff skill-up. Smaller institutions may also not perform all of the procedures due to a myriad of factors such as lack of need or lack of knowledge, adding more variability to what should or could be required.

Building requirements cover basic structural concerns that would affect any business. This includes having reliable roofs, floors, walls, windows and doors;

fire detection and suppression systems; adequate locks on doors and windows; and alarm systems (Michalski, 2018). These basic measures protect the building, the people in it, and the physical collections within. Checking these regularly to keep up maintenance and repairs is essential for protecting items from moisture, humidity, light, fire, and theft. Many practitioners would add pest management into this bucket, though this is not a consistent practice, and is likely performed in warmer climates more frequently. From the recent fires that ravaged the National Museum of Brazil and the Notre Dame in Paris, these measures are critical in routine maintenance and can be catastrophic (Solly, 2019 & Brown, 2019). Collections care does not cover architectural preservation because the treatments and decisions for preservation are very different than object care. However, many collecting organizations are housed in historic or older buildings with no hope for new or refurbished buildings that meet updated HVAC, lighting or biometric security systems. Pests, like termites, can be major problems for institutions that are in historic homes which is why many collections care professionals include it in their maintenance efforts, and any building with regular use can have a negative effect on any person or object housed within.

Portable fittings are the containers, shelves, or support structures that care for collections (Michalski, 2018). Many objects within museums, archives, and special collections are never exhibited, and are kept in temporary or permanent storage. Damage from a small box on an object may be irreparable, and not protecting the object from the moment it is stored goes against preventative care.

Since objects come in different sizes and shapes, the containers to protect them while in storage also vary. Specialty materials are made to ensure delicate materials like film and paper do not interact with chemical elements that would cause damage. Acid-free boxes, for example, are considered the best for storing loose and bound paper. After years of storing items in boxes made with acid, collections care professionals noted that damage appeared on paper items. Items that circulate in libraries that are not preserved for the long term should also have proper bookends or supports to prevent bending or slouching. Storage and preventative care should allow for regular access to items. This underlies almost all collections care practices.

As stated above, procedures vary. With any collecting institution, these core procedures should be practiced: cataloging (or inventory); inspection and review of the collection; environmental controls for interior spaces, exhibiting, and storing; knowledgeable staff; and financial support. Additional responsibilities for digitization, for example, have been practiced for decades, duplicating materials on microfiche in libraries and archives. However, the prevalence of computers and scanners made digitization cheaper over time, opening up the possibility of making copies and collections of digital items for almost any item. Additionally, institutions now collect native digital objects and preservation of these items depends on the software platform and the server space.

These three buckets also cover the various spaces that a museum, library,

historical society or archives would house collections: the exterior and structure

of the building, the interior space for exhibits, and storage, onsite or offsite.

Section 2.2 discusses the various ways that research studies have collected data

regarding practice for building features, portable structures and common

procedures and culminate with a comparison of all the preservation studies to

show which procedures are most commonly practiced, which are collected in

most studies and which are easier to measure.

2.2 Comprehensive Collections Care Studies 2005 to 2014

In the time between HHI 2004 and 2014, several studies delved into topics

covered by HHI. One study from the British Library titled *Knowing the Need*, from

2013, covers many preservation topics from 74 libraries and archives across the

United Kingdom and the Republic of Ireland collected from 2006 to 2011 (Peach

& Foster, 2013). The methods used to evaluate collections care practice are

radically different than HHI, and far more manageable given the small sample

size of 74. Each institution in the sample is given a Preservation Assessment

Survey to complete for 400 objects in its collection covering topics such as:

cataloging status; demand levels; condition and usability; the value and

importance of the collections; existing damage; good storage practices;

environmental management; handling practices; emergency planning; security;

and preservation surrogacy. For collections of 5,000 or more, 400 object-level

assessments give precision of ±5% with a confidence level of 95% (Peach &

Foster, 2013). All of the surveys completed by organizations are then aggregated into a database and analyzed. The findings showed that collections objects across institutional types were well cared for, especially in the areas of security and fire protection. But cataloging, storage management, and environmental controls are areas that require better practice in British institutions. Environmental management and emergency preparedness were both low with reported adequacy levels of 38% and 62%, respectively.

Knowing the Need is the most like HHI in the range of topics it covers with a broad approach on the overall health of the collection and all supplemental work done across an institution. This, unlike studies below, demonstrates that the sponsors of the study are concerned with comprehensive care. Because it is so detailed, and each assessment is performed at least 400 times, this survey of care practice required time. The study timeline, indeed, lasted five years. Where HHI 2014 covered a breadth of topics, it was shallow on each topic, as that would have been an impossible task for all of the institutions in the universe to do such a deep dive over the course of five or six months. *Knowing the Need*, instead, wanted to know more about the depth of the practice, and therefore adopted a different method allowing institutions ample time to report on several objects across the comprehensive list of practice areas.

Another recent study, the *International Storage Survey 2011*, covers more aspects of collections care than its title suggests (ICCROM-UNESCO, 2011).

Conducted by United Nations Education, Scientific and Cultural Organization (UNESCO) and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM-UNESCO, 2011), the study focused on the sufficiency of storage, the security of collections items, cataloging, damage to collections, environmental controls, and staff training for storing collections. The population of respondents covers only museums in 136 countries, so it is not representative of all collections-based institutions altogether, even with the international scope. Like HHI, the survey used a questionnaire format that allowed institutions to complete it quickly and did not involve a thorough review of individual objects. While the study covers more than one aspect of practice (storage), it does focus on the aspects of collections care that affect storage specifically, not exhibition space environmental controls, staff training, or funding for collections care. The findings from this study show that security in museums is low with 10% reporting theft of collections items, and 20% reporting unsecured buildings. 50% reported a lack of storage for their objects, and 40% reported a cataloging backlog, little to no support from management to update storage, and untrained staff.

In the United States, two preservation studies have similar scopes and purpose to HHI. In fact, Heritage Preservation's effort to build a comprehensive survey drew inspiration from one study and inspired the other. First is the Association of Research Libraries (ARL) Preservation Statistics (Kyrillidou & Bland, 2009). Conducted on an annual basis, this study surveyed ARL member academic

libraries in the United States about their collections care practice from 1984 until 2007 (Kyrillidou & Bland, 2009). The scope of topics in the study was broad, like HHI, including personnel, expenditures, conservation treatment, and preservation treatment (Kyrillidou & Bland, 2009). In this time, ARL recorded incremental progress in preservation care, but study responses began to plateau in the early to mid-2000s and the survey was not conducted again after 2007. Second, Preservation Statistics (PS), is collected by the Preservation Standards and Practices Committee of the Preservation and Reformatting Section (PARS) of the American Library Association (ALA) and the Association of Library Collections and Technical Services (ALCTS) (Peterson, Robertson, & Szydlowski, 2016). PS sought to fill the gap for regular preservation data collection after the end of ARL's data collection, and before the development of HHI 2014. Since 2012, PS has changed in scope; initially it included all collections-based institutions, but ultimately targeted academic and research libraries like ARL's survey after encountering difficulty securing participation from museums and archives. The breadth of topics mirrors the ARL survey, which itself has a lot of overlap with HHI. Section 2.3 below shows clearly how they overlap.

After the public release of findings from HHI 2004, other U.S. organizations sought to capture the momentum behind the study and identify areas of investment in their own preservation practice. One such example is the *North Carolina's Cultural Resources: A survey and report* from 2010 that provides an overview of all collections-based organizations in the state of North Carolina

accounting for the different types of organizations, the percentage of collections

types and items held within the state, as well as, collections care practice (North

Carolina, 2010). The report differs from HHI in that the scope is on the state of

North Carolina and its history. The beginning acts much like a brochure of the

sector within the state delving into the use, subject matter, and date range of the

collections items. Collections care topics surveyed and reported include digital

preservation activities, condition assessments, conservation activities (like book

binding or microfilming), storage, environmental controls, disaster planning,

funding, and cataloging (North Carolina, 2010).

2.3 Collections Care Studies Compared

For comparison, the table below shows how these studies overlap by collections

care topic. The matrix in Table 1 illustrates visually the differences between the

collections care studies discussed above. Across the top row is each collections

care study discussed above, and the left column lists each collection care topic.

Following across, from left to right, is a mark for each time a topic appears in a

specific study. The final five rows of the table list the types of collections-based

organizations that are measured in a study. A mark appears each time a study

included the type of collection.

Preservation Data Item	Pres Stats	ARL Pres Stats	HHI 2014	Knowing the Need	ICCROM Storage Survey	North Carolina
Staff Size		X	X			X
Collection Size	X	X	X			X
Staff Salaries		X				
Staff hierarchy		X			X	
Contract or temporary staff	X	X	X			X
Expenditures on preservation		X	X			X
Condition assessment	X		X			X
# or % of items treated for damage	X	X				X
# or % of items digitized	X	X	X			X
# or % of items catalogued	X		X	X	X	X
# or % of items catalogued via an online catalog	X		X	X		X
Items are properly stored	X		X	X	X	X
Environmental controls			X	X		X
Security			X	X	X	
Emergency Preparedness			X	X		X
Pest Control					X	
Condition of the building					X	

Collection Type						
Archive	X		X	X		X
Historical Society			X			X
Library	X	X	X	X		X
Museum			X		X	X
Scientific Collection			X			X

Table 1. Comparison matrix of collections care studies from 2005 to 2014

This table shows that even though other studies focus on collections care and provide findings to show how the field is maintaining items in their collections, not all topics can be covered or included in a single source. In some instances, the differences between studies derives from the funder or group conducting the study. For example, the percentage of collections cataloged is important because it is the first step in many towards a holistic collections care practice. However, ARL did not ask about this. Why is not known exactly, but one logical assumption is that ARL surveys only its members and assumes that all academic libraries have updated catalogs. This would be reasonable. Given the way that most museums and archives acquire objects, which can originate as donations or purchases, and require copyright and other legal releases to be fully incorporated into a collection, cataloging is often catching up to the acquisition and in some cases never completed.

2.4 Index Studies in the Cultural Sector

This section of the literature describes the studies that selected an index method in the cultural sector. None of the following studies focus on collections care, although they do provide a foundation for how an index functions as a ranking system for organizations and the differences that can exist between each index method. In Chapter 3, the details for how this dissertation performs its index are described in full drawing on the foundation that these previous studies provide.

Below is an overview of five well-known studies in the arts and cultural sector; the first study is not an index but a set of indicators - a similar method that identifies key measures, while the other four build an index based on the available data. There are only a few studies below because data collection about organizational practices in the cultural heritage sector is rare. There are regular data collection efforts for industry studies on employment and wages, for example, but these are not the same as understanding how institutions improve upon their daily work. There are several data sources about daily practice, especially in the museum sector, that evaluate a single institution or program. Much of these evaluations on practice vary in their results and adhere very loosely to performance measures that serve as the basis for customer satisfaction (Paulus, 2003 and De Prospo, et al, 1973). Data collection in cultural sector institutions, especially in the museum, archives, and arts organizations subsectors, tends to be intermittent or silo-ed making a comparison of their populations, content and estimates rare as well. Data collection about library

practice is the exception, with two regular data collections about practice procedures in libraries (ARL Preservation Statistics and the Public Library Survey), each conducted over more than 20 years. Additionally, an index is labor intensive to perform requiring staff to compile sources and perform the analysis and therefore is an uncommon analysis in any industry.

2.4.1 Multiple source studies

The first study is the Humanities Indicators (HI) project by the American Academy of Arts and Sciences which seeks to define and measure core areas of the humanities (The Humanities Indicators, n.d.). The humanities, as defined for the HI project, encompasses both public organizations that have humanities content (e.g., museums and libraries) and schools where the humanities are taught (specifically primary, secondary and higher education). HI has five major areas where it builds objective indicators that demonstrate the knowledge, skill, or experience of the humanities: K-12 education, higher education, workforce, funding and research, and public life. Under each of these areas are indicators that show growth or decline over time. The sources are all publicly available from reliable datasets produced by the National Center for Education Statistics, the Bureau of Labor Statistics, and others. The project is very similar to the Science and Engineering Indicators project funded by the National Science Foundation (National Science Board, 2018).

HI is included in this overview even though the methods for an indicator project are fundamentally different than an index because HI stands out as one of the

few research studies that uses social science to analyze the humanities.

Indicators are also closely related to indexes in methods where both identify core

concepts of a practice or industry. HI does not predict an outcome instead

showing the shifts in behavior, practice, learning, and experience over time.

Indicators can be powerful statements showing the trends. However, HI does not

combine its indicators into a single score because the datasets that it uses to

describe trends do not have the same population or universe. Each indicator

describes its own population, be it graduation rates for undergraduate students

across the U.S., or funding as a trend for public humanities through State

Humanities Councils.

One example of an index with multiple sources in cultural social science is the

National Arts Index (NAI) conducted by Americans for the Arts (AftA) from 2002

to 2013. The NAI takes an approach similar to the CPI, with annual data

collection that measures the health and vitality of American arts and culture in a

single number (Kushner & Cohen, 2016). The study uses publicly available

datasets, mostly from government sources that are objective to build 81

positively correlated reliable indicators of the health of the arts using data from

four major categories: financials, capacity, participation and competitiveness

(Kushner & Cohen, 2016). This ranges from data on workforce estimates, to

economic markets, to audience participation, to technology changes, and

nonprofit registrations, among others (Kushner & Cohen, 2016). Each indicator is

calculated as a score, then divided by the 2003 score (the original year of the

index) to find the current score of that indicator then summed. This means each indicator is weighted equally after its normalization. With the benchmark year for the index set to 2003, and a score of 100, all scores after 2003 should fall above or below 100. Variability of the score ranged from 96.5 up to 103.1 over the life of the study.

Each indicator in the NAI is calculated by taking the original raw data for the indicator in the given year and dividing its value by the raw data value in 2003. This produces an integer above, below, or equal to 1 regardless if the data were ordinal, scale, or expressed in dollars. Over time, in reviewing the index methods and as more data sources were available, the study included several new data and eliminated others. The normalization process would have to start again for the indicator if it was added after 2003 keeping in mind that the index scale was set to 100 for prior years and therefore additions to indicators could not exceed that total.

The NAI highlights the complexities of multiple source. The source studies are different from their weighting, to the collection as a census or sample survey, to data gaps in the datasets, and content gaps for the overall concept of the health of the arts in the U.S. With the data sources originating from different samples, time frames, questionnaires and weighting, multiple source studies often take an initial step to normalize the data and calculate an indicator that is combined into the index. This is why the Humanities Indicator project is similar to several

indexes, even if it is not an index. As noted by the Americans for the Arts in their reports, raw data from sources like government and associations are not equal, and to provide standardization sometimes requires returning to the original source or population to fill in gaps (Kushner & Cohen, 2016). Additionally, when looking to identify measures of vitality in the arts, and relying on secondary sources, there are challenges to finding questions that are objective in nature, cover a key aspect of the vitality of the arts, and has a sufficient response rate. AftA notes that their approach, while methodologically sound, does desire to include other aspects in the index that better describe the arts at the national level, but without control over the questionnaire design or the data collection it is impossible to capture everything.

A third study, the Arts Vibrancy Index, produced by the National Center for Arts Research at Southern Methodist University since 2015, also exists as a model for a multi-source index in the cultural social sciences (Voss, et al, 2016). The common initial step - normalization - is performed by dividing each indicator by the per capita rate of a metropolitan statistical area (MSA) (i.e., geographies around cities, towns, and rural areas) represented by the data point. Indicators include several key aspects of the arts sector's inputs and outputs such as artist employment, funding by foundations and government to an arts organization, and the number of arts organizations. The study gathers indicators into two primary buckets: supply and demand (Voss, et al, 2016). State support for arts and revenue from arts performances describe the demand for the arts in MSAs, while

the number of arts organizations in an area is the supply side (Voss, et al, 2016).

Indicators are weighted 45% for supply, 45% for demand, and 10% for grants

and other volatile measures (Voss, et al, 2016).The choice to normalize these

data by per capita rates is not uncommon as are shown in the next section on

single source studies; it is applied in the Library Journal Index as well. Per capita

rates provide a way to compare data even if they originate from sources with

different populations and weighting. The ranking of the Arts Vibrancy Index is by

MSA so as to compare scores by geography rather than listing the scores as

they are calculated. The ranking is then grouped by MSAs of similar size with

large MSAs (populations above 1 million) grouped together, and small and

medium MSAs grouped together (populations under 1 million) (Voss, et al, 2016).

This approach ranks a place's vibrancy in the arts to others of similar size and

can show similarities in places of different populations across the country.

As with the NAI, the normalization to achieve this ranking using disparate sources

can be a challenge due to timing and methods. The advantage that the Arts

Vibrancy Index has over NAI is the normalization of each metric to a per capita

measure before calculating the index is a simple procedure. Because an index

can obscure some of the nuance underneath, especially for cities that have large

population differences, small cities and large cities can rank close together in their

arts vibrancy taking into account that funding, artists employed and other metrics

may be similar. Grouping, as described above, is a common strategy meant to

orient the interpretation of the index. This technique is also used when measures

resulted in ranking systems with several scores rather than one. Below, the Library Journal Index describes similar methods to the Arts Vibrancy Index for this reason. This is also why the NAI described above does not utilize per capita measures or grouping because it results in a single score of the national health of the arts like the CPI.

2.4.2 Single source studies

A single source index has advantages over a multi-source index. First, all questions are captured at the same time, in the same fashion, and to the same sampled population. Timing is important as differences in practice or attitudes can change, and a survey that was collected all at once has the same weights applied to the population. The Public Library Survey (PLS) is an example of an annual data collection by a government agency, the Institute of Museum and Library Services, covering a wide range of objective measures of service from U.S. public libraries. The consistency of the collections makes it a great source for an index.

In fact, the PLS serves as the foundation for two indexes in the library world: The Library Journal (LJ) Index of Public Library Service and the HAPLR Index (LJ, n.d., Hennen's, 2016). It is important to highlight that these two indexes have different approaches to creating composite scores, even though they are based on the same data source.

The LJ Index, using five core metrics from the PLS, is "designed to recognize and promote America's public libraries, to help improve the pool of nationally collected library statistics, and to encourage library self-evaluation" – a similar purpose to HHI and this dissertation (Library Journal, 2018). It evaluates public library service outputs using data items that are statistically correlated. Based on the data items collected in the PLS, which includes service inputs and outputs, the LJ index makes a point that they use outputs only as they represent related functions of in-person public library service (Library Journal, 2017). The metrics used in the composite score include library visit counts, materials circulation counts, library program attendance, public Internet computer use, and circulation of electronic materials. In order for a library to be included in the index scoring, it must meet the Federal definition of a public library (as defined by IMLS), serve at least 1,000 people, operate on a budget at $10,000 and above, and have reported data to the five metrics used to calculate the index score.

The LJ score is calculated through a series of steps. First, a per capita ratio is calculated for each of the five metrics like Arts Vibrancy. By limiting the libraries that can be analyzed to the those that serve at least 1,000 people ensures that per capita ratios are generally positive in the calculations. Next, the LJ Index clusters libraries into peer groupings by budget size (expenditures data) - another similar grouping technique based on a different characteristic. Means and standard deviations are calculated for each expenditure group, then a standard score is calculated for each of the five metrics. This calculation subtracts the

mean per capita from the per capita metric in the first step, and then divides by the standard deviation. All five metrics are calculated and summed to make a composite score, and then the final step is to correct for scores that are negative by adding 6 to each composite, and each final score is multiplied by 100 (Library Journal, 2017).

The LJ Index is a widely used, and regularly produced, index that public libraries use for a myriad of purposes. While the scores can be consistent for some libraries, there is always movement that helps some smaller libraries move around and to see how their scoring changes each year. In terms of performance, the LJ Index is one of several ways that public libraries in the U.S. see their work evaluated, though the benefit of this one is that comparison groupings show how scores of peer institutions compare.

The HALPR Index, produced from 1999 to 2010, calculates 15 measures for both input and output services – a different method than the LJ Index – using data points from the PLS data source to build scores (Hennen's, 2006). HALPR focuses on a few key data items that serve as the basis for the indicators: expenditures, staff count, number of volumes, visits to the library, and circulation. It then calculates the following measures:

- Expenditures per capita
- Percent of the budget for materials purchased
- Materials expenditures per capita

- FTE staff per 1,000 population

- Periodicals per 1,000 population

- Volumes per capita

- Cost per circulation

- Visits per capita

- Collection turnover

- Circulation per FTE staff hour

- Circulation per capita

- Reference per capita

- Circulation per hour

- Visits per hour

- Circulation per visit

The study is limited to libraries in areas with a population of 500,000 or more, or approximately 100 libraries in the U.S (out of 9,251) (Hennen's, 2006). Most of the metrics are transformed by calculating ratios, like other studies, though not using a consistent method for each metric. The denominator most often used to calculate the ratios is population, like the Arts Vibrancy Index and LJ, but in some cases, the number of staff or expenditures is used (e.g., circulation per FTE staff hour) (Hennen's, 2006). Interestingly, there are many cuts on the same data item. Circulation ratios are used five times in the index, for example. In addition, after the metrics are calculated they are then weighted for each of the eligible libraries. HALPR weights expenditures per capita, cost per circulation item, and

visits per capita above all others and multiples them by 3. Eight metrics are multiplied by 2 and four metrics are multiplied by 1, indicating that only a few of the metrics are considered most important. Of the most important metrics, only two overlap with the LJ Index: circulation and visits, though they are tabulated differently.

Aside from the differences in item selection, the tabulations in both library indexes are quite different and reveal the choices inherent in item selection and calculating ratios. The example of library service area (or population) is a good one for comparison because it serves as a criterion for inclusion in the ranking process, and it is not part of the scoring. The methods of the HALPR index rely on strict measures of prevalence that are related to the local area around the library. This includes number of volumes per capita, circulation per capita, and FTE staff person per 1,000 population. For libraries serving less than 500,000 it is likely that scores are small or negative calculations, and HALPR's choice to leave those libraries out of the scoring rather than multiplying the scores by a positive integer in order to make them positive (like the LJ index) is up to the craft of the study's designer.

The advantages of using a single source does not always make the study design less complicated. As evidenced by the LJ Index and HALPR, the craft and how the score can be interpreted by the field are elements that can affect how well that index performs as a metric used for advocacy and industry comparisons. In

particular, HALPR is the only study discussed here that leaves a significant

number of libraries out of its analysis. This could be a contributing factor to why

the HALPR index is no longer performed and the LJ index is, but it could also be

that competing scores in the same industry using the same data source was

redundant. Similarly, the National Arts Index and the Arts Vibrancy Index cover

much of the same territory, and it's unclear if that impacted the NAI's

sustainability. As mentioned above, indexes require staffing, timing and budgets

to be produced on a regular basis. These types of projects are sustainably

produced by government or NGO organizations most often.

In summary, there are several methods in order to build an index. The headings

in Section 2.4 organize the studies by their sources, but as was shown in the

discussion there are methods that also rely on weighting, using measures that

can be calculated using per capita measures only, scoring pegged to its first

year, and the use of a variety of public and non-public sources. What is

consistent across these studies is the way they approach setting a clear set of

measures that all relate to a topic and a scoring rubric that sums to a total

composite score. As is evident in Chapter 3, there are several standard steps

that prepare any data before scoring, and because there is no one method for

scoring across these studies, amongst others, this study creates a unique

scoring method that uses the strengths of the HHI 2014 dataset.

2.5 Summary and Rationale

The present study builds an index using the HHI 2014 dataset. I selected this dataset and this method because I, like the Heritage Preservation staff before me, believe that collections are central to the mission and functions of cultural heritage organizations. It serves as the reason an organization displays, circulates, and researches; and it is the reason any patron visits. The professional experience of educational staff, the knowledge of curatorial and archival staff, and the skills of the security staff are all dictated by what the collection needs. To preserve collections for generations to come, for the benefit of all, it is imperative to maintain or improve collections care.

Additionally, HHI represents the best data source to use when calculating measures of collections care practice across all sizes and types of organizations in the United States. As demonstrated in section 2.3 above, other studies capture data about collections care responsibilities, some covering almost as many topics as HHI. Remarkably, HHI is the only study in the U.S. that captures data about practice regardless of the type of collection or institution.

Of the collections care studies discussed in section 2.2 and 2.3, several could be used or combined to build an index. The reasons that I selected HHI 2014 for this dissertation are:

1.   its comprehensive data items covering collections care;

2.	it is a single data source that has the advantages of the same sample, weighting and timing, and;

3.	the response rate by question for core practice questions is high because most were mandatory.

As mentioned in section 2.2, HHI 2004 and HHI 2014 cover the broad spectrum of collections care practice, and focus on the care, not the quality of the practice. This makes the items in HHI 2014 a good fit for an index, as the quality of the practice can vary, and like LJ, NAI and Arts Vibrancy, indexes include mostly objective measures. The generic nature of the HHI questions also led to high response rates. A high response rate by question also validates a question's usefulness as an indicator for collections care practice.

2.5.1 Why Develop An Index?

This dissertation asks the question stated in RQ2: is an index the best method to rank comprehensive care practice? A survey like PLS or HHI, with their broad overview of the field of practice, can serve as a source for a number of different analyses. Interestingly, an index has not yet been created using the data. In the absence of literature that states clearly that in attempting to create an index, the scholars failed, I assert that this study can serve as the first attempt.

Furthermore, the basis for selecting this method over others is the utility of an index for representing the desired message, and the discussion it creates around performance metrics. HHI began as an attempt to help advocates and

practitioners. As it states in chapter 1 on page 1 of the 2004 report, HHI filled a

gap for "[w]hen dealing with inquiries from the media, government officials,

private donors, or the public, collecting institutions and allied organizations have

typically explained preservation issues using anecdotal evidence, which, though

powerful, has reached the limits of its effectiveness. Reliable statistics and

evidence on current conditions and preservation needs are important to

document the work that U.S. collecting institutions are doing to care for our

nation's collections and to illuminate where additional efforts are required. This

data is needed to guide future preservation planning and programs, facilitate

cooperative approaches to address challenges, and inform the wise allocation of

limited resources" (Heritage Preservation, 2005, p. 1).

The study design proposed here also situates HHI in the performance

measurement landscape. HHI, like many studies on professional practice, sought

to create a replicable tool useful to any organization. A similar approach to HHI

within the business sector is the balanced scorecard which is a measurement

system that collects several input measures like turnaround times and efficiency

measures, as well as, financial measures to provide an overview of what parts of

the business cycle are working well and which are not (Kaplan and Norton,

1992). With several measures, the balanced scorecard is more akin to the

indicator projects described in Section 2.4 and the way that several inputs are

monitored regularly to see minute changes. An index like the CPI, by contrast, is

an easily digestible representative number that describes something everyone

wants to know: what is the average price of goods? It tells consumers, markets, economists and policymakers something about the overall performance of a complex financial system without overloading them with the specific changes that happen in prices. One advantage to indexes for practitioners is the ability to look at the complex measures within the index can describe their practice overall. It provides that benchmark that all future improvements or changes can be compared to for a complex system. It is also the best method for measuring the characteristics that contribute to an index score. In circumstances where it is important to convey the powerful message of performance without the specific details of each indicator, such as how to compare the comprehensive nature of collections care practice across the entire U.S. cultural heritage sector, an index is the most immediate way. It also allows for the analysis at the respondent level, whereas indicator projects and the balanced scorecard are analyzed at the question level.

The disadvantage to index studies like the NAI, the HALPR Index, and the Library Journal Index is the ongoing debate about methods. In the discussion above, no single method was considered better than others because the method of an index relies on the scholar's craft and knowledge of the field. If there is one critique, it is that an index as a score that communicates quite a lot, the number must be meaningful. Professionals in the field are responsible for the livelihood of the index. These are imperfect systems that measure a host of practices and should reflect current theory and behavior. It is for this reason that some do not

consider indexes necessary. The need for constant updating of methods and the

necessity of engaging practitioners with the results is labor intensive, however,

this is a common complaint of any regular data collection whether it results in an

index or indicators, or any measures that observe practice with the aim to

improve it. As Kaplan and Norton state in their study on the balanced scorecard

"what you measure is what you get" and any study that can result in usable,

reliable findings must consider the underlying efforts and quality of the data and

methods (1992).

These challenges are addressed in the results and conclusions chapters of this

dissertation, with the goal of returning to RQ2 with a determination on if an index

is in fact the best method for understanding comprehensive collections care

practice.

2.5.2 Study Design

The following study described in Chapter 3 aims to construct an index that takes

the list of comprehensive collections care practices, identifies how they are

related to one another, and assigns a score to each indicator using an original

rubric. All of the scored indicators are then tallied for a single index score

assigned to each respondent in the HHI 2014 survey. Using a standard approach

to data preparation, this study examines response rates of each question, the

relationships between questions using several techniques, and perform

crosstabulations between questions to identify statistical relationships before

scoring. The scoring rubric designed for this study takes into account the

literature cited above and the focus on what are considered primary performance

functions for indexes that assign scores to organizations like the LJ Index. It is a

unique scoring tool that considers how the HHI 2014 questionnaire allowed

organizations to respond and awards additional points if greater effort is provided

by the respondent that would enhance performance. Lastly, after assigning the

index score this study tests each of the hypotheses in RQ1 to determine if there

is a correlation between organizational characteristics that affect the score of

each respondent. The final test is described below in Section 2.5.4 and in detail

in 3.2.

Throughout the discussion above where different methods are compared for

indexes, it becomes clear that after the data are determined to be correlated and

therefore suitable for the index, data are then transformed or normalized using

calculations like dividing by per capita or creating ratios. This technique of

normalizing data is most common for raw reported numbers that vary because of

location, function, or population. As is described in Section 2.5.3 and 3.2, the

survey items selected while covering a broad array of topics, consists of largely

nominal data reported in the survey. That is, the data indicate whether the

respondent performs or does not perform the task by answering "Yes" or "No".

Nominal data cannot be transformed through per capita or other normalization

calculations, and therefore are used as they are reported. Additionally, there is

not a weighting system for this index. Weighting introduces more complexity and

potential error that cannot be undone when creating the index, and is not common or recommended.

The index uses both input and output measures for the indicators to measure performance. Both the NAI, the Arts Vibrancy Index, and HALPR combined inputs and outputs in their indexes, and found that both helped to represent something about the relationship to the measure has to the overall calculation and system. While the LJ Index argues that including both is too complicated and would not accurately represent their index, their primary focus in on the output of library services and, logically, input measures should not be used in this method. The current study identified input measures that when combined describe the performance of an organization with no concern for visitors served, objects conserved or any other output from comprehensive care. This is by design so as to focus on the efforts within each organization to support the work towards ongoing care.

2.5.3 Comprehensive Collections Care Core Items

The concept of comprehensive collections care is identified by the core functions of the practice. From Table 1, there are several practices included in many studies, though not all in one except HHI. From that table, it is also obvious that because several practices are asked about, they are deemed of highest importance, and easiest to measure. These serve as the core set of collections care responsibilities that make up comprehensive practice:

1. Temperature monitoring

2. Humidity monitoring

3. Light monitoring

4. General conditions assessment

5. Proper storage

6. Emergency planning for disaster preparedness

7. Security protections

8. Staffing for collections care

9. Preserving born-digital collections

10. Digitizing analog collections items

11. Supporting collections care with dedicated budgetary funds

12. Supporting collections care with grant or donated funds

The list of items above includes aspects of collections care that fall into the three major areas covered in section 2.1.2 above that make collections care comprehensive: 1) requirements for building features, 2) requirements for portable fittings, and 3) procedures. These variables also include the greatest breadth of any collections care study cited. With high response rates and objective approach, these items are also well-suited for an index that requires both. In chapter 3, I show the relationships between these items and the steps to calculate indicators using each.

2.5.4 Hypotheses

As a second analysis, this dissertation performs a multiple linear regression on the index score produced for this dissertation. There are three hypotheses in RQ1 of this dissertation that are tested through this second analysis. They are:

- Hypothesis 1: Large total budgets are positively correlated with a higher index score.

- Hypothesis 2: Mid-size institutions of all types score higher than small and large institutions.

- Hypothesis 3: Organizational collections type for archives is positively correlated with a higher score.

Each hypothesis is drawn from literature that states the effect that each organizational characteristic has on comprehensive collections care or preservation, though provides little or no evidence to support such a claim. To test which of the characteristics has an effect on care, I perform a multiple linear regression using the index score. See Section 3.2.

Logically for most functions within an organization, size is a determinant of effort. However, the ARL Preservation Statistics report for 2006-2007 states "size of collection is the most important factor in measuring the level of preservation effort" (Kyrillidou & Bland, 2009, p.11). It is unclear how ARL came to this conclusion, and the statement is not supported with evidence from the data collected in its study. ARL does claim that the greater the size of the collection,

the greater the level of effort should be for preservation (Kyrillidou & Bland, 2009). This assumption would lead one to believe that a larger collection would have a larger staff size and larger budget. My experience during the 2014 data collection revealed that in some instances, large, well-known institutions found questions such as total operating budget, collections assessment and cataloging difficult to answer. Reasons for this varied, however these challenges were cited by more than one institution with a large collection size and a large accompanying budget. While this is anecdotal evidence, it leads me to believe that size should matter when it comes to comprehensive care, though it is not always practiced well by those with the means do so. This is the basis for hypothesis 1, which assumes that a bigger budget is positively correlated with a more comprehensive care and a higher index score.

It is also this assumption that hypothesis 2 tests. HHI 2004, by contrast to ARL, makes no such claim that a larger budget or larger organization by size has the ability to do the most comprehensive care (Heritage Preservation, 2005). In the 2004 report, for example, small organizations responding to the study revealed that they comprise 74% of the total number of organizations in the U.S. and hold 15% of collections items, and makes clear that small institutions do not hold items in critical need of preservation or conservation care (Heritage Preservation, 2005). Meaning, organizations at smaller institutions reported great care of their collection. Knowing that both large and small organizations can perform their collections care duties well, and that resource support should be vital to the

ongoing maintenance of effort for collections, would suggest that organizations

that have resources but are not too large would perform better than all others,

thus outlining the rationale for hypothesis 2.

The third hypothesis is generated by the variation in the cultural heritage

community and the educational opportunities available to organizations in each

sector. Whether an organization is an archive, a library or a museum, and a

member of an association, they are provided with resources such as webinars,

educational booklets, conference presentations and more to understand

professional training and skills. With this kind of information within reach for

several types of cultural heritage organizations, there could be better

dissemination of these resources within each group. For example, ARL collected

preservation statistics from its member academic libraries with a high response

rate. The study began in 1984 and continued for more than twenty years for

member libraries to use as a benchmark on their practice. As the study continued

practice began to improve. Shared knowledge and measurement can impact a

group's efforts. In fact, ARL has several resources available to its members and

a dedicated committee of members to digital preservation efforts. Shared

professional training and standards all function as a way to also improve practice

and indoctrinate young professionals to continue as standard bearers. Because

ARL and ALA conducted surveys within their respective professional groups prior

to HHI 2014 (see Section 2.3), it would make sense that libraries in particular

have an advantage of shared knowledge over archives, museums, historical

societies and scientific research organizations and one would expect their

reported performance to be better resulting in a higher score in the index.

Hypothesis 3 expects that a smaller subgroup, archives, has an advantage of

libraries and museums in collections care practice. Libraries and museum both

include a variety of collections type, such as academic libraries and how they

differ from public libraries and one would expect practice to vary across those

subgroups. Archives, by contrast, have less variety of collections type and could

have an advantage because of it.

Finally, the hypotheses for this study do not include the cataloging of the

collection. Although ARL states that this practice is a determinant of

comprehensive care there is no other evidence to support the claim (see Section

2.3). While interesting empirically, this part of the study focuses on the

organizational structures that can contribute to the index score by improving

resources or funding, and not on practice itself as part of the test.

The next steps in items selection, data preparation, and hypothesis testing are

discussed in chapter 3.

Chapter 3: Methods

This chapter is composed of two different methods that describe the arc of the study in full. The first portion of Chapter 3 covers the stepwise methods designed to build the index from construction to validation. The later section describes the methods required to run the multiple regression on the index scores produced in the first section. For background on the source data from HHI 2014, how it was collected and the results of the national sample survey, see Appendix A.

3.1 Index Methods

This section describes the methods employed to build the index and in response to RQ2. It reviews the HHI questionnaire items that are suitable for the index, specifically the ones that comprise comprehensive collections care, examining empirical relationships of the items, creating a scoring rubric for the index, and validity measures.

3.1.1 Index Item Selection

To select the survey items, I began by reviewing the literature on preservation practice. Table 1 compares several studies that focus on collections care, and I selected topics that appeared in three or more studies, and compared them to the professional standards for care discussed in 2.1.2. The final list of topics is:

1. Temperature monitoring
2. Humidity monitoring
3. Light monitoring

4. General conditions assessment

5. Proper storage

6. Emergency planning for disaster preparedness

7. Security protections

8. Staffing for collections care

9. Preserving born-digital collections

10. Digitizing analog collections items

11. Supporting collections care with dedicated budgetary funds

12. Supporting collections care with grant or donated funds

The only topic that is not available for the index and appears in three or more collections care studies is the number or percentage of items that were repaired from damage. HHI does not include this topic specifically, which is why it is not marked in Table 1 in 2.3. It does ask respondents to estimate the percentage of items that are in urgent need of care - a subjective question where respondents do not have to base their reported percentage on the number of collections within the organization or the known condition of the collections. This makes the estimate no more accurate than a guess. Respondents to HHI were given great latitude in answering this question in the instructions. Because this question does not match the ones in other studies, it is not a requirement for collections care as provided in 2.1.2, and the answers to it vary considerably, the question from HHI is not included in the index.

Below are the corresponding questions by number and topic from HHI 2014:

1. C1 - Temperature controls

2. C1a - Temperature controls: All areas, Storage areas, exhibition areas

3. C2 - Humidity controls

4. C2a - Humidity controls: All areas, Storage areas, exhibition areas

5. C3 - Light controls

6. C3a - Light controls: All areas, Storage areas, exhibition areas

7. C4 - Have storage

8. D3 - Has had a general condition assessment

9. D4 - Emergency plan

10. D4a - Emergency plan: update schedule for plan

11. D6 - Security

12. D6a - Security: All areas, Storage areas, exhibition areas

13. D7 - Staff: Paid full-time conservation/preservation staff

14. D7 - Staff: Paid part-time conservation/preservation staff

15. D7 - Staff: Volunteer full-time conservation/preservation staff

16. D7 - Staff: Volunteer part-time conservation/preservation staff

17. D7 - Staff: Staff from other departments is responsible for conservation/preservation

18. D7 - Staff: Contracted provider(s) or consultant(s) is responsible for conservation/preservation

19. D7 - Staff: don't know

20. D10 - Digital collections

21. D10a - Condition of digital collections in the last 5 years

22. D11 - Digitize collections

23. E2 - Annual budget for CC

24. E3 - Other funds used to support CC

25. E6 - Which funding sources have supported preservation at your institution

26. E6 - Federal

27. E6 - State

28. E6 - Municipal (city or county)

29. E6 - Corporation or company

30. E6 - Foundation

31. E6 - Individual donor or private philanthropist (includes friends' groups or members)

32. E6 - None of the above[2]

The question numbers cited above are specific to HHI 2014 for both the primary question and the follow up. Each question is validated using the same methods, though it should be noted that follow-up questions are only answered by respondents that answered "yes" to the primary. It is for this reason that these questions do not show the same response rates as gateway items and are not treated the same in the scoring. More on how this factors into scoring is explained in Section 3.1.9. For questions such as staffing and external funding

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[2] These question numbers are taken from the 2014 questionnaire, and mirror almost identically the numbers from 2004 with a few minor adjustments.

sources, each response option is treated separately because those are "answer all that apply" questions with the possibility of answering "yes" to each option.

3.1.2 Response Options

The next step is to review the questions, their response options, and their response rates. Table 2 below lists each item and the corresponding response options. Almost every question results in nominal data - that is, "yes" and "no" questions that are scored as 1 and 0 in a data set. For those that are not "yes" and "no," responses are ordered in the table below as they appear in the questionnaire.

Original Variable	Name	Response options
C1	Temperature controls	Yes No Don't know
C1a	Temperature controls in what areas	In all areas Only in storage Only in exhibit areas
C2	Humidity controls	Yes No Don't know
C2a	Humidity controls in what areas	In all areas Only in storage Only in exhibit areas
C3	Light controls	Yes No Don't know
C3a	Light controls in what areas	In all areas Only in storage Only in exhibit areas
C4	Have storage	Yes No Don't know
D4	Emergency plan	Yes No Don't know
D4a	Emergency plan update schedule	Has a plan that is updated regularly Has a plan that is not updated regularly Developing a plan
D6	Security	Yes No Don't know
D6a	Security areas	In all areas Only in storage Only in exhibit areas
D7	Staff	Yes/No FT CC staff Yes/No PT CC staff

		Yes/No volunteer FT CC staff Yes/No volunteer PT CC staff Yes/No other staff help out Yes/No contractors or consultants Don't Know
D10	Digital collections	Yes No Don't Know
D10a	Condition of digital collections	Yes No Don't Know
D11	Digitize collections	Yes No Don't Know
E2	Annual budget	Yes No Don't Know
E3	Other funds used to support CC	Yes No Don't Know
E6	Which funding sources have supported preservation at your institution	Federal State Municipal (city or county) Corporation or company Foundation Individual donor or private philanthropist (includes friends' groups or members) None of the above

Table 2. HHI 2014 items selected for the index with original response options

3.1.3 Response Rates by Item

Table 3 below shows each item that constitutes the basis for the index and the
number of valid responses compared to missing data for each item. The total
number of valid cases in the dataset is 1,714. Most gateway questions such as

C1, D6, and D11 were compulsory, resulting in a high number of valid responses

for each of those items.

Original Variable	Name	Response Counts
C1	Temperature controls	Valid=1713 Missing=1
C1a	Temperature areas	Valid=1092 Missing=622
C2	Humidity controls	Valid=1712 Missing=2
C2a	Humidity areas	Valid=939 Missing=775
C3	Light controls	Valid=1711 Missing=3
C3a	Light areas	Valid=938 Missing=776
C4	Have storage	Valid=1713 Missing=1
D3	General condition assessment	Valid=1713 Missing=1
D4	Emergency plan	Valid=1712 Missing=2
D4a	Emergency plan update schedule	Valid=959 Missing=755
D6	Security	Valid=1714 Missing=0
D6a	Security areas	Valid=1279 Missing=435
D7	Staff	Valid=1699 Missing=15
D10	Digital collections	Valid=1695 Missing=19
D10a	Condition of digital	Valid=911

	collections	Missing=803
D11	Digitize collections	Valid=1695 Missing=19
E2	Annual budget for CC	Valid=1642 Missing=72
E3	Other funds used to support CC	Valid=1638 Missing=76
E6	External sources supporting CC	Valid=1623 Missing=91

Table 3. Valid Response Counts for Variables in the Index

Follow-up questions (C1a, C2a, C3a, D6a, and D10a) show a lower count for valid

responses because those questions are only provided to respondents that

answered "yes" to the gateway question. This is confirmed by the variance

calculations in section 3.1.6 below, where the percentage of respondents that

answered "yes" or "no" for primary questions is discussed.

While there is no threshold for response rates in indexes, it is important to show

that each index variable has an excellent response rate; none of the variables in

Table 3 above have dramatic drop-offs in response rate.

3.1.4 Normalization

There is no normalization process undertaken for the items in this study. Due to

the nature of most of the questions, and how they are coded in the dataset there

is no need to normalize data. The selected items are close-ended questions that

force a respondent into an answer. These are nominal data falling into distinct

responses with "yes"=1, and "no"=0, or "all areas"=1, "storage"=2 and "exhibit"=3.

Data as reported are close together. The distance between response options is not knowable in the same way it would be if the item requires a numeric response, such as total staff count or total budget. Nominal data eliminate the necessity to provide context to reported data. In the LJ Index, many of the measures that are calculated are normalized by grouping libraries of similar size together, then calculating the per capita measure first before dividing the standard deviations of an item (Library Journal, 2017). This can help the data that are reported fall within a similar scale. For example, one LJ measure, materials circulation counts, is an item that is much lower at small libraries than at large ones. After normalization, all measures calculated per respondent fall within a -5.5 to a +5.5 ratio, rather than the raw numbers which range from tens to ten million. Once LJ calculates all the measures repeating these methods, each measure then falls within the same scale, and when tallied, the final score also falls within a scale. This provides a context to each index score for how the circulation counts in the tens compare to the ones in the ten millions. In this way, the normalization generates a score that uses size as a factor for performance before calculating measures.

This is important to note for this study because size, and other organizational characteristics, are considered to have an impact on performance. While this is true in many ways, the index methods performed in this dissertation do not factor size or other organizational characteristics into the calculation of the score. Instead, one of the hypotheses tested through the follow-on analysis (see

Section 3.3) seeks to understand what effect each characteristic has, and specifically which one drives up or down an index score. With a universe of several different organizations, there is no foundational assumption that all respondents perform or act exactly the same, and the score is based on performance irrespective of those characteristics.

There are, however, two questions from the questionnaire that require transformation prior to the index scoring. These two items are D7 and E6, staffing and external funding, respectively. The rationale for transforming these two items is that they have overlapping response options for "mark all that apply". Unlike the nominal data from other questions, there is a high chance that respondents provided data to each response option for these two questions. In order to make D7 and E6 nominal in the same manner as all other items with discrete groupings, each response option was broken into separate variables. For example, where D7 had seven response options each appears in the dataset as a variable with "yes"=1 and "no"=0. If a respondent indicated they had full-time and part-time collections care staff, the variable for full-time is marked 1 and the variable for part-time is also marked 1. The E6 transformation followed the same process.

3.1.5 Face validity and Unidimensionality

After reviewing the items selected for the index, checking for sufficient response rates, and transforming items in the dataset, the next two steps review the

validity and unidimensionality of the index items through a series of steps that test whether the items can be included in the index.

First is to review each item for face validity. This type of validity asks: does each question have a relationship to the topic (Crossman, 2018)? Yes they do, as is confirmed by the fact that other studies on collections care include the same topics in Section 2.3. In review, each should also represent only one concept. Unidimensionality, the second step, is key to the index, making it possible to measure the concept accurately without confusing or blending similar ideas together (Crossman, 2018). For example, this index measures collections care practice which is an umbrella term that includes conservation practice. If the goal were an index concerning purely the conservation of objects, I would not include several of the questions covering security and digital collections. Though they are related, the relationship is that these responsibilities are aspects of the broader practice of collections care. If this index focused on conservation, it would not be appropriate to ask about security at the institution, for example. In addition, the questions selected for this index are specifically about the network of related tasks for collections care, even if they seem general. Since the concept of collections care involves many functions, this is an appropriate approach (Crossman, 2018).

Questions that could represent a similar concept such as a complete staff count are specifically not included in the index to ensure unidimensionality. Additionally,

with the inclusion of follow-up questions in the index, special attention is paid to gateway questions that have unidimensional topics.

3.1.6 Variance

The next step is to review each item for variance. This is a check on the likeness of the respondents and the data. Variance describes how items selected for the index represent different respondents or viewpoints (Babie, 2004). Variance can be guaranteed in the index by using one of two methods: "you may select several items the responses to which divide people about equally in terms of the variables,... [or] select items differing in variance" (Babie, 2004, p. 154-55). Considering that the items selected from HHI 2014 are nominal data, calculating variance (or the second option described) cannot rely on the variance in the responses to show how respondents vary on questions that describe their practice.

Using the first method, variance for index items is represented by the variation in responses. Table 4 below shows all items and the responses for "yes" for each index item. Nominal items list the comparison of "yes" to "no". No one item resulted in 100% "yes" responses. A few items come close; specifically, respondents indicated at 96.1% that they employ full-time volunteer collections care staff and 94.7% of respondents fund their collections care through external sources like government or foundation awards.

Original Variable	Name	Percentage for Yes Responses
C1	Temperature controls	64.1%
C1a	Temperature areas All areas Storage Exhibit	64.9% 28.1% 5.5%
C2	Humidity controls	54.9%
C2a	Humidity areas All areas Storage Exhibit	54.3% 36.8% 6.5%
C3	Light controls	54.7%
C3a	Light areas All areas Storage Exhibit	58.2% 22.7% 17.4%
C4	Have storage	83.0%
D3	General condition assessment	54.6%
D4	Emergency plan	56.0%
D4a	Emergency plan update schedule Has plan/regularly updated Has plan/not regularly updated Developing plan	51.4% 35.0% 13.6%
D6	Security	74.9%
D6a	Security areas All areas Storage Exhibit	79.4% 7.5% 9.9%
D7	Staff Yes FT CC staff Yes PT CC staff Yes volunteer FT CC staff Yes volunteer PT CC staff Yes other staff help out Yes contractors or consultants Don't Know	68.2% 76.3% 96.1% 68.8% 71.6% 77.1% 88.7%

D10	Digital collections	53.2%
D10a	Digital collections condition assessment	27.2%
D11	Digitize collections	69.5%
E2	Annual budget	60.4%
E3	Other funds used to support CC	55.4%
E6	External sources supporting CC	94.7%

Table 4. Variance for each index item

This variance in the items indicates that the index should result in valid scores.

3.1.7 Examining Empirical Relationships

The final step in data quality evaluation is to test the relationship between these questions using crosstabulations. Unidimensionality and emphasizing clear concepts are as important as the strength between concepts (Crossman, 2018). There should be empirical relationships between variables to further prove that the face validity and selection of each item are valid for the index scoring (Crossman, 2018). The lack of empirical relationships would eliminate variables from the index (Babie, 2004). To analyze the collections care variables for empirical relationships, I used the original variables with original response options. The rationale behind this is to test whether a respondent's answers to one question can predict his/her answer to other questions (Crossman, 2018).

Appendix C included at the end of this dissertation shows all of the

crosstabulations for pairings of questions to determine bivariate relationships. For

this test, it is important to note the items that have no relationship (i.e., 0%

overlap) or, by contrast, have a strong relationship (i.e., 100% overlap) (Babie,

2004). No relationship would indicate that there is no sign that a respondent who

performs one aspect of collections care performs another and therefore the two

concepts are not like one another in practice (Babie, 2004). Too much overlap, or

a high percentage of overlap in the tables in Appendix C, would indicate that

items are too similar, and measure the same concept (Babie, 2004). In the event

of a strong relationship between items, as seen as a high percentage of overlap,

then one item must be removed because it would be redundant for analysis.

No item response overlapped completely with any other and did not result in any

removals for this reason. In some instances, responses for two questions

compared for bivariate relationships resulted in less than a 1% or 0%. This was

most commonly for responses for "no" compared to "don't know", or "don't know"

from one question compared with "don't know" from another. While this may

appear to be no relationship, there is evidence that other responses overlap to

some degree with the other response options for the item and there was no

distinguishable pattern where one question had no relationship at all with others.

Likewise, there was no evidence that two questions provided such a high degree

of overlap that they represented the same concept.

3.1.8 Response Counting Procedures and Missing Data

After testing the empirical relationships, and keeping all items for the index, the

next step is to design a scoring rubric. I begin by describing how responses are

counted and how data that is missing is treated followed by the rubric in Table 5.

Throughout this section on the methods used to score items, the choices made

to arrive at this scoring rubric are presented. Section 3.1.12 describes ways to

modify the index construction method. Modifications are included in Section

3.1.12 to allow the reader to understand how the choices can affect scoring, and

secondarily to provide possible avenues that could change the scoring method if

the results of the validation process are negative. The process of building an

index requires trial and error when understanding how the method impacted the

resulting composite score. RQ2, in part, allows for modifications to be made to

the method to test whether this method is the best for understanding the factors

that contribute to collection care.

Because of the high number of responses reported in Table 3 in Section 3.1.3 all

response options - "yes", "no" and "don't know" - are counted as valid responses.

The rationale is that having replied to a collections care question indicates that

the respondent knew if their organization performed the function. For most items

selected there is a response option for "don't know" or "none". "Don't know"

would not affirmatively indicate that the person who completed the survey knew

the answer. However, "don't know" plays an important role in survey questions as

it indicates the respondent considered the categorical answers "yes" and "no" as

inaccurate. Therefore, for the initial construction of the index, "don't know" and

"none" serve as a valid response. It does not, however, factor into the score;

either response always receives a score of zero (see Section 3.1.9). This

essentially eliminates it from the index while treating it as a valid response.

Missing data is also eliminated from being included in the index. Table 3 above

shows that small proportion of responses per gateway question is missing. Per

Babie's recommendation, a high proportion of missing data would require a

strategy to either recode it into a different response such as "no", or to review its

content item by item to ensure that it did not skew the data (Babie, 2004). A

normal procedure for dealing with missing data, when it's a small proportion of

the response rate as is the case for this study, is to eliminate it (Babie, 2004).

This should not impact the scoring because a large proportion of respondents

provided a valid response to the questions selected for this index.

3.1.9 Scoring and Weights

As described in Section 3.1.4, there is no normalization in this study. This is

because these indicators are not raw data numbers where real-life variability and

context would be eliminated from the data in the index, and because

performance measurement is the goal of the study - not determining the

relationship that respondents have within their communities or to other

communities. Performance here is measured as a score that results from inputs

and outputs reported by an organization.

In the scoring rubric below in Table 5, each item and its responses have been assigned a score. Positive responses all receive a positive score of 1. "No" and "don't know" receive 0. In follow-up questions, scoring is positive with each response scored separately. Answers that affirmed an organization is performing the task were scored as 1, and other responses to that same question that indicate partial performance were scored 0.5. For example, the follow-up C1a asks if an organization has temperatures controls in a) all areas, b) in storage areas only, or c) in exhibit areas only. All areas, (response a), receives a 1 and each of the other responses receives 0.5.

The highest possible score is 26 and the lowest possible score is 0.0. The top score is determined by adding all of the questions that could be answered with a 1, and follow-ups D4a and D10a. Responses for C1a, C2a, and C3a that are 0.5 points do not get counted in the highest score because if a respondent provided a positive "all areas" response, then they would not have answered "in storage only" or "in exhibits only".

The responses for staffing and external funding are treated differently. Dedicated staffing for collections care is scored higher than any of the response options for volunteer, or contracted staff. External funding responses all receive a 1 in the scoring rubric based on the idea that as a collections care function it is primarily an operating cost that is paid for through the operating budget and any additional

funding to help support these activities affect these expenditures - and by extension the work - positively.

No questions are weighted. Per Babie's recommendation, equal weights should be the norm for scoring indexes (2004). Instead, each score for a response conveys the importance of the response option, and therefore there is no need to multiple or amplify the scores. This would assign importance to a part of collections care, and is not considered necessary. Though I have stated that there are core duties for comprehensive care, no one duty is more important than others because the constellation of responsibilities being carried out is what makes the practice comprehensive.

Instead, the scoring is setup so that the score can go up if a respondent indicates they performed more than the primary responsibility of collections care. A higher score would indicate higher performance on a task with additional labor or resources. While this is not a weighting scheme, it should be noted that it does allow for scores to vary quite a bit and because of that, there is a normal range that provides context to a respondent's score that does not use organizational characteristics as indicators of the additional points.

A score higher than 15.5 would indicate that the respondent performed extra duties, such as hiring additional staff, securing additional financial resources, and ensuring the environmental controls regulated all areas of their institution. This

sets a threshold for the index score which provides a context for what the score

means, and how to interpret performance above and below 15.5.

Original Variable	Response Option	Score	Response	Core
C1	Yes	1	Temperature controls	X
C1a	Response A	1	All areas	
C1a	Response B	0.5	Storage	
C1a	Response C	0.5	Exhibition	
C2	Yes	1	Humidity controls	X
C2a	Response A	1	All areas	
C2a	Response B	0.5	Storage	
C2a	Response C	0.5	Exhibition	
C3	Yes	1	Light controls	X
C3a	Response A	1	All areas	
C3a	Response B	0.5	Storage	
C3a	Response C	0.5	Exhibition	
C4	Yes	1	Have storage	X
D3	Yes	1	Has had a general condition assessment	X
D4	Yes	1	Emergency plan	X
D4a	Yes	0.5	Update schedule for emergency plan	
D6	Yes	1	Security	X
D6a	Response A	1	All areas	
D6a	Response B	0.5	Storage	
D6a	Response C	0.5	Exhibition	

D7		1	Paid full-time conservation/preservation staff	X
D7		1	Paid part-time conservation/preservation staff	X
D7		0.5	Volunteer full-time conservation/preservation staff	X
D7		0.5	Volunteer part-time conservation/preservation staff	X
D7		0.5	Staff from other departments is responsible for conservation/preservation	X
D7		0.5	Contracted provider(s) or consultant(s) is responsible for conservation/preservation	X
D7		0	Don't know	X
D10	Yes	1	Digital collections	X
D10a	Response A	0.5	Condition assessment for the digital collections in last 5yrs	
D11	Yes	1	Digitize collections	X
E2	Yes	1	Annual budget for CC	X
E3	Yes	1	Other funds used to support CC	X
E6		1	Federal	X
E6		1	State	X
E6		1	Municipal	X
E6		1	Corporation or company	X
E6		1	Foundation	X
E6		1	Individual donor or private	X

			philanthropist	
E6		0	None	X

Table 5. Index Scoring Rubric

3.1.10 How This Index Method Compares to Others

The distinctive aspects of this index construction have been discussed in various sections until now. They are summarized here.

1) This method is quite simple by comparison to many others. Like the Library Journal Index, I focus my method on a single data source and select key input and output measures to score for the index to describe a fulsome picture of practice.

2) This index starts from the premise that practice can be done well at any size. There is no grouping of HHI respondents prior to scoring. Unlike the LJ Index and Arts Vibrancy Index, there are no a priori expectations that an index score for a small organization is different than the same score for a large organization. If all aspects of collections care are answered honestly, then the practice would be equivalent at both organizations.

3) Due to the hypothesis that size is a predictor of a high score, this also precludes a grouping construct based on size categories. In fact, in Section 3.2, size and organizational type are tested to see how correlated they are with high or low scores.

4) The scoring rubric has no normalization of the survey items selected. This is in part due to the categorical questions in the survey and also due to the

way that each response item for staffing and external funding sources can be counted within the index separately. That means that this dissertation does not calculate per capita measures, or any other measures, prior to summing the score.

3.1.11 Validation

There are two types of validation most common in indexes: item validation and external validation. The first requires reviewing each item selected for the index looking at the percentage of respondents that fall into the score. This is performed in Chapter 4. I then plot the scores from 0.0 to 26 in a histogram to see what percentage of respondents have each score. If the index ranks respondents successfully then index score should show a normal distribution. Scores should also show a clustering around the 15.5 threshold indicating that most organizations are performing collections care with regularity, paying attention to the many responsibilities. This is important to note because it validates the selection of the items and how they described performance, as well as, showing that the index accurately describes practice in a way that is easily understood.

For the second validation step, items are compared to external measures taken from the HHI 2014 questionnaire. This tests whether the item selected for the index which scores a respondent as having good or poor collections care aligns with answers to other items in the survey. The items that are used for comparison from the survey that do not appear in the index include:

- D1: does the mission of your institution include preservation of your collections?
    - Response Options: "yes", "no" and "don't know"
- D13: was there significant damage or loss to your collections?
    - Response Options: "yes", "no" and "don't know"

The goal of this test is to show that if a respondent scored higher, then it is most likely they answered positively to D1 and D13. That is, "yes" to D1 and "no" to D13.

Depending on the results from the validation for internal analysis, and whether the external validation aligns the answers to the two other questions selected above, some modifications may be needed to improve the method. These are not known before performing the analysis. In the next Section, 3.1.12, I discuss what modifications are known to impact the index methods. There may be others. Inconsistent results in the internal test will result in a bad index. If the external validation fails then it is possible that the items do not strongly validate the concept of the index. Validation methods answer the question posed in RQ2 which asks whether an index is the right method for such a study.

3.1.12 Possible Methods Modifications

There are modifications to the method which can be considered after performing the initial analysis. Specifically, there are three items that are considered to be

risky for this index. They present the possibility that misreported data could affect the scores. As a result, each may be removed due to their role in moving the scores up or down.

These three items below could have an effect on a respondent's score:

1) D7: staffing

2) E2: Annual budget to support CC

3) E3: Other funds used to support CC

In Table 3 above, D7 for staffing does not pose an obvious risk due to its high response rate. E2 and E3, by contrast, show higher counts of missing data than all other gateway questions. Staffing and budgets are both notoriously faulty data. When given as raw numbers in surveys, they are some of the most unreliable. They are selected here because they are nominal data and steps for external validation also helped to improve the reliability of the data. Nonetheless, they pose a risk to the scoring if the data are not reported accurately for "yes" or "no" resulting in lower scores. Similarly, E2 and E3 have the possibility of inaccuracy based on the knowledge of the person completing the survey or the knowledge they have about external funding sources. In fact, the reason that question E1 (the total annual budget for the institution as a raw number) is not included as a variable in the index is because after several checks on accuracy during data cleaning, its accuracy still stands as dubious, even though it is a straightforward question that poses less risk for error in reporting. Also, it is used

as an indicator for size to test hypotheses 1 and 2 under RQ1 (see Section 3.2 below). Furthermore, E2 (does your institution fund collections care out of its annual budget?) is included as a more accurate picture of the financial support provided to practice. Depending on how these data are reported can affect their scoring, which is a consideration that must be evaluated after the index is completed.

3.2 RQ1 Hypothesis testing through a multiple regression

In section 1.3, I posited three hypotheses using organizational characteristics that are correlated with comprehensive care. These three hypotheses under RQ1 are:

Hypothesis 1: Large total budgets are positively correlated with a higher index score.

Hypothesis 2: Mid-size institutions of all types score higher than small and large institutions.

Hypothesis 3: Organizational collections type for archives is positively correlated with a higher score.

In Section 2.5.4, I outlined the rationale for each hypothesis under RQ1. In this section, I describe the methods to test each hypothesis. To answer this question requires seeing which of these organizational characteristics would affect a respondent's score causing it to increase or decrease. Through the process of building the index, I have successfully assigned a score to each respondent in

HHI 2014 for their performance based on several duties that encompass comprehensive care. It is after this score has been assigned to each respondent that I can then employ the index score in a regression model. This is a second analysis of the score to show what organizational characteristics are predictive of comprehensive care index score. A multiple linear regression is the method best suited for this test. It is most commonly used to measure the strength of the effect that independent variables have on the dependent variable (Laerd, n.d.). For this analysis, the index score is the dependent variable. All of the organizational characteristics that could predict the score are independent variables.

Below is an example of a multiple linear regression with several independent variables:

$$Y_i = \beta_0 + (\beta_1 X_1) + (\beta_2 X_2) + (\beta_3 X_3) + (\beta_4 X_4) + ...\varepsilon$$

Y_i is the index score to the left of the equation, and β_1 and β_2 are the organizational characteristics. β_0 is the Y intercept (or constant), and the ε is the random error. For this study the regression model can be expressed as:

predicted (index score) $= \beta_0 + (\beta_1$ x total budget) $+ (\beta_2$ x total collections items count) $+ (\beta_3$ x total staff count) $+ (\beta_4$ x organizational type) $+ ...\varepsilon$

I have selected four survey items that are organizational characteristics relating to size and type in order to test my hypotheses. They are in order as they appear in the survey:

- B1 - collections type (i.e., organizational type),
- E1 - total operating budget,
- F5 - total number of items in the collection, and
- G1 - the total number of staff.

This part of the study acknowledges that size is a determinant of the index score. There may be other performance metrics that affect the index, however, size is the focus here because it is readily available in the dataset in three different forms, and this study serves as the first test of which factors play a role in increasing an index score. Future research, including other factors, is discussed later. In addition to the availability of the three size items in the data set, size as an attribute can be assigned by multiple measures. The regression model controls for the two additional factors that determine size so as to isolate their effect on the predicted index score. There are several tests for each hypothesis to show the effect that one characteristic has on the predicted score. Each independent variable included in the regression is transformed by taking the log of the raw counts as reported in the survey data from 2014. In the next section, the steps taken to transform data are discussed.

In the following sections, I describe the processes to prepare the organizational characteristics before running the model. This includes testing the assumptions between variables and creating dummy variables for categorical data.

3.2.1 Overview of the Characteristics and Dummy Variables

I have selected four items that would be predictors of comprehensive care that are the independent variables in the regression. Similar to the index item selection process, I have listed below each variable by its name and the response options for each.

Original Variable	Name	Response Options	Variable Type
B1	Collections type	Archive Historical Society Library Museum Scientific/Archaeological repository	Categorical
E1	Total operating budget	Amount	Interval
F5	Number of collections items	Quantity by type of item	Interval
G1	Total Staff	Number	Interval

Table 6. Regression independent variable selections and response options

Interval data (i.e., continuous or scale data) are normally inserted into regression models as is. However, the data from these three items have skewed distributions. Below are three charts illustrating the distribution of the operating budget, total number of collections items and total institutional staff broken into two major groups for each.
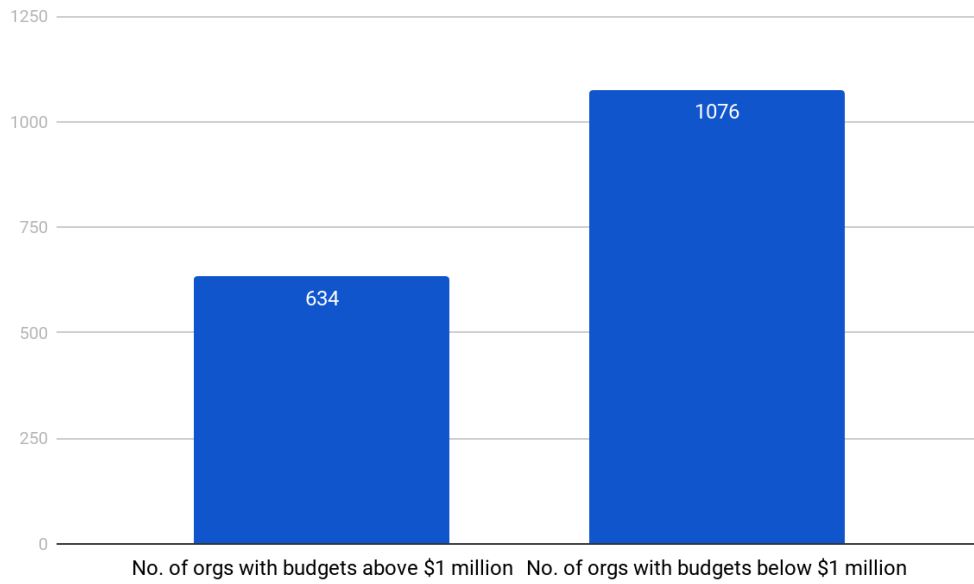
Chart 1. Annual Budgets above and below $1 million dollars by count
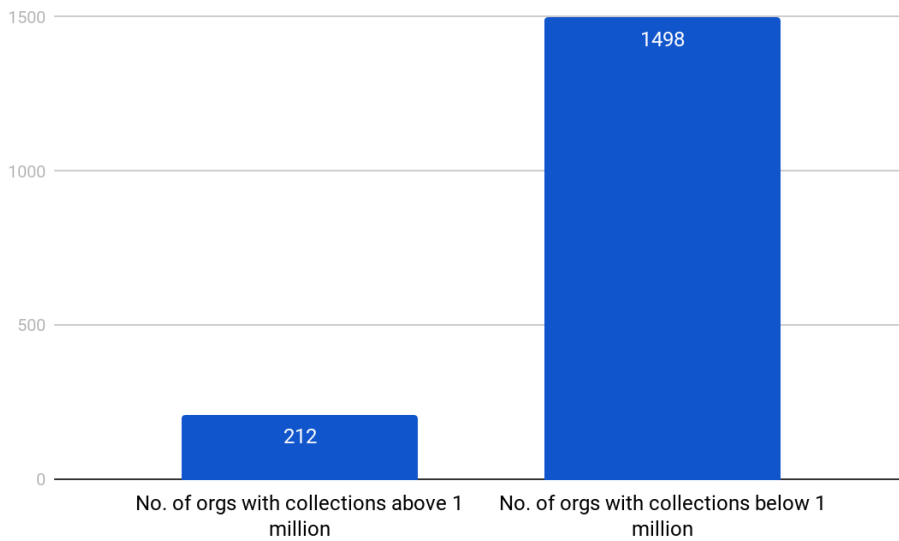
Chart 2. Collections size above and below 1 million by count
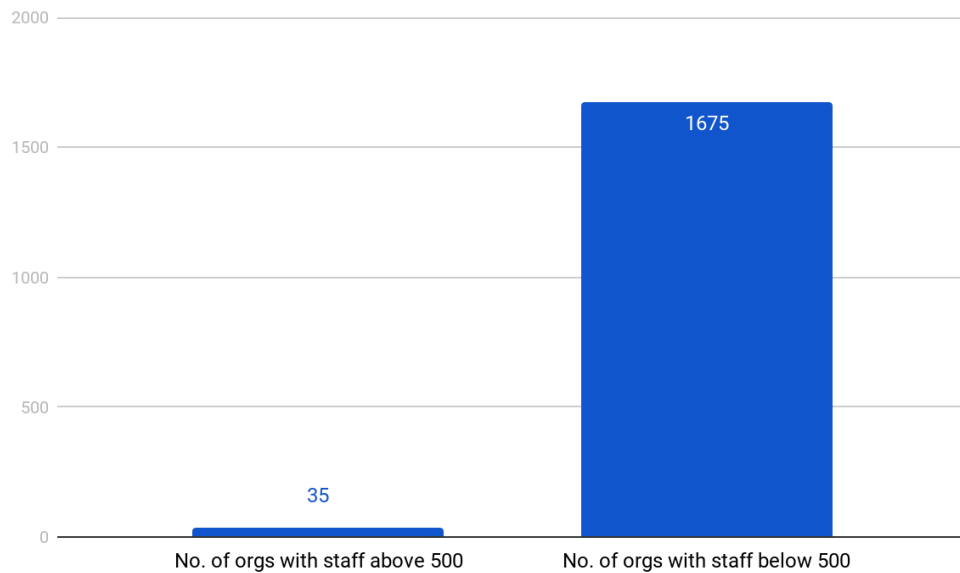
Chart 3. Staff size above and below 500 by count

The reason these data are skewed tells a familiar story about well-endowed

organizations, and how few there are in the U.S. From the charts above, for

example, only 35 institutions have a large staff above 500 while 212 institutions

have collections above 1 million objects. It is these types of disparities that can

have a deep effect on collections care practice and why they are selected for the

regression. Prior to running the model and building the descriptive charts above,

it became necessary to review each variable for outliers. This check removed

eight cases because of extremely high reported counts in one or two of the

variables. As is described below in the assumptions, outliers can affect the

regression model as well resulting in an additional review later in the process.

Next, a logarithmic transformation was performed on the three independent

variables. With data in each of these variables showing strongly positively

skewed data (that is, right-skewed) it is normal to perform a transformation prior

to running the regression model to reduce skew. In Charts 4 through 6 below, the distribution of each variable is shown with a normal curve after taking the log.
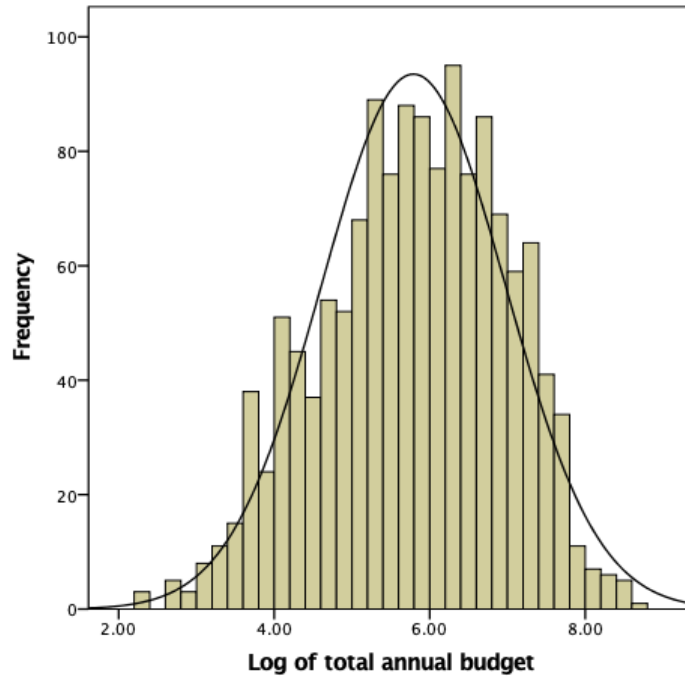
Chart 4. Histogram of the log of total annual budget data showing normal distribution
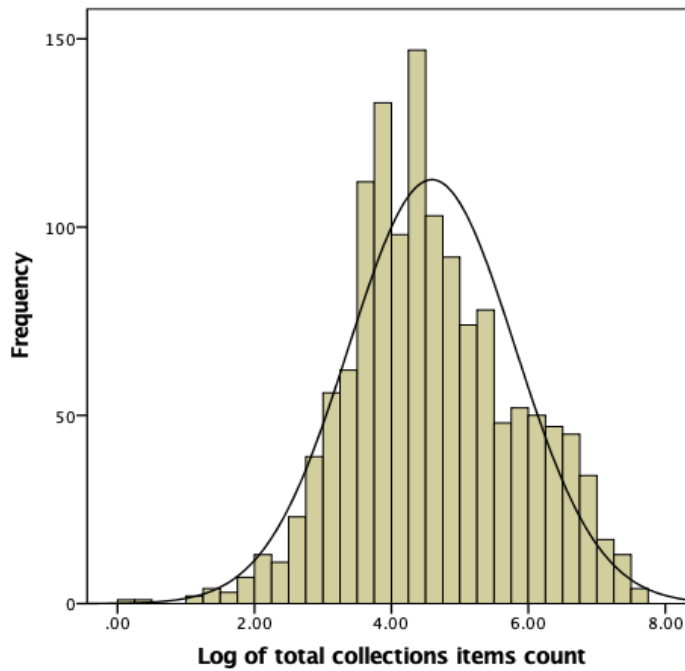
Chart 5. Histogram of the log of total collections items counts showing normal distribution
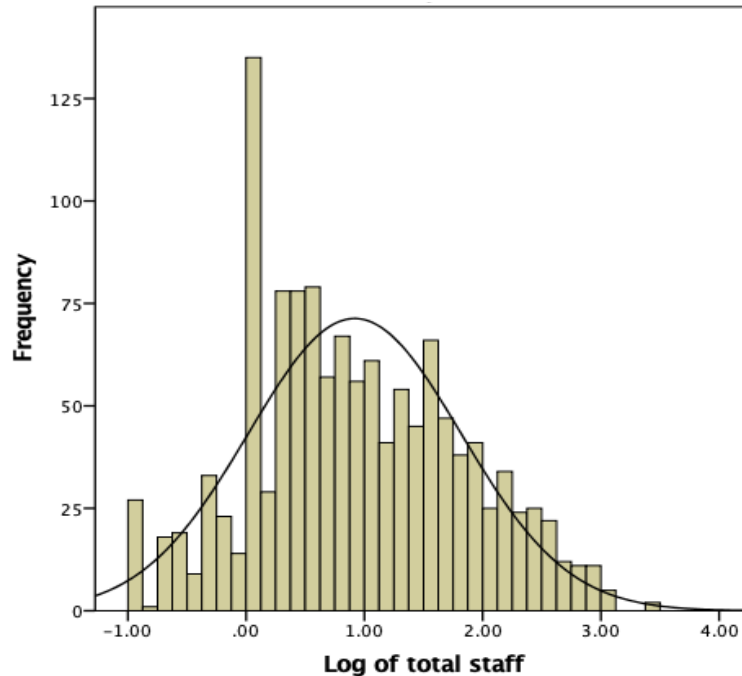
Chart 6. Histogram of the log of total staff data showing normal distribution

Categorical data, like the institutional type item, requires transformation to nominal before being included in the model. This involves creating dummy variables for each collections type transforming a single variable that had categorical codes for each type into five separate variables. That is, the current variable has a code for each type: archives are coded as one, historical societies are coded as two, and so on. In order for a nominal variable to be included in the model each type must be recoded into separate variables for each type. To do this, I created five variables, one specifically for archives, one for libraries, and so on. Each respondent is coded as one if they are the type of the variable, and zero if they are not.

In order to run the model, I added each of the logarithmic interval variables and all of the collections type nominal items. In running the regression, the statistical software excludes a nominal variable randomly. This is the standard way to test for the nominal variable where you have created dummy variables by creating a comparison for the remaining four items.

The next step is to run the model in statistical software selecting for calculated statistics that describe the model including residuals, plots, and coefficients. In the next section I review the steps required to test the assumptions of the data and the model based on the output of the calculated statistics.

3.2.2 Testing Assumptions

The next step involves checking to make sure that the data to be analyzed can actually be analyzed using multiple regression method (Laerd Statistics, n.d.). It is only appropriate to use the regression if the data meet (or satisfy) each of the eight assumptions required (Laerd Statistics, n.d.). Otherwise, the results may not be valid. This step is performed before and after the model is executed. Below each assumption is described with the first two answered. The findings from assumptions three through eight are described in Chapter 4. In the next chapter, if there are instances where an assumption was not satisfied, as is common with most datasets, I describe the methods to overcome the assumption.

The first assumption is to identify if the dependent variable is continuous. Indeed, the index score is an interval continuous number. This assumption is satisfied.

The second assumption is to identify if there are multiple independent variables that are continuous or categorical. Three of the independent variables are continuous: budget, size of collection, and staff. One is categorical: organizational type as described. This assumption is satisfied.

The third assumption tests the independence of observations through calculating the Durbin-Watson statistic. The statistic is a test for a particular type of - or lack of - independence; namely, 1st-order autocorrelation, which means that adjacent observations (specifically, their errors) are correlated (i.e., not independent). Because the independent variables are all size characteristics, it is highly likely that budget, staff size, and collections size are correlated and do not have independence from each other. The test can be performed in the statistical software as part of the description of the linear regression model summary. The Durbin-Watson statistic can range from 0 to 4, but ideally the value is approximately 2 to indicate that there is no correlation between residuals.

The fourth assumption tests the linear relationship between the dependent variable with each independent variable, and the dependent with the independent variables collectively. Scatterplots and partial regression plots of the relationships are the best way to review visually and inspect each to check for linearity between

variables. If the relationship displayed in the scatterplots and partial regression

plots are not linear, then there is a decision point that can determine how to

proceed. The two choices are to either run a non-linear regression analysis or

transform the data in a number of ways before running the regression model.

Transformations are only possible with data that are partly or close to a linear

relationship and can be "coaxed" towards more uniform linearity. Typical

transformations include taking the log of a variable, taking the square root, and

taking the inverse. Since data are already known to be right-skewed, the log of

each raw data point has transformed each. A review of the scatterplots indicates if

additional transformation is required.

Using the scatterplots from assumption four, I then test for homoscedasticity to

assess the fifth assumption. The aim is to see where the variances along the line

of best fit remain similar as you move along the line. This requires plotting the

studentized residuals against the unstandardized predicted values.

Assumption six tests for the multicollinearity of the model, which occurs when you

have two or more independent variables that are highly correlated with each

other. This leads to problems with understanding which independent variable

contributes to the variance explained in the dependent variable, as well as

technical issues in calculating a multiple regression model. The process includes:

(a) detecting multicollinearity through an inspection of correlation coefficients and

Tolerance/VIF values; and (b) interpreting these correlation coefficients and

Tolerance/VIF values so as to determine whether the data meets or violates this assumption.

There should be no significant outliers, high leverage points or highly influential points. Outliers, leverage and influential points are different terms used to represent observations in the data set that are in some way unusual when performing a multiple regression analysis. These different classifications of unusual points reflect the different impact they have on the regression line.

Assumption seven is reviewing the data for these observations by: (a) reviewing in casewise diagnostics and studentized deleted residuals, and options to deal with outliers; (b) check for leverage points and what to do if there are any; and (c) check for influential points using a measure of influence known as Cook's Distance (Laerd Statistics, n.d.). All these points can have a very negative effect on the regression equation that is used to predict the value of the dependent variable based on the independent variables. This can change the output that statistical software produces and reduce the predictive accuracy of the results as well as the statistical significance.

Finally, assumption eight checks that the residuals (errors) are approximately normally distributed. Two common methods to check this assumption include using: (a) a histogram (with a superimposed normal curve) and a Normal P-P Plot; or (b) a Normal Q-Q Plot of the studentized residuals.

3.2.3 The Regression Results and Hypotheses

If all eight assumptions are satisfied, then the model is evaluated for how well it fits. This is performed through evaluating R^2 and the slope coefficients produced for the model for each independent variable with their standard errors at the 95% confidence interval. With the coefficients, the model equation can be fully expressed.

The final step is to test the hypotheses. As stated above, each of the multiple tests is designed to answer how a particular size metric affects the prediction of the index score. The data are approximate for real world estimates of size based on a breakout created by Heritage Preservation in the first HHI study in 2004. The size groupings from 2004 served as the basis for a new size breakdown that was reviewed and updated based on the 2014 data incorporating observed changes in staff, budget, and collections counts. Appendix D has the full list of groupings by collections type.

3.3 Summary

In summary, after selecting the HHI 2014 data items for the index, and reviewing their response options and response rates, each one was evaluated for face validity, unidimensionality, variance, and empirical relationships between items. The results of these reviews were as follows:

1) Each item has sufficient response for the index analysis;

2) Each item selected has face validity, unidimensionality, and shows variance in responses;

3) No normalization procedures were necessary for the index analysis, though two items were transformed to match the response categories of the other items;

4) Crosstabulations of the empirical relationships (Appendix C) showed that a relationship exists between each response to each item, except in some cases of comparing "no" and "don't know";

5) The scoring rubric created for this index has core questions and supplemental questions scored separately. The core questions cover the predominant responsibilities of collections care, and the supplemental ones add points to the score if the respondent performed additional duties;

6) The highest score is 26, with the expectation that most scores are higher than 15.5 indicating most performed all of the core duties and some of the supplemental ones;

7) A multiple regression analysis is performed using the index scores as the dependent variable, and four organizational characteristics are used as independent variables;

8) After the regression is checked for viability against eight assumptions, the equation for the model is inspected and expressed with slope coefficients; and,

9) The hypotheses under RQ1 can be tested using the size grouping parameters with multiple examples and combinations of size attributes.

Chapter 4 discusses the results from building the index, the validation results

testing the index, and the modifications to that method. It also includes the results

from testing the hypothesis.

Chapter 4: Findings and Discussion

The following chapter describes the results from the methods in chapter 3 with two sections covering the results of the index and the results of the regression model. Each section answers the research question that relates to the analysis. In this case, RQ2 is answered by the results of the index, and RQ1 and the hypotheses are answered by the results of the regression.

4.1 Index results

Each of the 1,714 respondents to HHI 2014 received a score using the scoring rubric in Section 3.1.9. In the Chart 7 below the scores are shown in groupings by 5 scores. The first grouping is zero to 5.5, the second is 6 to 10.5 and so on through 24.5. No HHI respondent received a top score of 26; only one organization scored the top score of 24.5. In Chart 7, the total number of respondents in each grouping appears on each bar associated with the grouping. The respondents with the lowest scores totaled 340, the respondents with next lowest scores totaled 423, the next group totaled 500, the next higher scoring group totaled 363, and the respondents with top scores totaled 88. This distribution shows that scores clustered towards the low to middle range. Indeed, the mean score is 11.57 and the median is 11.75. The highest cluster of scores is 13.5 with 60 respondents. This is lower than expected considering the 15.5 threshold. This finding means that respondents to HHI 2014 were performing at a level that covers most

but not all minimum comprehensive care responsibilities (for more on HHI 2014 see Appendix A.
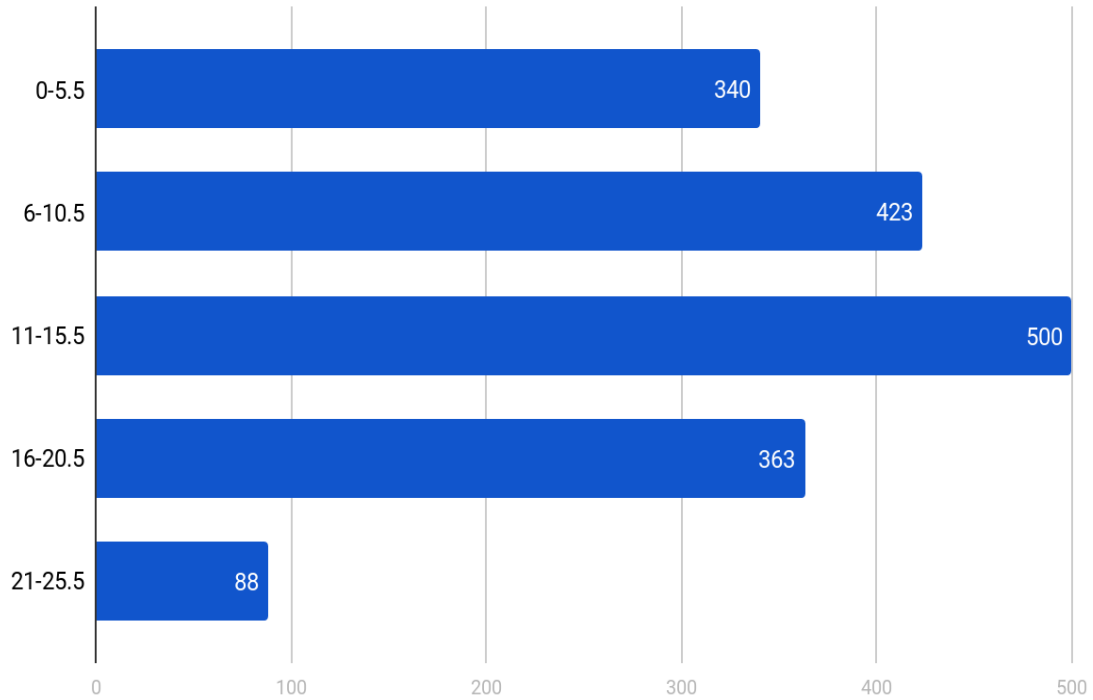
Chart 7. Distribution of Index Scores in Groupings of Five

To burrow deeper into the scores, Chart 8 below shows the distribution of all the scores from zero to 24.5. 13.5 is the peak score in the bar chart below, with scores generally growing in count until that peak and then dropping off. The distribution of scores looks statistically normal. Scores begin to increase in count around 9.5 and then drop off after score 17.5 with each having 51 respondents. It is not surprising then that organizations cluster towards the middle of the distribution.
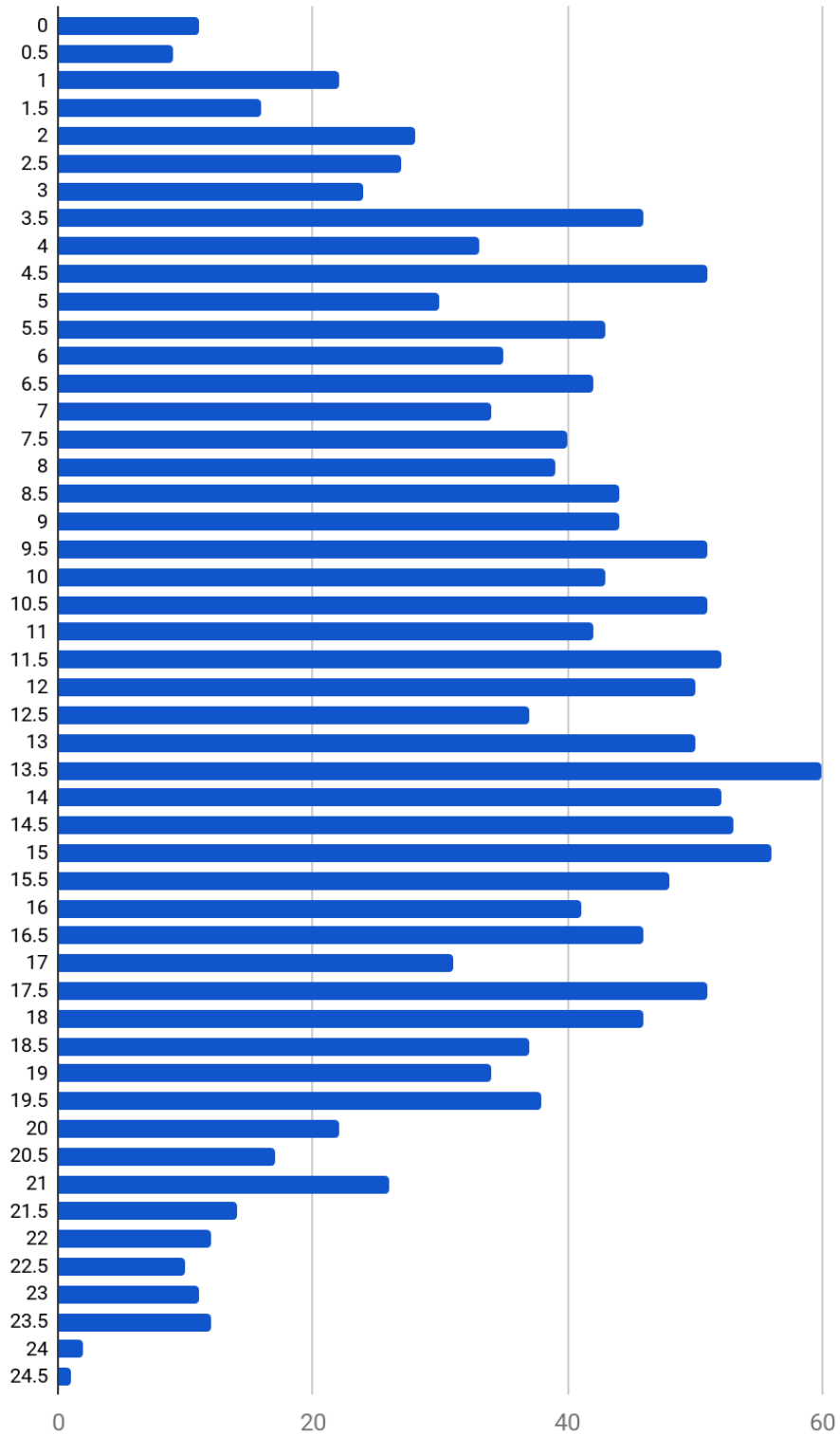
Chart 8. Distribution of All Index Scores

Looking at scores across organizational type is informative. In Table 7

below, the scores are grouped again and compared across type. Libraries

score low in comprehensive care practices in the 0 to 5.5 range with 175

respondents. Museums, by contrast, have scores clustering in the 16-20.5

grouping. Scientific collections cluster in the middle in the 6-10.5 grouping,

as do archives and historical societies with clusters of scores in the mean

and median range.

Index Score	Archive	Historical Society	Library	Museum	Scientific Collection/ Archaeological Repository
0-5.5	8	53	175	87	17
6-10.5	34	54	142	162	31
11-15.5	76	61	146	195	22
16-20.5	41	37	76	201	8
21-25.5	9	6	28	44	1

Table 7. Index Scores by Organizational Type

The mean and median scores across organizational type are also revealing. The

raw counts above show where organizations cluster, but the real scores below

show how organizational type could contribute to a higher score. Whether these

are correlated is pursued in the answer to RQ1 in Section 4.2. In Table 8 below,

archives had the highest mean score at 13.45, or the closest to the most popular

score which is 13.5. Museums score slightly lower on average at 12.94 followed

by historical societies at 10.58, libraries at 9.99, and then scientific collections at

9.75. Median scores are close to the mean, showing no obvious signs of outliers in the scores.

Institutional Type	Mean	Median
Archives	13.45	13.50
Historical Society	10.58	10.50
Library	9.99	10.00
Museum	12.94	13.50
Scientific Collection/ Archaeological Repository	9.75	9.50

Table 8. Mean and Median Scores by Organizational Type

Taken together, Tables 7 and 8 show that the clustering of scores is not always telling of the average score by type. The greater proportion of libraries and museums in the survey respondent pool did not have the same distribution. Museums are the largest proportion of the respondents (689), which may be one reason why this type has the largest count of respondents in the top range. However, the small proportion of archives (168) scored the highest mean and median out of any organizational type, with both close to the most popular score (13.5). Archives' median score is also the highest count of scores in Chart 8 with 60 respondents. Libraries had the highest count of scores in the lowest group in Table 7, though the mean and median scores are higher than scientific collections. These comparisons further support the hypothesis proposed in RQ1 that organizational type does impact scores (see Section 4.2).

In Chart 8 there are also clusters in the higher scores of 15 (56 respondents) and 17.5 (51 respondents). Though those respondents are above average, the clusters in lower scores in 9.5 (51 respondents), 10.5 (51 respondents), and 11.5 (52 respondents) are more in line with the averages.

4.1.1 Validating the index

After looking at the results, it is imperative to test the index for validation. This ensures that the scores that are assigned are consistent with the process both internally and externally.

Above in Chart 8 and below in Chart 9 are the histograms that show the distribution of scores. Chart 8 shows a normally distributed curve confirming that scores do not skew in one direction. This is important for internal validity as it shows that the index scoring process did not alter or misrepresent the distribution of the underlying data set or the real world. Chart 9 ranks the scores by the percentage of respondents from highest percentage to lowest. While the scores did not break the 15.5 threshold as expected, the top three highest percentages of the scores range are 13.5, 15, and 14.5. These fall naturally into or close to the range for full comprehensive care (15.5). Larger scores and smaller scores cluster towards the bottom of the chart indicating that the mid-range, which is expected to provide validity to the index, clusters as well. This is significant because it shows that the index scores do have valid responses. The scores just above at 15.5, 16.5 and 17.5 fall at 2.7% to 3%. Higher scores that would fall into the comprehensive care range like 19.5 and 21 all fall between 1.5% to 2.2%. In other

words, scores that would show comprehensive care is performed at a minimum rank near the top, showing care is performed adequately. Those with higher performance scores fall lower in the ranking.

The internal validation shows that the method performed well. The items selected for the index, as well as the scoring rubric produced results that are valid and easily understood. These two checks provide evidence that the index is sufficient as a measure of collections care performance.
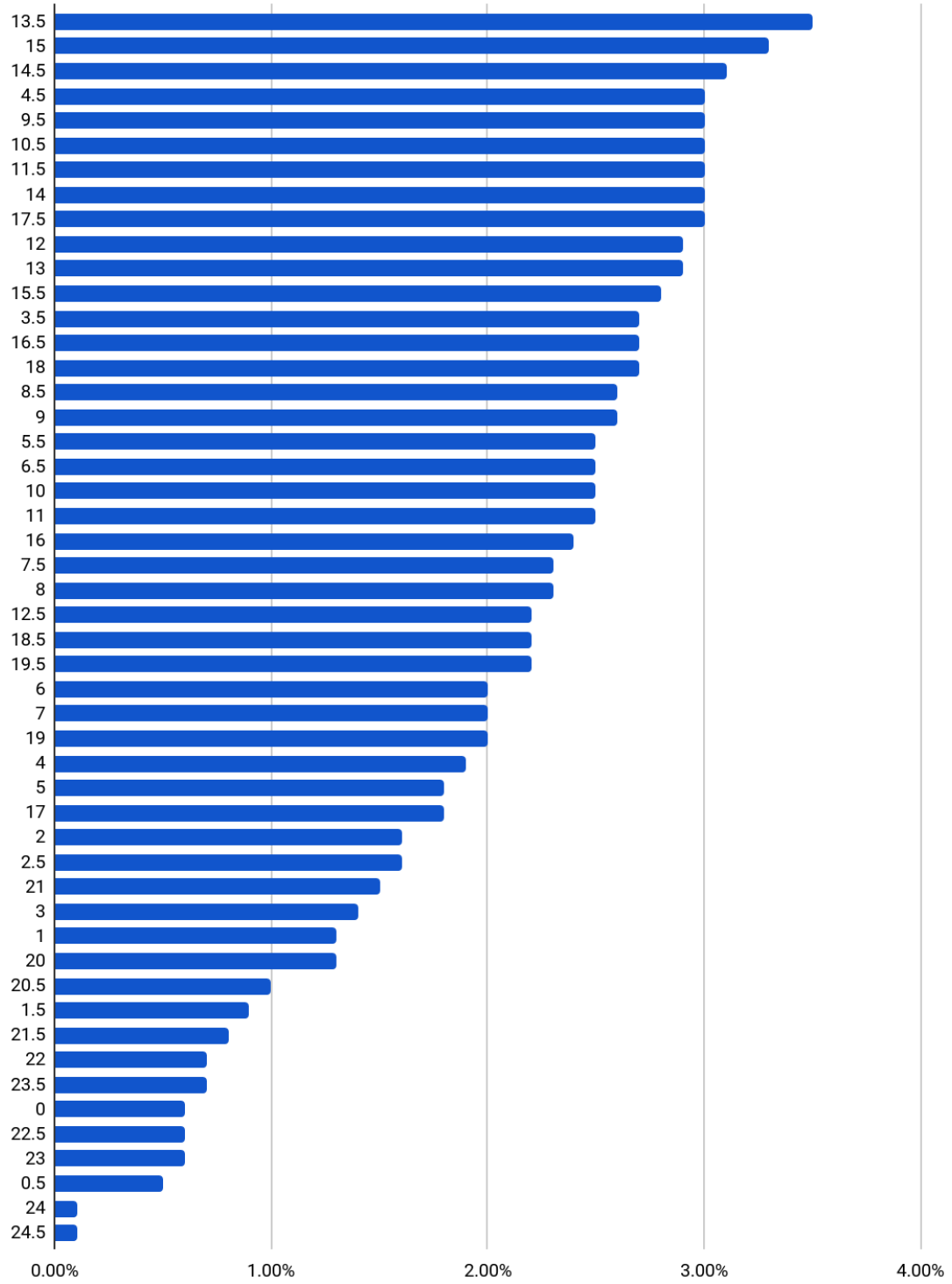
Chart 9. Index Score Distribution by Percentage

The second validation step is to check for external validation. This is done by analyzing a crosstabulation of the index scores compared to items D1 and D13. These two items are selected from the HHI questionnaire because they show how respondents would align their practice towards comprehensive care, though they are not indicators that other studies chose to measure. These two items are:

- D1: does the mission of your institution include preservation of your collections?
  - Response Options: "yes", "no" and "don't know"
- D13: was there significant damage or loss to your collections?
  - Response Options: "yes", "no" and "don't know"

If the index scores show external validation, then it is most likely the answers to D1 and D13 should overlap with scores. If the higher number of scores answered positively to D1 and negatively to D13, then the index has external validity.

D1	Yes	No	Don't Know
Total	1355	293	64

Table 9. Index Scores Compared to Item D1 Responses

D13	Yes	No	Don't Know
Total	702	893	87

Table 10. Index Scores Compared to Item D13 Responses

Tables 9 and 10 show that the index is externally validated as well. The total number of index scores that positively answered "yes" to item D1 is the majority, and the majority of scores answered item D13 negatively.

4.1.2 Modifications and Discussion

Section 3.2.12 proposed three modifications to the index items. Certain data items are often difficult for respondents and could cause the index scores to inaccurately record bad or misreported data that would not show the reality of the respondent's daily practice. These items are included in the index because they play a role in how collections care is carried out, though they are not collected in more than half of the studies cited in Section 2.3. These are:

4) D7: staffing

5) E2: Annual budget for CC

6) E3: Other funds used to support CC

In reviewing the distribution of scores to D7, E2, and E3, there are no obvious signs of poorly reported data in Table 3. Staffing across all of the 7 response options only has 15 missing cases. Coupled with the roughly 69% or higher negatively reported data in Table 11 below indicates that the low staffing reported by the HHI respondents is an accurate reflection of how responsibilities are spread across very few staff. This is not necessarily because the organization is understaffed; most cultural heritage organizations in the U.S. are either run by volunteers or less than 10 staff. Low staffing counts is likely driving scores down across the respondent pool due to the nature of the scoring rubric and its emphasis on positive scores that are totaled. Even with this reality, it is recommended that staffing remain in the index as it is a reflection of a necessary resource for comprehensive care. If staffing continues to be reported negatively in

future HHI data collections it is likely to grow only marginally given the slowing of

the American economy since HHI 2014 was collected.

Item	Negative Response Percentage	Count of Missing Respondents
D7 - Paid Full Time staff	69.1%	15
D7 - Paid Part Time staff	77.2%	15
D7 - Volunteer Full Time staff	97.0%	15
D7 - Volunteer Part Time staff	69.7%	15
D7 - Staff from other depts	72.5%	15
D7 - Contracted staff	78.0%	15
D7 - Staff Don't Know	100%	15
D10a - Condition of digital collections in the last 5 years	85.5%	803
E2 - Annual budget for CC	39.6%	72
E3 - Other funds used to support CC	44.6%	76
E6 - Federal	73.3%	91
E6 - State	79.0%	91
E6 - Municipal	87.4%	91
E6 - Corporation	89.5%	91
E6 - Foundation	67.5%	91
E6 - Individual Donor	52.9%	91
E6 - None of the above	100%	91

Table 11. Percentage of Negative Responses and Missing Data Count by Index Items D4a, D10a, D7, E2, E3 and E6

Items E2 and E3 both had less than 50% negatively reported data in Table 11.

With the count for missing data also being quite low (72 of 1,714), there is no

reason to believe that these data are inaccurate or have an effect on the index

scoring due to skewing or non-reported data.

Three other items showed a high percentage of negative responses in the index

score. These are D10a and E6. Table 11 above shows D10a has a negative

response at 85.5% and all E6 responses are greater than 50%, with most greater

than 70%.

The one particularly concerning item in Table 11 is D10a with 85.5% of the 857

respondents to that item responding they had not performed a condition

assessment of their digital collections in the last 5 years. This is borne out in the

crosstabulations in Appendix C where item D10a correlated more strongly with

"no" responses to other items. This data anomaly is remarkable. 85.5% of

respondents that did not score anything for D10a indicates that this item only

serves to highlight the 14.5% of cultural organizations that do perform conditions

assessments on digital collections. This is likely not practiced often and for this

reason may not be worth including in the index. Digital collections management

and digital preservation is a particularly understudied area, and it is an

underperformed responsibility across the cultural sector. During the development

of HHI 2014, there was some debate regarding the utility of some of the more

advanced items that asked about practice in digital collections management, as

that practice area is hard to capture. This item, and its high rate of negative

responses seems to affirm that suspicion. For this reason, until better data can

accurately represent that there is activity performed here in digital collections

management, it is recommended that this question be removed from the index.

E6 similarly asks about external funds for collections care - an important but

understudied topic. Though it would help to support the effort for organizations to

make the case they do not receive external funds and it is an important data item

compared to E2 and E3 for analysis, it did not return additional points for many

HHI respondents in the index scoring. Like staffing above, this mirrors the real-

world context where it is increasingly competitive to receive grants, donations, or

even support from local sources to improve collection care responsibilities. Since

this series of questions does not have much effect on the scoring because there is

very little data to score, this item should be dropped from future scoring and

analysis.

4.1.3 Answering RQ2

This dissertation has two research questions. The above analysis addresses the

second one:

  RQ2:   Is an index the best method for measuring overall comprehensive

           collections care?

After reviewing the scores, their distribution, testing for validation, and discussing

modifications based on the scores, the index method proved to be a fruitful

experiment. HHI 2014 served as a good source for the comprehensive care index

and the items selected provided reasonable results for the scoring. The results

are valid based on internal and external checks, also proving that this method could be replicated with new survey data and would serve the purpose it was created to fill. Unlike an indicator study, the index provided an accurate overview of how practice is carried out with a single score that communicates quite a lot bypassing the analysis that individual measurements require. Even though scores did not fall as high as anticipated for minimal care, this is not a product of the method, but rather the result of the reported data. Overall, the lower scores are consistent with the reported progress for collections care per the survey results (IMLS, 2019). It is evidence that better care is still needed overall (IMLS, 2019).

After a review of the three items suspected of influencing the index scores negatively, it was determined that all three should remain in the methods. However, items D10a and E6 were determined to be extraneous upon review.

4.2 Regression results

The second analysis performed in this dissertation is a multiple regression. This section provides the results of the regression model and the results of testing the assumptions of the model, followed by the results of the hypothesis testing from RQ1. This method uses the index score created in Section 4.1 without any modifications. Although the discussion above makes suggestions to improve that index method, these were not performed before the regression analysis in this section.

4.2.1 Testing Assumptions

This section reviews the steps required to test the assumptions of the data and the model based on the output of the calculated statistics. As a reminder, the next process involves checking to make sure that the available data can be analyzed using multiple regression method (Laerd Statistics, n.d.). It is only appropriate to use a regression if the data meet (or satisfy) each of the eight assumptions required (Laerd Statistics, n.d.). If they do not, the results may not be valid. In order to test the assumptions, the regression is first performed, and associated statistics are reviewed. In Chapter 3 the first two assumptions are satisfied. The review of assumptions three through eight follows.

In reviewing the three independent variables - staff count, collections items count, and total budget - it became clear in Chapter 3 that organizations reported high numbers that, while possibly accurate, were far outside the range of the distribution of all other data reported. For this reason, eight cases were removed from the data file prior to running the model and the independent variables were all transformed by taking the log of the data reported so as to reduce the skew that the raw data exhibited before performing the model. To start the review of assumptions, I begin with the seventh assumption looking for outliers, high leverage points, or highly influential points. All three can impact the multiple regression analysis in different ways. Reviewing this assumption first determines whether to rerun the regression prior to reviewing the remaining assumptions.

This review includes looking for the unusual casewise diagnostics, studentized

deleted residuals, leverage points calculated, and Cook's Distance variable

generated in the first run of the model. Table 12 shows the casewise diagnostics

highlighting unusual cases that produced a predicted value for the index score

that is quite different from the index score as tabulated in Section 4.1. Each case

listed below is ±3 standard residuals away from the predicted value. None of the

cases in Table 12 were identified as outliers in the earlier review because the

collections size, staff counts, and total budgets did not warrant further scrutiny.

However, the cases identified in Table 12 do stand out for their collections care

index score. Specifically, each performs collections care either well above or well

below the predicted value for index score when compared to similar organizations.

For example, case 50 below is a library and Tables 7 and 8 above in this chapter

show that libraries mostly scored below 10, with a majority in the lowest score

category of 0-5.5. For case 50 to score so high (17.5) is unusual for a library. The

predicted index score value for case 50 is 2.7392 -- a much more consistent value

with other libraries. Also, this particular library has 4 total staff and approximately

a $200 annual budget. These attributes taken together are questionable. It is no

wonder that the predicted value would be low. All three remaining cases in Table

12 have a similarly strange set of attributes.

Assigned Case Number	Std. Residual	Index Score	Predicted Value	Residual
1	3.322	23.5	10.0655	13.43449
4	3.056	22.5	10.1399	12.36009
50	3.649	17.5	2.7392	14.76083
997	-3.186	3.5	16.388	-12.88797

Table 12. Casewise Diagnostics of the regression model

The studentized deleted residuals similarly show the same four cases have residuals ±3 standard deviations away from the mean. The leverage points, however, did not highlight any unusual cases nor did a review of the influential points using a measure known as Cook's Distance (Laerd Statistics, n.d.). Even though two of the four tests showed no negative effect, and two did, it was decided that taken together these four cases might pose unusual predictive index scores, though they are accurate to the real world. If the number of cases totaled much higher than four, it would be considered appropriate to remove these cases from the analysis. However, these four cases should not threaten the model because the index scores are reasonable, even if they do not conform to the model's predictions. For this reason, these four cases were not removed prior to proceeding with the interpretation of the remaining five assumptions, and the first run of the model is described below. What follows is a review of the model assumptions three, four, five, six, and eight.

The third assumption tests the independence of observations through calculating the Durbin-Watson statistic. The statistic is a test for a particular type of (lack of) independence; namely, 1st-order autocorrelation, which means that adjacent

observations (specifically, their errors) are correlated (i.e., not independent). The Durbin-Watson statistic can range from 0 to 4, but ideally the value is approximately 2, indicating that there is no correlation between residuals. The reason this test is important is to show that in the study design the cases are independent of each other, not the variables. Because the study design for this regression does not assume any relationship between the budget size of libraries to museums, or the number of collections between types there is no reason to measure the Durbin-Watson statistic. There may be correlated relationships between the variables -- budget and staff size in particular -- but the cases are independent. No other considerations are needed. This satisfies the third assumption.

The fourth assumption tests the linear relationship between the dependent variable with each independent variable, and the dependent with the independent variables collectively. Scatterplots and partial regression plots of the relationships are the best way to review visually and inspect each to check for linearity between variables. If the relationship displayed in the scatterplots and partial regression plots are not linear, then there is a decision point that can decide how to proceed.

The plots for the dependent variable with each independent variable are below in Charts 10 through 12 with the independent variables across the X axis and the index score always on the Y axis. You can see linearity between each independent variable and the index score, though in some instances it appears

stronger than in others. The linear relationship between the number of collections items, Chart 11, shows a more obvious line, whereas the total budget and total staff to the score (Charts 10 and 12) show a somewhat linear relationship.
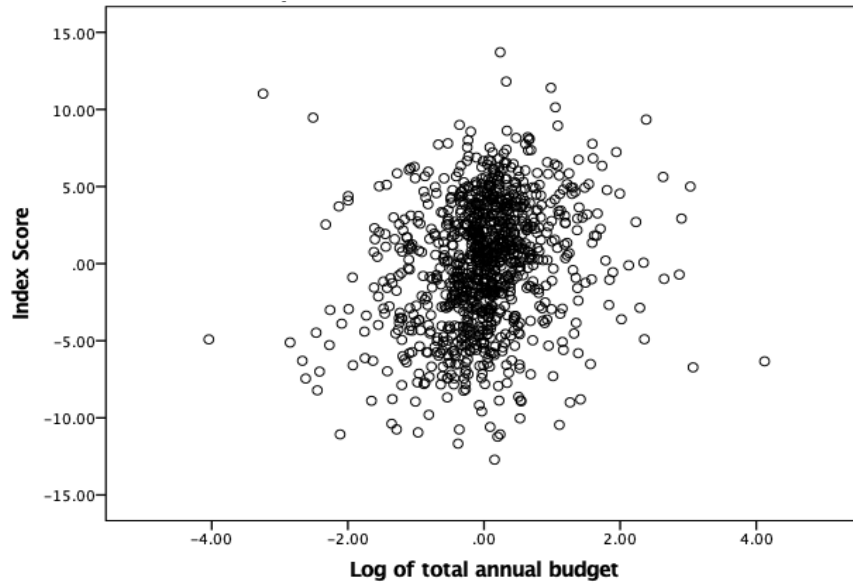
Chart 10. Scatterplot of log of total budget with index score
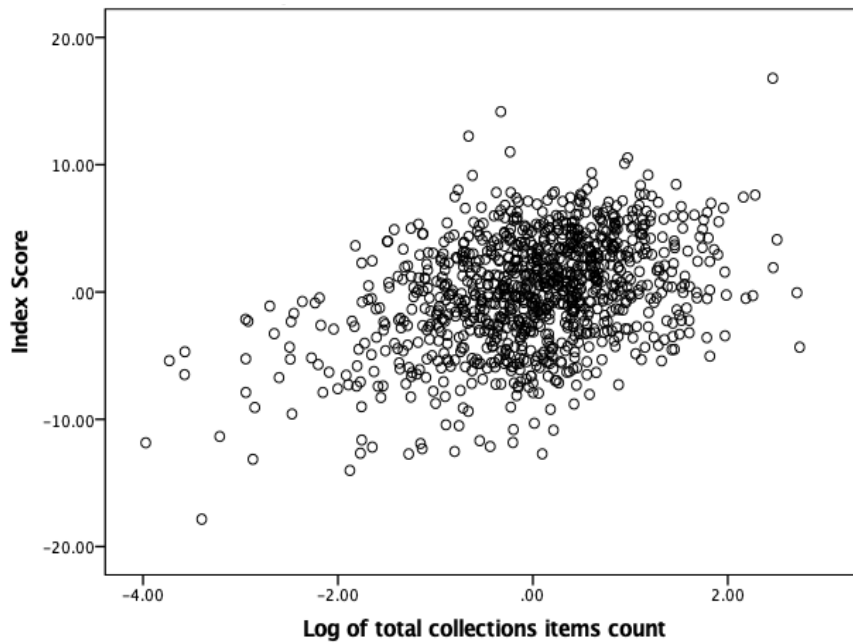
Chart 11. Scatterplot of the log of total number of collections items and the index score
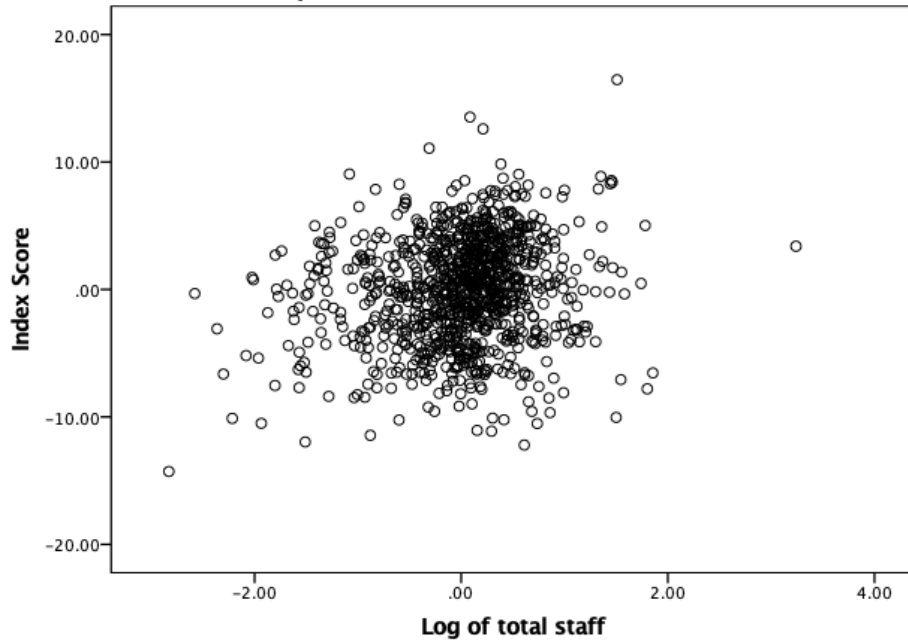
Chart 12. Scatterplot of total staff with index score

A scatterplot of the unstandardized predicted values with the studentized residual values tests the linearity of the relationship of the dependent (or index score) with the independent variables collectively. Chart 13 below shows the relationship between these regression outputs. There is a less obvious linearity to the relationship between these variables, though, a sloping negative line comes into focus along the X axis. This satisfies the fourth assumption.

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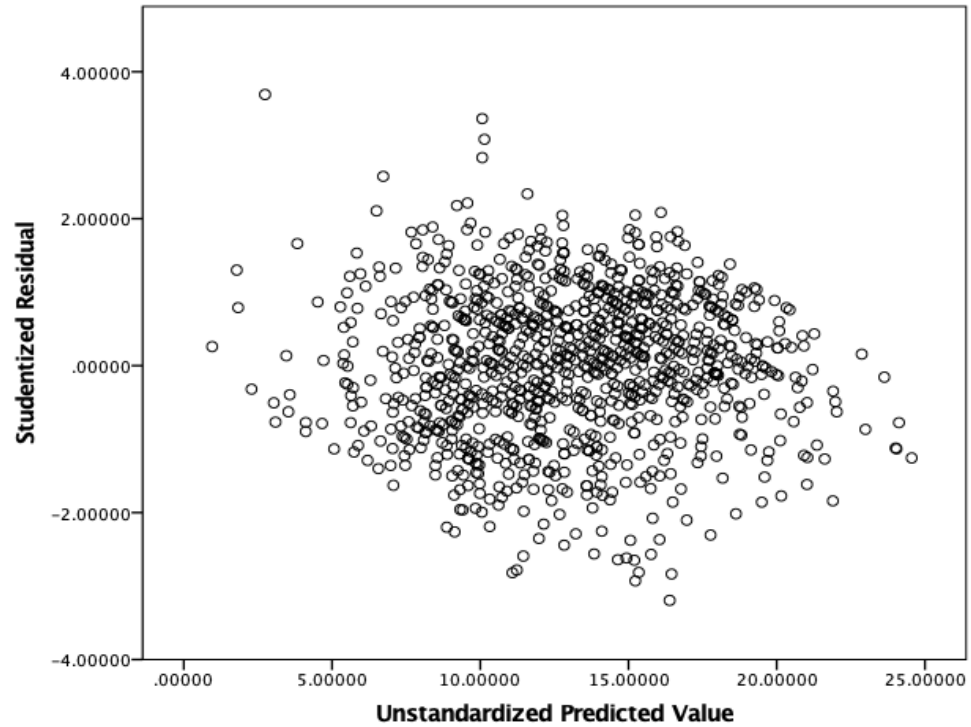
Chart 13. Scatterplot of unstandardized predicted value with studentized residuals

Using the same scatterplot in Chart 13, we can visually inspect for the fifth

assumption of homoscedasticity. The aim is to see where the variances along the

line of best fit remain equal as you move along the line. Visually, this looks like an

even spread of plots as you move across the X axis. There is a relatively even

distribution of plots in Chart 13, and there is no obvious clustering above or below

zero on the Y axis. This indicates that the variance is equal. Assumption five is

satisfied.

Assumption six tests for the multicollinearity of the model, which occurs when you

have two or more independent variables that are highly correlated with each

other. This leads to problems with understanding which of the independent

variables contributes to the variance explained in the dependent variable, as well as technical issues in calculating a multiple regression model. The process includes detecting multicollinearity through an inspection of correlation coefficients and Tolerance/VIF values and then interpreting these correlation coefficients and Tolerance/VIF values so as to determine whether the data meets or violates this assumption. Below in Table 13 are the correlation coefficients for each independent variable and the dependent variable. None should be greater than 0.7, and indeed none of them are greater than 0.675. Values greater than 0.7 could indicate a problem with multicollinearity.

		Index Score	Log of total annual budget	Log of total staff	Log of total collections items count
Pearson Correlation	Index Score	1	0.475	0.499	0.499
	Log of total annual budget	0.475	1	0.675	0.518
	Log of total staff	0.499	0.675	1	0.534
	Log of total collections items count	0.499	0.518	0.534	1
Sig. (1-tailed)	Index Score	.	0	0	0
	Log of total annual budget	0	.	0	0
	Log of total staff	0	0	.	0
	Log of total collections items count	0	0	0	.
N	Index Score	1025	1025	1025	1025
	Log of total annual budget	1025	1025	1025	1025
	Log of total staff	1025	1025	1025	1025
	Log of total collections items count	1025	1025	1025	1025

Table 13. Correlation coefficients of independent and dependent variables

	Tolerance	VIF
(Constant)		
Log of total annual budget	0.469	2.133
Log of total staff	0.493	2.03
Log of total collections items count	0.607	1.648
ArchivesDummy	0.833	1.201
HistoricalSocietyDummy	0.81	1.235
LibraryDummy	0.759	1.318
ScientificDummy	0.916	1.092

Table 14. Tolerance and VIF values for the regression model

An additional review of the Tolerance and VIF values in Table 14 above also confirms that there is no apparent issue of multicollinearity. The Tolerance values are all greater than 0.1. As VIF is the reciprocal of the Tolerance (i.e., 1 divided by Tolerance) this results in the VIF values all being less than 10. The sixth assumption is satisfied.

Finally, assumption eight checks that the residuals (errors) are approximately normally distributed. Two common methods to check this assumption include using: (a) a histogram (with a superimposed normal curve) and a Normal P-P Plot. Below Charts 14 and 15 show the results. Chart 14 shows a relatively normal distribution of the regression residual. The mean is approximately 0 and the standard deviation is approximately 1 confirming the distribution of the regression residuals as a good fit. From the superimposed normal curve, the histogram shows a mostly normal distribution.
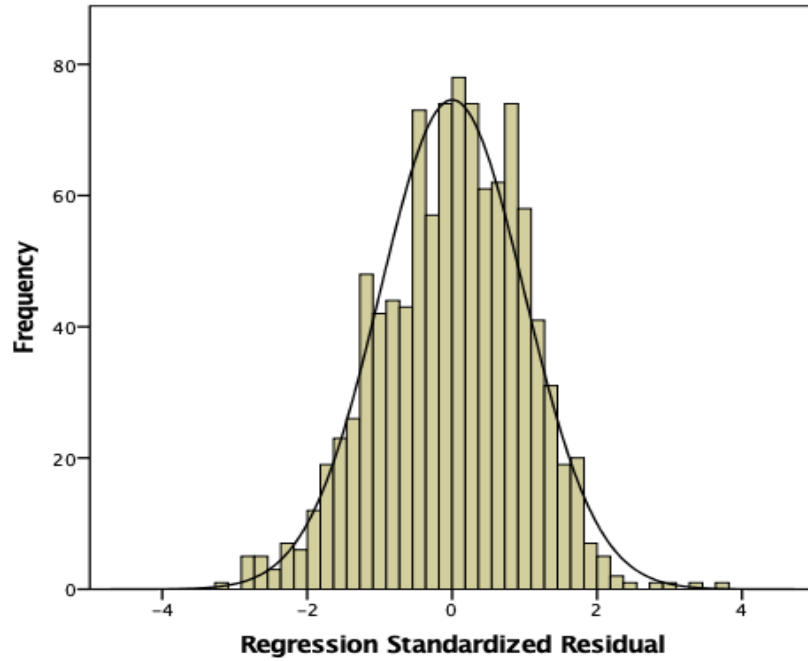
Chart 14. Histogram of the regression standardized residual

Chart 15 below shows that the regression fits almost to the line indicating that the residuals are close enough to normal for the analysis to proceed. Assumption eight is satisfied.
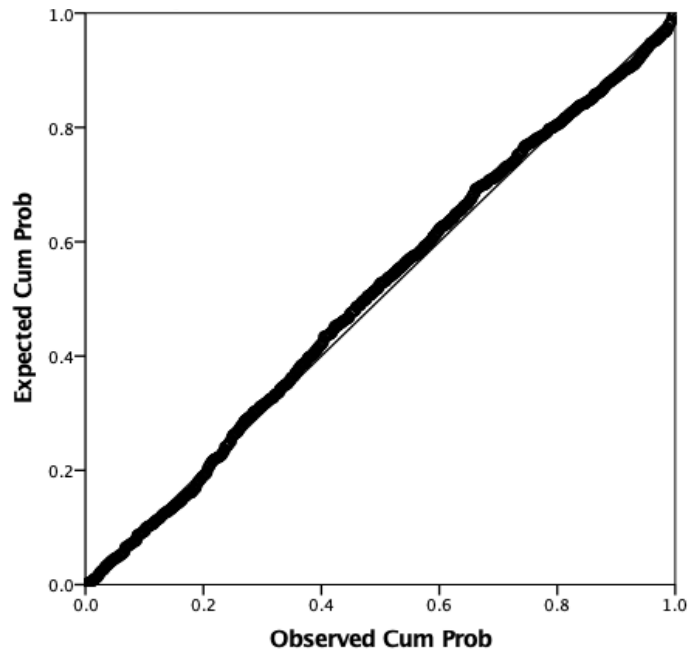
Chart 15. Normal P-Plot of regression standardized residual

4.2.2 The Regression Model Fit

Now that the data have passed each of the eight assumptions above, it is now

appropriate to determine how well the model fits. This is performed through

evaluating R^2 and the slope coefficients produced for the model for each

independent variable with their standard errors at the 95% confidence interval.

With the coefficients, the model equation can be fully expressed.

R^2 for the overall model was .488 explaining 48.8% of the variability when

compared to the mean model with an adjusted R^2 of .484 or 48.4%. R^2 is also a

measure of effect size, and according to Cohen, .484 is a large size effect (1988).

The model is statistically significant at a p-value p < .0005 confirming that the

model (a) is statistically significantly better at predicting the dependent variable (or

index score) than the mean model; and (b) is a statistically significantly better fit to

the data than the mean model. The addition of the three independent variables,
annual total budget, total collections count, and total staff count to the model is
statistically significantly predicted index score, $F_{(7,1017)} = 138.305$, $p < .0005$.

Below in Table 15 are the coefficients produced with the model. The independent
variables total budget, total collections size and total staff are positively correlated
with the index score with the strongest relationship shown with the count for total
staff at 1.801. When run, the statistical software excluded the museum dummy
variable to compare against the four other organizational types with each being
negatively correlated with the index score.

Variable	B	Standard Errors of B	β
Constant	-1.703	0.889	
Log of Total Budget	1.152	0.161	0.235*
Log of Total Collections Items	1.128	0.197	0.183*
Log of Total Staff counts	1.801	0.134	0.386*
Archives	-0.816	0.451	-0.044*
Historical Societies	-0.104	0.45	-0.006*
Libraries	-4.924	0.306	-0.415*
Scientific Collections	-3.203	0.666	-0.113*

Table 15. Summary of multiple regression analysis

Note: *$p < .05$; *B* = unstandardized regression coefficient; Standard Errors is the Standard
Errors of the coefficient; β = standardized coefficient

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In Section 3.2, the regression model equation for this study was expressed as:

predicted (index score) = β_0 + (β_1 x log of total budget) + (β_2 x log of total collections items count) + (β_3 x log of total staff count) + (β_4 x organizational type) +...ε

With the coefficients, the model now can be expressed as:

predicted (index score) = -1.703 + (1.152 x log of total budget) + (1.128 x log of total collections items count) + (1.801 x log of total staff count) - (0.816 x archives) - (0.104 x historical societies) - (4.924 x libraries) - (3.203 x scientific collections) +...ε

This aligns with the results of the index produced by organizational type in Table 7. The negative coefficients for archives, historical societies, libraries and scientific collections are logical given the distribution of scores for these three types fall lower than museums. Additionally, the positive coefficients for the three independent variables also aligns with the positive slopes in Charts 10, 11, and 12 showing the linear relationship between the index score and total budget, total collections items, and total staff, respectively.

4.2.3 Answering RQ1

This section now uses the completed regression equation to predict index scores that answer each of the following hypotheses:

RQ1:   What are the characteristics of a comprehensive collections care organization?

Hypothesis 1: Large total budgets are positively correlated with a higher index score.

Hypothesis 2: Mid-size institutions of all types score higher than small and large institutions.

Hypothesis 3: Organizational collections type for archives is positively correlated with a higher score.

This requires identifying the parameters for each hypothesis through selecting a total budget size, total collections items count and total staff count to test the model. These data are entered into the model to calculate a mean index score within the 95% confidence interval (CI). For testing, it is enough to have the mean predicted index score because the analysis produces the standard error (or the measure of variability) of the mean score, as well as, an upper and lower bound that the mean predicted score should fall within (Laerd, n.d.). The 95% CI is usually preferred for describing the variability in the mean, which is why the 95% CI is used to describe the predictions (Laerd, n.d.). While it would be possible to test the hypotheses by calculating the predicted score using the equation alone, it is more difficult to perform the calculations for the upper and lower bounds and therefore the use of statistical software is used to perform each test (Laerd, n.d.).

Each test inputs the log of the three independent variables because the model was created using the log of the raw data.

There are several tests of the hypotheses below. The data used to calculate the predicted scores are be drawn from the data set. They provide the real-world data that calculated the model, and therefore are not needed for testing. Instead, the data used for testing are drawn from the size breakdown in Appendix D. The model serves as a way to predict an index score and the upper and lower bound for an unknown, potential HHI respondent using only the three independent variables. In other words, now that the coefficients for each slope is known, any collecting institution could provide data for budget, collections count, and total staff count and a mean index score could be calculated at the 95% CI without that institution completing the HHI survey.

For reference, the regression equation is:

predicted (index score) = -1.703 + (1.152 x log of total budget) + (1.128 x log of total collections items count) + (1.801 x log of total staff count) - (0.816 x archives) - (0.104 x historical societies) - (4.924 x libraries) - (3.203 x scientific collections) +...ε

Hypothesis 1 states that large total budgets are positively correlated with a higher index score. This requires testing the model five times for each of the

organizational types in the equation: archives, historical societies, libraries,

museums and scientific collections. Museums serve as the constant in the

equation but can be tested by marking each organizational type in the equation as

null.

The parameters for the hypothesis 1 tests are as follows:

Institutional type	Size	Budget	Collection Items Count	Staff Count
Archives	Large	$1,000,000	5,000	10
Historical society	Large	$1,500,000	1,500,000	10
Library	Large	$1,000,000	1,500,000	35
Museum	Large	$1,500,000	1,500,000	10
Scientific collection	Large	$500,000	500,000	5

Table 16. Hypothesis 1 testing parameters

The results of hypothesis 1 testing at the 95% CI are as follows:

Institutional type	Size	Predicted Index Score	Lower Bound	Upper Bound
Archives	Large	12.182	11.316	13.048
Historical society	Large	17.558	16.692	18.424
Library	Large	14.472	12.649	16.296
Museum	Large	17.662	17.067	18.257
Scientific collection	Large	16.193	8.967	23.418

Table 17. Hypothesis 1 results

From the results of the predictions, it appears that large budgets are mostly

positively correlated to scores. For all organizational types except archives, the

predicted scores for institutions with large budgets are remarkably higher than the mean scores in Table 8. Indeed, this indicates that while the scores may not appear as high as 15.5 - the threshold for comprehensive care - the larger the budget, the higher the scores, generally speaking. Historical societies, museums, and scientific collections all had a positive relationship to a large budget, whereas archives and libraries had a slight uptick in their predicted scores and large budgets. Both archives and libraries benefitted from having large budgets with predicted scores of 12 and 14, respectively, though it was not enough to bring the predicted scores above 15.5.

Hypothesis 2 states that mid-size institutions of all types score higher than small and large institutions. To test this hypothesis, there are ten predictions calculated - two for each organization type at small size and mid-size.

The parameters for the hypothesis 2 tests are as follows:

Institutional type	Size	Budget	Collection Items Count	Staff Count
Archives	Small	$200,000	500	3
Archives	Mid-size	$500,000	2,500	7
Historical society	Small	$150,000	12,000	2
Historical society	Mid-size	$750,000	100,000	5
Library	Small	$1,000	10,000	1
Library	Mid-size	$250,000	550,000	5
Museum	Small	$150,000	5,000	1
Museum	Mid-size	$900,000	600,000	8

| Scientific collection | Small | $3,000 | 2,500 | 1 |
| Scientific collection | Mid-size | $125,000 | 25,000 | 3 |

Table 18. Hypothesis 2 testing parameters

The results of hypothesis 2 testing at the 95% CI are as follows:

Institutional type	Size	Predicted Index Score	Lower Bound	Upper Bound
Archives	Small	8.986	8.039	9.933
Archives	Mid-size	11.119	10.238	11.999
Historical society	Small	11.841	11.081	12.602
Historical society	Mid-size	14.754	13.967	15.541
Library	Small	4.033	3.123	4.943
Library	Mid-size	10.718	10.167	11.268
Museum	Small	11.065	10.574	11.556
Museum	Mid-size	16.580	16.042	17.119
Scientific collection	Small	5.219	3.899	6.539
Scientific collection	Mid-size	9.424	8.193	10.654

Table 19. Hypothesis 2 results

Since larger budgets appear to be correlated with higher scores for each organizational type, it is no surprise that hypothesis 2 is disproven. All ten tests resulted in lower predicted scores for small and mid-size institutions than the results for large budgets tested in hypothesis 1 in Table 17. In fact, for libraries and scientific collections predicted scores fell by four or five points reinforcing that a larger budget does result in scoring higher.

The third and final hypothesis states that organizational collections type for archives is positively correlated with a higher score. Hypothesis 3 compares results from Tables 17 and 19 for all predicted scores for archives of all sizes, as well as, how archives compares to the predicted scores for all other institutional types at all sizes. Large archives' predicted scores are lower than other types in Table 17 at 12.182. This confirms that even though large budgets improve scores for all institutional types, it does not improve the predicted scores of large archives over other types. Small and mid-size archives also do not score higher than other institutional types in Table 19. Hypothesis 3 is disproven. Though small and mid-size archives predicted scores do not fall precipitously like those for small and mid-size libraries and scientific collections types, being an archive does not improve a predicted score.

Overall, the predicted scores for large budgets proved to have the greatest effect on predicted scores. Institutional type, collections items size, and staff count did not have as great an effect, resulting in scores that neither improved predicted index scores nor sustained them. Museums of all sizes prevailed over archives, historical societies, libraries and scientific collections at all sizes with predicted scores above 10 thereby proving that museums have a greater effect on predicted scores than any other institutional type.

4.3 Discussion

The experiment of the index yielded useful results that signaled how cultural institutions in the U.S. as of 2014 are performing collections care. When put into

context of the descriptive statistics from the data set, it is no surprise that scores

hover below the standard. Most HHI respondents reported a need for

improvement in standard practice areas, and the resulting scores align with this

finding (IMLS, 2019).

The index scores also indicate that archives may have an advantage over other

collections type with a median score higher than all other types. This is not

ultimately borne out in the regression analysis, but it is no mistake to assume that

archives may perform better as an overall group. Archives, like research libraries

discussed in Section 2.5.4, have professional committees dedicated to improving

ongoing practice in the field. It is also not a mistake that archives should score

better than most other collections types by the nature of their work. Most archives

service a narrow slice of researchers and the public focusing their primary work

on the preservation of objects within their collection. It is worth noting that the

mission of most cultural heritage organizations includes preservation (79.1%),

though how it is emphasized is reflected in the scores above.

Further analysis of the library respondents in the analysis also shows why scores

are lower in the 0-10.5 range. Public libraries are slightly more numerous than

academic libraries (248 compared to 238), and all other library types are less than

50. Public libraries, unlike academic, independent research libraries, and

specialized libraries, concentrate their collections work on circulation with regular

updates to the catalog for patrons needs and use. This is not to say that public

libraries are exempt from collections care, and in fact, many have special

collections, large server rooms, and state of the art shelving that prevents objects

from slumping over. This is where the impact of professional standards can be

observed. With the regular survey of practice undertaken by ARL, it is expected

that academic libraries score well in the index. The mean score for academic

libraries is almost the same as archives at 13.41. Scores cluster at 12, 12.5,

14,15, 15.5 and 16.5 showing that academic libraries are at least responsible for

some of the higher scores in Table 7.

Interestingly, drilling down into the large organizations, it is easy to see that

museums would be more likely to score higher. The two largest types in the HHI

sample are museums and libraries with 689 and 567 respondents each,

respectively. This is representative of the total population of museums and

libraries in the U.S. HHI should have higher respondent counts from these two

types because there are more of them. While large libraries do cluster at 16.5,

large museums cluster at 17.5, 18, 18.5, 19, and 20. These spikes align with the

regression findings, even if it was not expected.

4.4 Limitations and Future Research

The limitations of the data set play a large role in being able to build models that

can accurately or reliably provide results. With an inclusive universe of all

museums, libraries, and archives, the overall response rate was low by many

standards at 20%, even with a 70% response rate by item (Frehill, et al, 2019).

The low response rate overall resulted from libraries, museums and historical

societies - large subgroups in the cultural sector - responding at rates lower than

expected and small proportions of the small subgroups for archives and scientific

collections. This limitation is not present in the index score calculations as each

respondent is treated equally, though the impact of this disproportionate

representation is present in the hypothesis testing for RQ1. Table 17 shows the

results of hypothesis 1 where predicted scores for large scientific collections can

range from 8.967 up to 23.418. These lower and upper bounds explain the

variation (i.e., uncertainty) of the predicted scores from the model. With only 151

scientific collections, less than a third of them fall into the large category, and as

stated above in this chapter, most real-world size parameters vary quite a lot,

especially for the science respondents in the HHI 2014 data set. With additional

respondents from scientific collections, the range provided by the lower and upper

bounds would most likely be closer to the predicted score and show less

uncertainty at the 95% CI.

Another limitation of both analyses is the interpretation of the results. In indexes

and multiple regressions, there are questions regarding the validity of the results

based on the availability of or selection of items for analysis. The methods used to

construct the index require testing the relationships between items and

interrogating the relationship of each item for its relevance to the topic. That

process is unique to the index and can engender debate about the appropriate

inclusion of some items. Additionally, the validation processes of indexes can

surface questions regarding how well the index scores meet with the external

factors or relationships. This limitation overall centers around the appropriateness of the items and would require vetting with communities that intend to use it prior to implementation. A particularly important next step in the vetting process would be to seek feedback from the American Institute for Conservation of Artistic and Historic Works community where professional standards for collections care is maintained today.

Multiple regressions, similarly, have limitations centering around the appropriateness of the predictor variables used to calculate the model. Unavailable, or unused, variables may have an observable effect on the index score that cannot be known by evaluating the relationships employed here. Factors such as the location of the institution, or the average educational attainment of the staff could also impact the score. This study set out to determine if size parameters impacted the index score finding that large budgets, in fact, did raise mean predicted scores in the model.

However, this study has an additional limitation which is that real world variation was not considered for size parameters in the hypothesis testing. Along with large budgets, for example, the other size parameters used to test the model were approximately large as well, and therefore the difference is not known if a large budget with a small collections count would impact the predicted score. Additional testing of the hypotheses would reveal the answers to these questions of exactly which predictor has the greatest impact by controlling for the others.

As an experimental study premised on the construction of an index score not previously calculated, it was decided early on in this process that the tests for the hypotheses would provide a baseline for understanding the relationships of size to scoring. Now that the model is tested, future research can include testing for all variations in size metrics and predictor variables. For example, Charts 10 through 12 show a somewhat linear relationship to the index score making it possible to continue with the analysis. Other predictor variables, such as location, could reveal a stronger positive linear line indicating that the model would change, and thereby predicted index scores, based on location in the U.S. This is only one example.

Future research using this index method would consider these modifications, as well as, the one posed in Section 4.1.3 regarding digital collections and external funding. As digital collections management becomes central to collections care practice it is necessary to measure it more completely to gauge its practice and efficiency, even if my recommendation is to remove it from the current index scoring rubric. E6, funding from external sources, however, should remain excluded from the index. In the funding environment today, it is unlikely that this item can improve scores.

Additional index analysis of the HHI 2004 data set could possibly reveal how scores have changed. That would require adapting the scoring rubric to fit the

2004 questionnaire. It would be valuable to see if there was measurable progress in practice since Heritage Preservation set out to emphasize the importance of collections care and improved education resources after the initial 2004 survey.

In sum, the analysis for the index and regression provided key insights into how well cultural organizations are performing collections care. While the scores for the index showed lower performance than expected, this is the nature of the practice at this time in the U.S. As noted by IMLS, reported data from respondents improved some practice in key areas of collections care (Frehill, et al, 2019). Additionally, it was found through testing the hypotheses, that large budgets do positively correlate with higher index scores, and archives are not positively correlated with higher scores. Mid-size institutions also did not outperform institutions with higher budgets. These results serve as a baseline for future research where modifications and testing the models could reveal more insights into which predictors effect scoring higher in the index.

Chapter 5: Conclusions

This chapter concludes the dissertation with a summary of the study and its key findings and significance. It describes the study's contributions to collections care practice and potential uses for the tools built for this study such as the original index.

5.1 Summary of the Study

The original index completed in this dissertation assigned a score for each HHI respondent based on 12 collections care responsibilities. After selecting the HHI 2014 data items for the index, and reviewing their response options and response rates, each one was evaluated for face validity, unidimensionality, variance, and empirical relationships between items. The results showed that each item has sufficient response for the index analysis and each item selected has face validity, unidimensionality, and shows variance in responses. No normalization procedures were necessary for the index analysis, though two items were transformed to match the response categories of the other items. Crosstabulations of the empirical relationships (Appendix C) showed that a relationship exists between each response to each item, except in some cases of comparing "no" and "don't know". The scoring rubric created for this index has core questions and supplemental questions scored separately. The core questions cover the predominant responsibilities of collections care, and the supplemental ones add points to the score if the respondent performed additional duties.

After scoring each HHI respondent, a multiple regression analysis is performed

using the index scores as the dependent variable, and four organizational

characteristics are used as independent variables. Each of the eight assumptions

was tested to show if the data, the dependent and independent variables, and

their relationships were sufficient to run the model. Each of the eight assumptions

was satisfied and the model equation was inspected and expressed with slope

coefficients. The final step in this study tested the regression model with multiple

examples and combinations of organizational attributes that represent different

sizes and types of collections to answer the hypotheses in RQ1. These tests

showed what attributes are correlated with the index score.

5.2 Summary of Findings

The highest index score is 26. It was expected that most scores would be higher

than 15.5 indicating that the majority of HHI respondents performed all of the core

duties and some of the supplemental ones. Unfortunately, these expectations

were not met. The highest score was 24.5 and assigned to only one organization.

The highest proportion of scores was in the 11 to 15.5 range, with a mean score

of 11.57 and a median of 11.75. The highest cluster of scores is 13.5 with 60

respondents. Archives have the highest median score, although museums have

the highest proportion of scores above 15.5. The index validation methods show

that the index is internally and externally validated.

Of the three modifications proposed, all three were determined not to have a

negative impact on the scoring process. Staffing (D7), annual budget support for

collections care (E2) and other funds to support collections care (E3) all proved to be low counts for the index, revealing that staffing and funding are still quite low for this work across the cultural heritage sector. Two items are recommended for removal from the index methods: born-digital preservation practice (D10a) and external funds for collections care (E6). Like the three questions above, the data reported for these questions had low counts of response. They also had a high percentage of negative responses, indicating that organizations are not successful in their attempts to secure external funds through grants or donations, and that they are preserving digital materials with less frequency, if at all.

RQ2 was answered through the index results being valid and normal showing no signs of failed validity. The index is a good method to describe collections care practice.

A multiple regression was run to predict the mean index score from institutional type, collections items size, and staff count. There was linearity as assessed by partial regression plots and a plot of studentized residuals against the predicted values. The Durbin-Watson statistic was not calculated because the respondents are independent of each other. There was homoscedasticity, as assessed by visual inspection of a plot of studentized residuals versus unstandardized predicted values. There was no evidence of multicollinearity, as assessed by tolerance values greater than 0.1. There were studentized deleted residuals greater than ±3 standard deviations, but no leverage values greater than 0.2, or

values for Cook's distance above 1. The cases totaled four, and it was determined that these cases could remain in the regression model. The assumption of normality was met, as assessed by a P-Plot. The multiple regression model is statistically significantly predicted index score $F_{(7, 1017)} = 138.305$, $p < .0005$, adj. $R^2 = .484$. All three variables added statistically significantly to the prediction, $p < .05$.

Overall, the predicted scores for large budgets proved to have the greatest effect on predicted scores. Institutional type, collections items size, and staff count did not have as great an effect, resulting in scores that neither improved predicted index scores nor sustained them. Museums of all sizes prevailed over archives, historical societies, libraries and scientific collections at all sizes with predicted scores above 10 thereby confirming that museums have a greater effect on predicted scores than any other institutional type.

5.3 Contributions and Uses for the Index and Model

This dissertation engages Heritage Health Information Survey (HHI) data to construct a tool for cultural heritage professionals to assess their performance of collections care within their own institutions. Several index studies have shown that the scoring process, while valuable, is not enough. This dissertation provides both the index method and a regression model as tools for cultural heritage practitioners to review, monitor and improve their practice at each level of practice and resources.

Comparative studies of indexes in Chapter 2 show how these methods serve to improve decision-making and monitoring fluctuations in economic markets. There is debate about whether the methods should include input resources for performance, or outputs from the practice. Most of the index projects in the cultural heritage sector have studied resources such as money flows into organizations, while only libraries have data detailed enough to observe how practice is performed within organizations. HHI, with its detailed data, allows for this study to look at libraries, archives, historical societies, museums and scientific collections and to consider how inputs that are not resource-bound, but rather performance responsibilities, can describe collections care practice. The need to understand how resources, namely the three variables chosen for the regression model, affect the score is a new way to inform the field. Taken together, these two analyses provide a greater picture of performance and what affects the outcome.

There are many uses for these tools in practice for cultural heritage organizations. Educational books, tutorials, webinars and several other professional development tools on collections care are available at little to no cost for cultural heritage organizations to fill the gap in knowledge for how to improve. Heritage Preservation pioneered many of them. However, these tools and resources do not allow organizations to evaluate their work and this is why the index in this dissertation is valuable to all practitioners. Previous analyses of HHI data have shown the national trends in how practice changes overall. This is enough for a

national picture. It's impossible, however, for HHI respondents, or any cultural heritage organization to link the national trends with their own practice, or to select the correct materials or skills development to improve collections care. This question: how well is my organization performing? depends greatly on detailed knowledge of indicators, as is discussed Chapter 2. This study focused on how institutions can take on the responsibility of improving their performance regardless of size or collections showing that comparisons within groups are not necessary for small institutions or large ones in order to improve collections care. These analyses aim to complement other resources available by providing two living tools that work independently, as well as, in concert with each other to improve ongoing review of practice. It is meant as a stress test, rather than a full physical examination, that empowers organizations to take on the responsibility in a less burdensome, less time-intensive manor.

Many organizations, especially in mid-sized or large organizations, reported the length of time and staff availability to be the greatest burden in completing the HHI survey. This is not totally unexpected with a survey of this kind that is only collected at designated times; from Appendix B it is clear that HHI is also lengthy for a single institution to complete. While the study designers intended for the HHI questionnaire to serve as a tool for organizations to use annually, it simply proved too overwhelming. It is the intent for the index to fill the role left open for an ongoing performance measurement resource that HHI cannot fulfill. Additionally, for the organizations that were not invited to participate in the HHI survey, the

index is the best way to understand how they perform these essential duties. This has the byproduct of eliminating the quantity of instructions, items in the detailed glossary and resource-gathering by staff required to complete it. For larger organizations such as the Metropolitan Museum of Art and the Library of Congress where the conservation/preservation departments are hundreds of people, and their control over budgeting and hiring is done in concert with the finance and human resources departments within their institution, HHI is a multi-month endeavor. If this short form is able to be completed by the head of collections, or head of preservation, alone then this short form will have fulfilled its primary purpose of serving as a go-to measure and method for monitoring. Likewise, this short form approach is an immediate and accessible way to generate an assessment that can impact planning for staff commitments and priority-setting. Professional conservators that serve as contractors to cultural heritage organizations doing only occasional work could also use this tool to provide a baseline for overall care.

How organizations can use this information for a larger purpose was considered when this study began. The scores produced through either method can inform funding agents, state and local administrators and boards when an organization is advocating for needed improvements and funds to attain them. There is a powerful statement in the index score alone for organizations to make in grant proposals or to their donors. In the interest of improving practice, an assessment is often the first step that sets a baseline upon which new resources and new

programs for improved care can be dedicated. This launchpad is the same for organizations regardless of size or collections type for tangible cultural heritage organizations like museums and archives.

Professional associations like the American Institute for Conservation of Historic and Artistic Works can take the scores from individual institutions to their donors and find new educational or skills-building programs, in addition, to advocating for better grant-funding through the Federal agencies that support preservation such as the Institute of Museum and Library Services and the National Endowment for the Humanities. This advocacy is not limited to the national associations, especially in areas with a strong regional or state association that can take up these scores in their area as a more detailed review of practice. It could be that regional differences make a big impact on practice, especially in areas where environmental controls are hardest, for example. This could open the door to publishing scores, like the LJ Index or the Arts Vibrancy Index, to show peer institutions how they perform and to boost transparency about the need for practice. Without additional attention to this issue, it could fall away again, languishing for years.

It is the desire outlined in the Preface that this work continues to carry forward the principle that making improvements has to start with data and awareness. It furthers Heritage Preservation's guiding principle that if an organization cares about its collection, then we all should, and there is no better way than to continue

to alleviate the challenges inherent in preservation by improving the resources,

assessments, and skills to do so.

Appendix A. HHI 2014 Data Collection and Methods

The HHI 2014 study began with a newly updated universe file of cultural organizations in the United States (IMLS, 2019). The two criteria that make an organization eligible for inclusion in the survey universe, allowing the organization to complete the study, are 1) holding collections and 2) nonprofit status. Work done previously for the 2004 study compiled the first database of collections-based institutions from available directories of libraries, historical societies, state museum association lists, and various other sources, such as the U.S. Army Corps of Engineers list of warehouses with Federal archaeological collections. Where possible, this 2004 universe was compared to updated directories for 2014 (Frehill, et al, 2019). In cases such as the Army Corps' list of archaeological collections, there were no updates after 2004. Counts of libraries, museums, historical societies, and archives had all grown, shrunk, and grown again since the initial survey universe was compiled.

The total survey universe had over 45,000 eligible collections-based institutions. This was a 30% increase in the size of the universe since 2004. Even in the post-Great Recession era, when many institutions folded, it is clear that cultural organizations were expanding and growing in ways that were going unstudied. Though this may not be obvious during economic hardship, research has proven that selective growth in the cultural sector is possible, leading to continued increase after recovery (Grodach & Seman 2013). Directories of cultural

organizations also improved over this time, including the Institute of Museum and

Library Services' recent museum census (IMLS, 2018).

In order to make the studies comparable, I selected a repeated cross-sectional

method. This method allows for the survey universe in each data collection to be

independent of the other (Lavrakas, 2008). For surveys collected every month, or

annually, the biggest advantage of this method is overcoming respondent survey

fatigue (Lavrakas, 2008). For HHI 2014, it meant that the study team could use

the same sampling parameters and a similar questionnaire, and still produce

national estimates that would result in an accurate perspective of the field when

compared to the 2004 national estimates. With a ten year gap between data

collections, there was no way possible to capture the exact same respondent

pool, therefore the methods selected had to allow for representativeness of the

field once the final data from the survey were weighted. The decision to modify

the questionnaire resulted from findings that the original questionnaire posed

cognitive challenges to the respondent, and indeed showed in the data that the

most complicated questions were skipped by 2004 respondents. To ease the

burden on respondents in 2014 using the online platform to complete the survey,

the study team prioritized time spent on questions and efficiency moving from

question to question which resulted in modifications to the questionnaire.

The 2014 sampling methods were adapted from the 2004 study. The universe is

divided into fifteen strata: five types of organizations and three groups. The types

are archives, historical societies, libraries, museums, and scientific or research collections (Frehill, et al, 2019). Below are the grouping strata:

- Group 1: large and/or small well-known institutions with collections estimated over 5 million;

- Group 2: large and medium-sized institutions with collections estimated over 1 million and less than 5 million;

- Group 3: All other institutions, with a majority of public libraries, historical societies, and city and town archives, with collections estimated less than 1 million.

The sampling plan for HHI 2014 included selective sampling and stratified random sampling by (a) surveying all Groups 1 and 2 institutions with significant collection holdings, (b) surveying all archives and archaeological repositories/science research organizations, regardless of collection size, due to the small number of institutions (an over-sampling strategy); and (c) selecting a stratified random sample of libraries, historical societies, and museums with small (or unknown size of) collections within each type of institution and stratified by location (based on zip code). The sampling plan resulted in a sample of 11,856 institutions (Frehill, et al, 2019).

It is important to note that the size metrics used in the sampling strategy are rough estimates of collections size; the grouping strategy was designed to yield a high response rate through targeted sampling (Heritage Preservation, 2005). The

rationale for the groupings relied on the finding from a 1989 study conducted by the American Alliance of Museums (formerly the American Association of Museums) that stated "7.3% of U.S. museums were large and that large museums held 74.8% of the total number of objects or specimens" (Heritage Preservation, 2005, p.6, footnote 2).

For reliability, the entire 2014 sample was verified by phone bank operators that ensured the survey would reach the correct recipient at the institution. In addition, phone verification of the sample allowed Heritage Preservation to weed out bad or old records that the source directories failed to update (Frehill, et al, 2019).

The survey data collection period lasted five months crossing the holidays from 2014 to 2015 (Frehill, et al, 2019). Most participants completed the survey via the web portal, though some submitted a paper copy. As some participants noted, the long print questionnaire made for a good worksheet when gathering the data prior to completing the web survey. Due to the busy time of year, we extended the data collection period three times, and sent up to five email or postcard reminders to invited participants (Frehill, et al, 2019).

The full paper data collection instrument is in Appendix B. It includes the questionnaire with directions for skipping, a full glossary, and a frequently asked questions section. This well-rounded instrument is intended to ameliorate difficulties when answering the questions by experts and novices alike. This is

especially important to prevent response bias and a general lack of training or knowledge of the terms used in the questions. As is mentioned in Chapter 2, one underlying premise of collections care is that it can be performed at any scale in any size organization with any amount of training, though it was important that organizations start at the same place of understanding in order to answer the survey. Technical support via phone and email also provided respondents with consistent guidance during data collection.

Post collection data processing included 1) data validation, 2) review of known items that have issues such as budget figures reported as raw numbers, 3) eligibility checks for organizations, 4) checks on the representativeness of the respondent pool, and 5) nonresponse bias collection (Frehill, et al, 2019). In a minor number of cases, data validation had to be completed through direct contact with the institution that provided the data, sometimes because the respondent identified problems with submitted responses or budget data reported raised concern. Final dispositions for the survey resulted in 1,714 complete and validated respondents after a few cases were removed (Frehill, et al, 2019). Removals were due to eligibility checks that revealed duplicate responses from a single organization, or a satellite organization that completed a separate survey from the parent organization; the parent organization reported aggregate data and therefore the satellite organization's data was duplicative (Frehill, et al, 2019). Through representative checks and a nonresponse bias survey, it was confirmed

that the respondent pool mirrors the universe of eligible organizations, and that no

one subgroup was overrepresented (Frehill, et al, 2019).

Appendix B. HHI 2014 Questionnaire, FAQ and Glossary

Heritage Health Information 2014 Questionnaire, Glossary, and Frequently Asked Questions

A Glossary of terms is appended to the end of the survey.
Defined terms are indicated by (G).

A. Eligibility to respond to the survey

A1. Does your institution collect artifacts, objects, texts, or any other art, historic and/or scientific items? **(select one)**

   a. Yes

   b. No **Please return the survey in the provided envelope.**

A2. Is your institution 1) a nonprofit, filing as a 501(c)(3) with the Internal Revenue Service (IRS), or 2) part of local, state or federal government? **(select one)**

   a. Yes

   b. No **Please return the survey in the provided envelope**.

B. Institutional Type & Governance

B1. Which of the following most closely describes your type of institution? **(select one)**

   a. Archives

   b. Public library

   c. Academic library

   d. Independent research library (includes state libraries & large federal libraries)

   e. Special library (includes law, hospital, religious, blind & handicapped libraries)

   f. Historical society (includes genealogical societies, historical associations)

   g. Historic house/site

   h. History museum (includes living history)

   i. Art museum (includes art gallery, art center, or arts organization)

   j. Children's/youth museum

   k. Natural history museum

l. Science/technology museum

m. General museum (collection represents 2 or more disciplines)

n. Specialized museum (collection represents one discipline)

o. Archaeological repository or research collection

p. Scientific research collection (includes agencies or university departments with scientific specimen/artifacts)

q. Arboretum or botanical garden

r. Aquarium

s. Nature center

t. Planetarium or observatory

u. Zoo

B2. Which additional services or functions does your institution provide? **(select all that apply)**

a. Archives

b. Library

c. Historical society

d. Historic house/site

e. Museum (includes art galleries, art center, or arts organization)

f. Archaeological repository or research collection

g. Scientific research collection (includes agencies or university departments with scientific specimen/artifacts)

h. Aquarium, Zoo, Arboretum, Botanical garden, Nature center or Planetarium

i. Records center or records management

j. Other: _____

k. None

B3. Which of the following most closely describes your institution's governance? **(select one)**

a. College, university or other academic entity

b. Nonprofit, non-governmental organization or foundation

c. Federal

d. State

e. Local (county or municipal)

f. Tribal

Section C. Environment

C1. Does your institution use environmental controls to meet **temperature specifications (G)** for the preservation of collections? **(select one)**

  a. Yes

  b. No SKIP TO C2

  c. Don't know SKIP TO C2

C1a. Which best describes where your institution uses **environmental controls (G)** to meet **temperature specification (G)** for preservation of collections? **(select one)**

  a. In all areas, including storage and exhibitions spaces

  b. Only in storage areas

  c. Only in exhibition spaces

  d. Don't know

C2. Does your institution use **environmental controls (G)** to meet **relative humidity specifications (G)** for the preservation of collections? **(select one)**

  a. Yes

  b. No SKIP TO C3

  c. Don't know SKIP TO C3

C2a. Which best describes where your institution uses **environmental controls (G)** to meet **relative humidity specifications (G)** for the preservation of collections? **(select one)**

  a. In all areas, including storage and exhibition spaces

  b. Only in storage areas

  c. Only in exhibition spaces

  d. Don't know

C3. Does your institution control **light levels (G)** to meet specifications for the preservation of collections? **(select one)**

  a. Yes

  b. No SKIP TO C4

  c. Don't know SKIP TO C4

C3a. Which best describes where your institution controls **light levels (G)** to meet specifications for the preservation of collections? **(select one)**

a. In all areas, including storage and exhibition spaces

b. Only in storage areas

c. Only in exhibition spaces

d. Don't know

C4. Does your institution keep collections in on-site and/or off-site storage? **(select one)**

a. Yes

b. No SKIP TO D1

c. Don't know SKIP TO D1

C4a. What percentage of your collections is stored on-site and/or off-site?

a. _____%

b. Don't know

C4b. What percentage of your collections is currently housed in storage units or equipment (G) large enough to accommodate your collections items?

a. _____%

b. Don't know

C4c.   What percentage of your collections is currently housed in **storage units or equipment (G)** that allows designated staff or research access to each collections item?

a. _____%

b. Don't know

C4d. Does your institution need additional storage space for collections not currently on display? (select one)

a. Yes

b. No SKIP TO C6

c. Don't know SKIP TO C6

C5. Does your institution need to make improvements to its on-site or off-site storage space for collections not currently on display? **(select one)**

a. Yes

b. No

c. Don't know

C6. Does your institution need new **storage units or equipment (G)** for collections not currently on display?

a. Yes

b. No

c. Don't know

Section D. Preservation Activities

D1. Does the mission of your institution include preservation of your collections? **(select one)**

a. Yes

b. No

c. Don't know

D2. Does your institution have a formal written long-range **preservation plan (G)** for the care of the collections? **(select one)**

a. Yes

b. No SKIP TO D3

   c.   Don't know SKIP TO D3

   D2a.   Which best describes your institution's written **preservation plan (G)**? **(select one)**

a. My institution has a preservation plan that has a regularly scheduled update

b. My institution has a preservation plan, but it is updated on an infrequent schedule

c. My institution is developing a preservation plan

d. My institution includes preservation in other planning documents

D3. Has a **general condition assessment (G)** of your institution's collection been done? **(select one)**

a. Yes

b. No SKIP TO D4

c. Don't know SKIP TO D4

D3a. Which best describes the general condition assessment (G) conducted by your institution? (select one)

a. We completed an assessment of the entire collection and regularly update it every five years

b. We completed an assessment of the entire collection but it is not updated regularly

c. An assessment of only a portion of the collection was completed and is updated regularly every five years

d. An assessment of only a portion of the collection was completed, but it is not updated regularly

D4. Does your institution have a written **emergency/disaster plan (G)** that includes the collection? **(select one)**

a. Yes

b. No SKIP TO D5

c. Don't know SKIP TO D5

D4a. Which best describes your institution's written emergency/disaster plan (G)? (select one)

a. My institution has an emergency/disaster plan that is regularly updated

b. My institution has an emergency/disaster plan, but it is not updated regularly

c. My institution is developing an emergency/disaster plan

D4b. Is your staff trained to carry out your institution's written emergency/disaster plan (G)? (select one)

a. Yes

b. No

c. Don't know

D5. Does your institution have **collections records (G)** for the items in its collections? **(select one)**

a. Yes

b. No SKIP TO D6

c. Don't know SKIP TO D6

D5a. Does your institution store **collections records (G) off-site (G)**? (select one)

a. Yes

b. No SKIP TO D6

c. Don't know SKIP TO D6

D5b. What percentage of your **collections records (G)** is stored **off-site (G)**? (select one)

a. _____%

b. Don't know

D6. Does your institution have a **security system (G)** to help prevent theft or vandalism of collections? **(select one)**

   a. Yes

   b. No SKIP TO D7

   c. Don't know SKIP TO D7

D6a. Which best describes where your institution has a **security system (G)** to help prevent theft or vandalism of collections? **(select one)**

   a. In all areas, including storage and exhibitions spaces

   b. Only in storage

   c. Only in exhibition spaces

   d. Don't know

D7. Which best describes your current **institutional staff (G)** for conservation/preservation? **(Select all that apply)**

   a. Paid full-time conservation/preservation staff

   b. Paid part-time conservation/preservation staff

   c. Volunteer full-time conservation/preservation staff

   d. Volunteer part-time conservation/preservation staff

   e. Staff from other departments is responsible for conservation/preservation

   f. Contracted provider(s) or consultant(s) is responsible for conservation/preservation

   g. Don't know SKIP TO D8

D7a. Please tally the number of paid professional Full Time Equivalent (FTEs) (G) who perform conservation/preservation at your institution. Professional staff includes archivists, conservators, digital curators, digital librarians, digital repository managers, librarians, preservation administrators, and research scientists.

Express the total amount of paid professional staff time spent on conservation/preservation in full-time equivalents (FTEs), based on a 40-hour work week, regardless of the number of people engaged in this activity. For example, two part-time staff who each work 20 hours a week on conservation/preservation activities would be counted as 1.0 FTE. Please round your answer to the nearest tenth (e.g., 1.5 for 60 hours of work per week).

_____

D7b. Please tally the number of paid support Full Time Equivalent (FTEs) (G) who perform conservation/preservation at your institution. Support staff includes archives assistants, care assistants, collections librarians, digital repository managers, digital curators, handlers, IT staff, and technical assistants. Include conservation/preservation activities performed by staff, contractors, consultants, and seasonal employees.

Express the total amount of paid support staff time spent on conservation/preservation in full-time equivalents (FTEs), based on a 40-hour work week, regardless of the number of people engaged in this activity. For example, two part-time staff who each work 20 hours a week on conservation/preservation activities would be counted as 1.0 FTE. Please round your answer to the nearest tenth (e.g., 1.5 for 60 hours of work per week).

_____

D7c. Please tally the number of unpaid volunteer Full Time Equivalent (FTEs) (G) who help with conservation/preservation at your institution.

Express the total amount of staff time spent on conservation/preservation in full-time equivalents (FTEs) for people who are not compensated monetarily for their work, based on a 40-hour work week, regardless of the number of people engaged in this activity. For example, two part-time staff who each work 20 hours a week on conservation/preservation activities would be counted as 1.0 FTE. Please round your answer to the nearest tenth (e.g., 1.5 for 60 hours of work per week).

_____

D8. Do your institution's conservation/preservation activities currently include any of the following functions? **(select all that apply)**

a. Preventive conservation (e.g., housekeeping, holdings maintenance, rehousing, environmental controls)

b. Preservation management (e.g., administration, planning, assessment)

c. Conservation treatment (e.g., repair, mass deacidification, specimen preparation)

d. Preservation reformatting (e.g., preservation photocopying, microfilming)

e. Preservation of audiovisual media and playback equipment (e.g., making preservation copies of media, maintaining equipment)

f. None of the above

g. Don't know SKIP TO D9

D8a. Are any of the following conservation/preservation activities currently planned at your institution? **(select all that apply)**

a. Preventive conservation (e.g., housekeeping, holdings maintenance, rehousing, environmental controls)

b. Preservation management (e.g., administration, planning, assessment)

c. Conservation treatment (e.g., repair, mass deacidification, specimen preparation)

d. Preservation reformatting (e.g., preservation photocopying, microfilming)

e. Preservation of audiovisual media and playback equipment (e.g., preservation copies of media, maintaining equipment)

f. None of the above

g. Don't know

D9. Are any of the following conservation/preservation activities **completed by staff in-house** at your institution currently? **(select all that apply)**

a. Preventive conservation (e.g., housekeeping, holdings maintenance, rehousing, environmental controls)

b. Preservation management (e.g., administration, planning, assessment)

c. Conservation treatment (e.g., repair, mass deacidification, specimen preparation)

d. Preservation reformatting (e.g., preservation photocopying, microfilming)

e. Preservation of audiovisual media and playback equipment (e.g., making preservation copies of media, maintaining equipment)

f. None of the above

g. Don't know SKIP TO D10

D9a. Are any of the following conservation/preservation activities completed by external contractors or consultants (G) currently? (select all that apply)

a. Preventive conservation (e.g., housekeeping, holdings maintenance, rehousing, environmental controls)

b. Preservation management (e.g., administration, planning, assessment)

c. Conservation treatment (e.g., repair, mass deacidification, specimen preparation)

d. Preservation reformatting (e.g., preservation photocopying, microfilming)

e. Preservation of audiovisual media and playback equipment (e.g., preservation copies of media, maintaining equipment)

f. None of the above

g. Don't know

D10. Does your institution preserve digital collections? (e.g., **born-digital collections (G))? (select one)**

a. Yes

b. No SKIP TO D11

c. Don't know SKIP TO D11

D10a. Has your institution conducted a **general condition assessment (G)** of the digital collections in its care in the last five years? **(select one)**

a. Yes

b. No

c. Don't know

D10b. Has your institution developed a **preservation plan (G)** for the care and management of its digital collections in the last five years? **(select one)**

a. Yes

b. No

c. Don't know

D11. Does your institution **digitize (G)** collections? **(select one)**

a. Yes

b. No SKIP TO D12

c. Don't know SKIP TO D12

D11a. For each of the digital curation/preservation functions listed below, please indicate how it is currently conducted. Mark the box that shows the party primarily responsible for the function – institution staff/volunteers, in collaboration with other institutions and/or external contractors. (check all that apply)

	CHECK ALL THAT APPLY CONDUCTED:				
	INSTITUTION DOES NOT CONDUCT FUNCTION	**By institution-al staff (G)**	**In collab-oration with another institution**	**By external contractor (s) (G)**	**Don't Know**
1.Digitization **(G)**					
2.Metadata **(G)**					
3.Format migration **(G)**					
4.Tool development **(G)**					

5.Normalization **(G)**					
6.File format identification **(G)**					
7.File format validation **(G)**					
8.Checksums **(G)**					
9. Backups **(G)**					
10.Redundancy **(G)**					
11.Emulation G)					
12.Development of plans and policies **(G)**					
13.Education, training and outreach **(G)**					

D11b. Please tally the number of professional, support, and volunteer **Full Time Equivalent (FTE) (G)** digital curation/preservation staff at your institution. Digital curation/preservation staff includes digital repository managers, digital curators, digital libraries, and IT staff.

Include all workers who perform digital curation/preservation activities whether full-time, part-time, contractor/consultant, seasonal, or volunteer.

Express the total amount of staff time, both paid and unpaid, spent on digital curation/preservation in full-time equivalents (FTEs), based on a 40-hour work week, regardless of the number of people engaged in this activity. For example, two part-time staff who each work 20 hours a week on digital curation or preservation activities would be counted as 1.0 FTE. Please round your answer to the nearest tenth (e.g., 1.5 for 60 hours of work per week).

_____

D11c. Has your institution participated in a digital curation/preservation repository, digital library, digital archive, or network operated by a third party?

a. Yes Please specify: _____

b. No

c. Don't know

D12. To which of the following conservation/preservation activities does your institution need improvement: **(select all that apply)**

a. Findings aids, inventorying and/or cataloguing of collections

b. **General condition assessments (G)**

c. Staff training

d. **Security systems (G)**

e. **Environmental controls (G)**

f. Reduction in light exposure to collections

g. Conservation treatment (include specimen preparation)

h. Preservation of digitized collections

i. Preservation of **born-digital collections (G)**

j. **Integrated pest management (G)**

k. None of the above SKIP TO D13

D12a. To which of the following conservation/preservation activities does your institution need improvement in the next three years: (select all that apply)

a. Findings aids, inventorying and/or cataloguing of collections

b. **General condition assessments (G)**

c. Staff training

d. **Security systems (G)**

e. **Environmental controls (G)**

f. Reduction in light exposure to collections

g. Conservation treatment (include specimen preparation)

h. Preservation of digitized collections

i. Preservation of **born-digital collections (G)**

j. **Integrated pest management (G)**

k. None of the above

D13. Over the past two years, has your institution experienced any damage or loss to collections?

a. Yes

b. No SKIP TO D14

c. Don't know SKIP TO D14

D13a.   Please indicate the causes of damage or loss to collections: **(select all that apply)**

a. Handling (e.g., by researchers, staff, in shipping)

b. Water or moisture (including mold, stains, warping)

c. Light (including fading and discoloration)

d. Airborne particulates or pollutants (e.g., dust, soot)

e. Fire

f. Improper storage or enclosure (e.g., bent, creased, or adhered together storage)

g. Pests

h. Vandalism

i. **Physical or chemical deterioration (G)**

j. Obsolescence of playback equipment, hardware, or software

k. Prior conservation treatment(s) or restoration

l. Natural disaster (e.g., hurricane, tornado, earthquake, flooding)

D13b.   Please indicate the causes of **significant damage or loss (G)** to collections: **(select all that apply)**

a. Handling (e.g., by researchers, staff, in shipping)

b. Water or moisture (including mold, stains, warping)

c. Light (including fading and discoloration)

d. Airborne particulates or pollutants (e.g., dust, soot)

e. Fire

f. Improper storage or enclosure (e.g., bent, creased, or adhered together storage)

g. Pests

h. Vandalism

i. **Physical or chemical deterioration (G)**

j. Obsolescence of playback equipment, hardware, or software

k. Prior conservation treatment(s) or restoration

l. Natural disaster (e.g., hurricane, tornado, earthquake, flooding)

m. None of the above

D14. Does your institution currently educate donors and/or trustees or members' groups about preservation activities? (e.g., in tours, demonstrations) **(select one)**

a. Yes SKIP TO D15

b. No

c. Don't know

D14a. Over the next two years, does your institution plan to educate donors and/or
trustees or members' groups about preservation activities? (e.g., in tours,
demonstrations, annual meetings) **(select one)**

a. Yes

b. No

c. Don't know

D15. Does your institution currently highlight its preservation activities in exhibitions or
other public programming? **(select one)**

a. Yes SKIP TO D16

b. No

c. Don't know

D15a. Over the next two years, does your institution plan to highlight its preservation
activities in exhibitions or other public programming? **(select one)**

a. Yes

b. No

c. Don't know

D16. Does your institution currently serve as a source for preservation information to
the public? (e.g., responding to queries) **(select one)**

a. Yes SKIP TO D17

b. No

c. Don't know

D16a. Over the next two years, does your institution plan to serve as a source for
preservation information to the public? (e.g., responding to queries) **(select one)**

a. Yes

b. No

c. Don't know

D17. Does your institution currently use its conservation/preservation activities to raise
revenue? (e.g., selling archivally safe materials in shop, providing conservation
on a fee-for-service basis) **(select one)**

a. Yes SKIP TO D18

b. No

c. Don't know

D17a. Over the next two years, does your institution plan to use its conservation/preservation activities to earn income? (e.g., selling archivally safe materials in shop, providing conservation on a fee-for-service basis) **(select one)**

    a. Yes

    b. No

    c. Don't know

D18. Does your institution currently feature its conservation/preservation activities on its website? **(select one)**

    a. Yes SKIP TO E1

    b. No

    c. Don't know

D18a. Over the next two years. does your institution plan to feature its conservation/preservation activities on its website? **(select one)**

    a. Yes

    b. No

    c. Don't know

Section E. Expenditures and Funding

E1. What is the total annual operating budget of your institution for the most recently completed fiscal year?

If your institution has a parent institution or organization, please provide only the operating budget for your institution.

$_____

Please select the completed fiscal year   FY 2011   FY2012   FY2013

E2. Does your institution fund conservation/preservation activities in your annual budget? **(select one)**

    a. Yes

    b. No SKIP TO E3

    c. Don't know SKIP TO E3

E2a. Are conservation/preservation activities a specific line item in your annual budget? **(select one)**

    a. Yes

b. No

c. Don't know

E3. Are conservation/preservation activities supported with other funds? **(select one)**

a. Yes

b. No

c. Don't know

E4. What is the annual budget for conservation/preservation activities at your institution for the most recently completed fiscal year?

Please do not include capital expenditures in the total.
$_____

Please select the completed fiscal year   FY 2011   FY2012 FY2013

E5. Does your institution have endowed funds **(select one)**?

a. Yes

b. No SKIP TO E6

c. Don't know SKIP TO E6

E5a. In the last three years, have any of your conservation/preservation expenditures been from endowment income? **(select one)**

a. Yes

b. No

c. Don't know

E6. From which of the following external sources has your institution received external funding to support conservation/preservation activities? **(select all that apply)**

a. Federal

b. State

c. Municipal (city or county)

d. Corporation or company

e. Foundation

f. Individual donor or private philanthropist (includes friends' groups or members)

g. None of the above

E7. Has your institution applied for grant funding to support conservation/preservation activities in the last three years? Please include all successful and unsuccessful applications. **(select one)**

    a. Yes SKIP TO F1

    b. No

    c. Don't know SKIP TO F1

E7a. If no, what factors influenced your institution not to apply for grant funding to support conservation/preservation activities? **(select all that apply)**

    a. Not aware of appropriate funding sources

    b. Lack of staff time or staff expertise

    c. Additional project planning or preparation was necessary before applying

    d. Conservation/preservation activities are not an institutional priority

    e. Funding for conservation/preservation activities is sufficient

    f. Applications for external funding for conservation/preservation support were unsuccessful

    g. Other, please specify:_____

    h. Don't know

Section F. Collections and Holdings

F1. What percentage of your collections is catalogued?

    a. _____%

    b. None SKIP TO F4

    c. Don't know SKIP TO F4

F1a. What percentage of your catalog is available to be searched internally at your institution?

    a. _____%

    b. Don't know

F2. Does your institution make its catalogued collections available online? **(select one)**

    a. Yes SKIP TO F3

    b. No

    c. Don't know

F2a. Over the next two years, does your institution plan to make its catalogued collections available to be searched online by the public? **(select one)**

    a. Yes

    b. No SKIP TO F4

    c. Don't know SKIP TO F4

F3. What percentage of your catalogued collections is available to be searched online by the public?

    a. _____%

    b. Don't know

F4. If applicable, how does your institution provide access to its digitized or digital collections? **(select all that apply)**

    a. Computer equipment available to users on site

    b. Institutional content management system and user interface that is viewable online

    c. Links to digital objects through an institutional online catalog

    d. Subscription or commercial service(s)

    e. Multi-institutional digital library or network

    f. Other:_____

    g. No digitized or digital collections

F5. In the following chart, please indicate the estimated number **for each type of collection you hold**.

- Include only collections that are a permanent part of your holdings or for which you have accepted preservation responsibility.
- For types of collections not listed, record under the appropriate "other" category. If possible, please specify what you have included.
- For each collection, note the **estimated percentage that is in need of urgent care (G) of preservation treatment.** It is not necessary for your institution to have done a general condition assessment **(G)** on all or part of your collections to provide this estimate. If you do not know the condition of your materials and cannot provide an estimate, enter 100% in **unknown condition (G)**.

Books and Bound Volumes	Approx. # of units	% in unknown condition (G)	% in urgent need of care (G)
Books/monographs			
Serials/newspapers (on paper)			
Scrapbooks, albums, pamphlets			

Other books and bound volumes (please specify)			

Unbound Sheets	**Approx. # of units**	**% in unknown condition**	**% in urgent need of care**
Archival records/manuscripts (record in linear/cubic feet)	Ft		
Maps and oversized items (record in linear/cubic feet)	Ft		
Ephemera and broadsides (record in items)			
Philatelic and numismatic artifacts (record in items)			
Other paper artifacts (please specify)			

Photographic Collections (record in items)	**Approx. # of units**	**% in unknown condition**	**% in urgent need of care**
Microfilm and Microfiche (record number of units)			
Black and white prints, all processes (e.g., albumen, collodion, silver gelatin)			
Black and white film negatives, pre-1950 (e.g., cellulose nitrate, cellulose acetate)			
Black and white film negatives, post-1950 (e.g., cellulose acetate, polyester)			
Color prints, negatives, and positives (including slide and transparencies)			
Cased objects (e.g., daguerreotype, ambrotype, tintype)			
Glass plate negatives and lantern slides			
Other photographic collections (e.g., digital and inject prints) (please specify)			

Moving Image Collections (record in items)	Approx. # of units	% in unknown condition (G)	% in urgent need of care (G)
Motion picture film (record in items, e.g., reels, cans)			
Magnetic tape (e.g., Beta video, VHS video, digital)			
Disc (e.g., laser, CD, DVD, minidisc)			
Other moving image collections (please specify)			

Recorded Sound Collections (record in items)	Approx. # of units	% in unknown condition	% in urgent need of care
Grooved media (e.g., cylinder, phonodisc)			
Magnetic media (e.g., cassette, open reel tape, DAT)			
Other recorded sound collections (e.g., wire, dictabelts) (please specify)			

Art Objects (record in items)	Approx. # of units	% in unknown condition	% in urgent need of care
Painting (e.g., on canvas, panel, plaster)			
Art on paper (e.g., prints, drawings, watercolors)			
Sculpture (include carvings, indoor and outdoor sculpture in all media)			
Decorative arts (e.g., fine metalwork, jewelry, timepieces, enamels, ivories, lacquer, china, tapestries)			
Other art objects (please specify)			

Historic and Ethnographic Objects (record in items)	Approx. # of units	% in unknown condition	% in urgent need of care
Textiles (e.g., quilts, flags, rugs, costumes and accessories)			
Ceramics and glass artifacts (e.g., stained glass)			
Ethnographic and organic collections (e.g., leather, skin, baskets, bark)			
Metalwork (e.g., arms and armor, medals, coins)			
Furniture			
Domestic artifacts (includes frames, household tools/machines, dolls/toys, musical instruments, models, sports artifacts)			
Science, technology, agricultural, medical artifacts (include transportation vehicles, globes)			
Other historic and ethnographic objects (please specify)			

Archaeological Collections, Individually Catalogued (record in items)	Approx. # of units	% in unknown condition	% in urgent need of care
Individually cataloged organic based material (e.g., textile, fiber, wood, bone, shell, feather)			
Individually cataloged inorganic based material (e.g., ceramic, glass, metal, plastics, lithics, stone)			

Archaeological Collections, Bulk (record in cubic feet)	Approx. # of units	% in unknown condition	% in urgent need of care
Bulk cataloged organic based material (e.g., textile, fiber, wood, bone, shell, feather)	Ft^3		

Bulk cataloged inorganic based material (e.g., ceramic, glass, metal, plastics, lithics, stone)	Ft^3		

Natural Science Specimens (record in items)	Approx. # of units	% in unknown condition	% in urgent need of care
Zoological specimens: dry, glass slide and frozen			
Zoological specimens: wet preparations			
Botanical specimens: dry, glass slide, frozen, culture, and modern palynology materials			
Botanical specimens: wet preparations			
Geological specimens (e.g., rocks, gems, minerals, and meteorites)			
Vertebrate paleontological specimens (include appropriate microfossils and nannofossils)			
Paleobotany specimens (include appropriate microfossils, nannofossils, cyanobacteria, and fossil palynology materials)			

Digital Material Collections (include all master, duplicate and derivative items)	Total volume (record in items)	Data Measure-ment Size (check one)	Location(s) of stored digital collections	Condition of digital collections

			% in cloud storage	% on hard disk/ tape	% on your server/ network	% in urgent need of care	% in unknown condition
Images (e.g., JPEG, PNG,TIFF, RAW, GIF, BMP)		GB/TB/PB					
Texts		GB/TB/PB					
Video (e.g., GIF, WMV, MOV)		GB/TB/PB					
Audio (e.g., MPEG, WAV, MP3, WMA)		GB/TB/PB					
Web sites		GB/TB/PB					
Data sets		GB/TB/PB					
Software		GB/TB/PB					
Games		GB/TB/PB					
Electronic Records		GB/TB/PB					
Exhibit media		GB/TB/PB					
Geospatial media (e.g., GIS data)		GB/TB/PB					
Original catalog records							
Other specify: ——————— ——————— ____		GB/TB/PB					
Other specify: ——————— ——————— ____		GB/TB/PB					

Section G

G1.　How many **Full Time Equivalent (FTEs)** are currently working at your collecting institution?

Express the total amount of paid professional staff time spent on conservation/preservation in full-time equivalents (FTEs), based on a 40-hour work week, regardless of the number of people engaged in this activity. For example, two part-time staff who each work 20 hours a week on conservation/preservation activities would be counted as 1.0 FTE. Please round your answer to the nearest tenth (e.g., 1.5 for 60 hours of work per week).

If you have no staff in a category, indicate zero ("0").

　a. Full-time paid staff　　　_____

　b. Part-time paid staff　　　_____

　c. Full-time unpaid staff　　_____

　d. Part-time unpaid staff　　_____

G2.　How many visitors or users did you serve last year? Indicate "0" if you had no visitors or users in a category.

　a. On site　　　_____

　b. Off site　　　_____
　　(e.g., traveling exhibits, bookmobiles, educational programs)

　c. Online　　　_____
　　(e.g., website visits, listservs, distribution lists, social media followers)

G3.　Name of the lead person completing or coordinating survey

　　_____

G4.　Title of the lead person　　_____

G5.　Person with primary responsibility for preservation activity (if applicable)

　　_____

G6.　Phone number _____

G7.　Email address _____

G8.　Did more than one person complete this survey?

　a. Yes

　b. No

Glossary:

Backups: Backups refers to the copying and archiving of computer data so it may be used to restore the original after a data loss event.

Born digital: Born digital items created and managed in digital form.

Checksums: Mathematical values used to validate data and detect errors that may have occurred during its transmission or storage. When data is stored, a value is calculated based on the data and stored with it. To check the integrity of the data, the checksum can be recalculated at any point and compared with the original stored value. If the values match, the data in the digital object is assumed not to be altered or corrupted.

Collections records: Collections records can include inventory, catalog, or insurance policies as documents that contain information about an object. These records can be redundant and/or electronic copies.

Development of plans and policies: Written documents addressing the challenges and steps necessary for digital preservation. Plans and policies can take multiple forms – some that are high level or institutional and others that are lower level or departmental. They address collection, preservation, and continued access to digital collections. Policies typically describe the institution's responsibility and goals for digital preservation, while plans are used to describe carrying out those policies.

Digital curation/digital preservation: Digital curation/preservation is the active selection, preservation, management, and archiving of digital content over time to ensure ongoing access.

Digitization: The process of replicating a non-digital (analog) item in digital form. This is typically accomplished through the use of scanning equipment and/or digital photography. The process also typically encompasses the creation of administrative, descriptive, and other information ("metadata" -- see below) that accompanies the resulting digital representation, in order to facilitate its preservation and usability. Digitization projects can be ongoing, or ad hoc, depending on the needs of the institution.

Education, training and outreach: The process of expanding or improving workforce expertise in collections care and digital preservation/curation as well

as building broader professional and public awareness of the importance of preserving collections and digital information.

Emergency/disaster plan: A comprehensive, systematic, emergency-preparedness plan provides a means for recognizing and preventing risks, and for responding effectively to emergencies.

Emulation: A means of allowing access to digital information after the technology on which it was created becomes obsolete. Emulation aims to overcome hardware and software obsolescence by imitating the obsolete system environment on a current generation of computer, so that users can access digital objects with their original look and feel preserved.

Environmental controls: Environmental controls provide an appropriate climate for collections items depending on their material and types of damage that can affect an item. Environmental controls protect collections whether in storage or on exhibit, including lighting, heating, air conditioning, dehumidifying, and humidifying.

External contractors or consultants: Workers, including volunteers, from outside the entity indicated in B1, or its parent institution(s) that provide conservation/preservation services, such as consultants, vendors, service providers, and workers at another institution or firm.

File format identification: The process of identifying the file format (the internal structure and encoding) of a digital object, usually through the use of a file type identification tool that examines a file's header section to determine its type.

File format validation: The use of a file format validation tool to read through an entire digital object and confirm that each section fully follows the specifications of the file format in which it is stored.

Format migration: Copying data from one format to another as a means of overcoming technological obsolescence. Format migration is used to ensure continued access to the content of digital objects even as hardware and software change. While format migration does not ensure exact replication of digital objects, it does aim to preserve intellectual content even if some original features and appearance are lost with new generations of technology.

Full time equivalent (FTE): The FTE units, or equivalent employees, working at your institution. The ratio of the total number of hours worked during a period, whether part time, full time, temporary, or contracted, by the number of working hours considered to be full-time employment. To ensure comparability, 40 hours per week has been set as the measure of full-time employment. In other words, one FTE is equivalent to one employee working full-time, equal to 40 hours of work per week. For example, if three employees work part-time at 20 hours of work per week, this is equal to 1.5 FTEs.

General condition assessment: An assessment based on visual inspection of the collection and the areas where it is exhibited or stored.

Institutional staff: Workers at the entity that are responding to the survey as indicated in B1. Include temporary, hourly, and volunteer workers but do not include hired consultants.

Integrated pest management: Integrated pest management strategies encourage ongoing maintenance and housekeeping to insure that pests will not find a hospitable environment in a cultural heritage institution. Activities include building inspection and maintenance; climate control; restriction of food and plants; regular cleaning; proper storage; control over incoming collections to avoid infestation of existing collections; and routine monitoring for pests.

Light levels: Controlling lights levels can include UV protection screens on windows, UV blocking sleeves on tubular fluorescent lights, window shades or covers, storing items in boxes for protection, LED lights in exhibit cases, storing items away from windows, exhibiting items especially prone to damage away from direct light or glazing with UV blocking glass, and turning off the lights in areas that are not occupied.

Metadata: A summary of basic information akin to that found in catalog records to facilitate finding, storing, and managing digital objects. Created manually or by automated processes, types of metadata include administrative, descriptive, preservation, rights management, structural, and technical.

Normalization: The process of efficiently organizing data in a digital repository by eliminating unnecessary duplication and ensuring consistency in the way data is structured. Sound normalization practices can reduce storage needs and facilitate retrieval, thereby improving digital preservation.

Off-site: Off-site storage can be physical or cloud storage that contains collections items.

Physical or chemical deterioration: Damage due to temperature, humidity, aging; for example, brittle paper, flaked paint, cracked leather, degradation of electronic media.

Preservation plan: A document that describes a multi-year course of action to meet an institution's overall preservation needs for its collection.

Redundancy: Producing copies of collection items for safekeeping in locations within and, especially, beyond the physical walls of a single institution in case one of the copies is corrupted or destroyed by fire, power failure, human error, or other incident.

Relative humidity specifications: Depending on the material of the collections item, humidity levels within the environment need to be adjusted to control for deterioration or damage. At times, such as during the summer or winter, less or more humidity might be required to prevent deterioration. Actively monitoring this aspect of storage spaces, and exhibition space is needed to provide a complete picture of your institution's humidity levels and controls.

Repository (repositories): An organization, archive or system that intends to maintain information for access and use.

Security system: A security system is a wide-ranging task in which a series of mutually complementary measures are suggested to provide a layered approach to risk by reinforcing a collecting institution against intrusion, controlling access and circulation, and protecting its contents. Not all of these measures may be in place at your organization. The recommended process for the best security system would include: 1) physical measures such as quality locks, robust doors and windows to prevent, deter and delay intrusion at the perimeter; 2) electronic systems such as intruder alarms to detect any breaches of the perimeter and facilitate a response; 3) the combined use of physical barriers, access control, CCTV and security officers to maintain safety and protect property while the premises are open to the public, and; 4) the use of physical and electronic systems to ensure the safety of individual exhibits and prevent theft from display casings.

Significant damage or loss: Change(s) in an item's physical or chemical state necessitating major treatment or reformatting or resulting in total loss of access.

Storage units or equipment: Storage units or equipment are protective enclosures made of chemically stable materials that provide both physical support and chemical protection for objects.

Temperature specifications: Depending on the material of the collections item, temperature levels within the environment need to be adjusted to control for deterioration or damage. At times, such as during the summer or winter, colder or hotter temperatures might be required to prevent deterioration. Actively monitoring this aspect of storage spaces, and exhibition space is needed to provide a complete picture of your institution's temperature levels and controls.

Tool development: Production or modification of tools that improve searching and presentation of information and help to automate and streamline various procedures in digital preservation, such as file format identification, metadata creation/extraction, file format validation, data management (DAMs), and data transfer and file sharing. Efforts are underway to compile listings or registries of such tools. A selective "showcase" is available via the Library of Congress's Digital Preservation website.

Urgent Need: Material needs major treatment or reformatting to make it stable enough for use, and/or the material is located in an enclosure or environment that is causing damage or deterioration. For machine-readable collections, deterioration of media and/or obsolescence of play-back equipment or hardware/software threatens loss of content.

Unknown condition: Material has not been recently accessed by staff for visual inspection and/or condition is unknown.

Frequently Asked Questions (FAQ):

1) **What do you mean by "collections for which you accept preservation responsibility"?**

   Not all collections that are important to your institution are meant to be preserved. Some are meant to be used by visitors or patrons and are disposed of or replaced if they are lost or damaged. Others are not accessioned into the collection because they fall outside the institution's mission or could be replaced if necessary. Some examples of collections for which you do **not** accept preservation responsibility might be:

   - current books, magazines, DVDs, sound recordings of which multiple copies exist at the institution and/or could be replaced if lost or damaged and/or are deemed expendable
   - reference books or materials that aid in staff research but are not part of the accessioned collections
   - teaching aids or collections (e.g., commonly found specimens, hands-on exhibits)
   - replicas of historic objects.

2) **Our collecting institution has very few collection items that we take a preservation responsibility for. Should we still complete the questionnaire?**
   Yes, please complete the questionnaire. We expect that some institutions take preservation responsibility for only a few items. It is important that such institutions are represented in the Heritage Health Information data.

3) **Our collecting institution has various types of collections. Should we complete the Heritage Health Information for all of them?**
   Yes, but only for **nonliving collections**.

4) **If we are a botanical garden, arboretum, zoo, aquarium, or nature center** should we complete the Heritage Health Information?
   Yes, but only for **nonliving collections**.

5) **If our institution has historic buildings, should we complete the Heritage Health Information?**
   Yes, but only for your collections, not your historic buildings (even if those buildings are a part of your institution's preservation responsibility or are accessioned as collections).

6) **If we are a public library system with branches, should we complete the Heritage Health Information?**
   Yes, and you should include collections held at branches for which your system accepts preservation responsibility.

7) **If we are a library with an archive, history room, or other collections, should we complete the Heritage Health Information?**
   Yes, include all collections for which you accept preservation

responsibility.

8) **If we are a museum or historical society that has an archives or library as part of our institution, should we complete the Heritage Health Information?**
Yes, include the archival and/or library materials for which you accept preservation responsibility.

9) **Our collecting institution is part of a university. Should we include other campus collections in the survey?**
Every college or university is organized differently, but Heritage Preservation has attempted to identify the separate entities on campus that should receive the Heritage Health Information. It is possible that other university collections will receive their own survey.

Some specific examples:

If the entity is "University Natural History Museum," that entity should complete the survey for all collections under its care, including its library and archival collections. Do not include collections held by other museums, libraries, or archives within the university.

If the entity is "University Main Library," and this library is only one entity in a system of university libraries, which has centralized many library functions, such as cataloguing, gathering statistics, and preservation activities, then the survey should be completed for **all the libraries and archives in the university library system**. Do not include any departments or schools that are not included in central operations of this library system.

If the entity is a scientific research collection operated by a specific department, complete the questionnaire just for this collection. Other research collections on campus may receive their own survey.

10) **In a few months our collecting institution will begin to address some of the preservation issues brought up in the Heritage Health Information. Should we report what we are currently doing or what we plan to do?**
Heritage Preservation understands that preservation is an ongoing process; some questions allow you to indicate that certain activities are being planned but have not yet been completed.

All other questions should be answered for the current situation and condition of your collections **unless the work is already in progress**. For example, you should report on current preservation staff, not staff you plan to hire or who no longer work with you. The estimate of condition should, again, reflect the current state of your collections unless improvement is in progress (e.g., black and white photographs currently being rehoused in appropriate sleeves and boxes).

11) We often hire paid, part-time student workers to assist with simple preservation tasks; however, they are only temporary workers. Should we include them in our preservation staff?
Yes. Temporary workers should be included in your response to questions D7a, D7b, and D7c. In the case of student workers, they would likely be considered "support conservation/preservation staff." For example, if you **currently** have two paid student workers who each work 10 hours a week for 6 months, then the full-time equivalent of your support conservation/preservation staff is .25 (2 workers x 10 hours=20 hours or .5 FTE) (.5 FTE x .5 year = .25 FTE).

Note that 1 FTE = a year-round worker who works an average of 40 hours per week.

If your number of FTE falls between possible responses (e.g., between 1 and 2 FTE or between 5 and 6 FTE), round to the nearest whole number. Our institution is open April to October only, and we have trained some volunteers to do routine housekeeping. Are they preservation staff?
Yes. Any volunteers who assist with the care of collections should be counted. For instance, if two volunteers each work 5 hours a week for 6 months, then the full-time equivalent would be approximately 0.13 (2 workers x 5 hours = 10 hours or .25 FTE) (.25 FTE x .5 year = .13 FTE).

12) Should we report on the operating budget of our entire institution**?**
You should report on the total annual operating budget for the entire institution. You should not provide the operating budget for a parent institution, if your institution has one. For example, if the entity is "University Natural History Museum," just the total annual operating budget for the museum should be reported—**not the entire university's budget**.

13) Our institution doesn't have a line item for preservation and conservation, but we do use budgeted funds for staff and supplies. Last year we also received some grant funding for a preservation and conservation project. How should we complete question E4?
Whether or not your institution has a specific budget line-item for preservation and conservation, you should complete question E4. Again, estimates are acceptable. To calculate staff costs, use the figures for preservation/conservation staff that you indicated previously in the survey. Include any portion of your institution's supply or equipment budget that was used to purchase items relating to preservation and conservation. Include any expenditures made for preservation and conservation activities, whether done internally or by an external provider. You should include any grant funds or other temporary funding used for preservation and conservation. Do not include utilities, security, capital expenditures, or overhead in your response to question E4.

 14) Our institution has undertaken a major conservation treatment project this year, and our conservation/preservation budget and staffing levels are higher than usual. Should we record this figure even if it is not typical?
The Heritage Health Information is meant to be a snapshot of current activities, and we expect to capture dips and peaks in staffing and funding levels. While your institution's project may not be typical, it provides important information

about the level of preservation activity nationally. However, note the instructions on question E4, about what should and should not be included in the preservation budget.

15) Some of the categories for question F5 do not match the categories our institution uses in cataloguing. How should we answer the question?
Every institution organizes its collection in a way that is meaningful to them. Therefore, the categories listed for question F5 may not exactly match the system you use. If you have collections that do not fit in the specified categories, please use the appropriate "other" category and briefly indicate the type of collection they are.

16) We have not cataloged some of our collections. How should we go about determining the approximate number of units for question F5?
An **estimate** is fine so that Heritage Preservation can determine the scope of national preservation needs. Even figures such as "10, 100, 1000, and 5000" are useful. If it is not possible to provide an estimate, check "quantity unknown."

17) Our institution has object collections organized by subject matter and archives identified by subject or person. Within these collections there are many media and formats, including manuscripts, photographs, ephemera, and art on paper, but we don't know the exact quantity and condition of these items. How should these collections be recorded in question F5?
Archival records and manuscripts should be recorded in linear feet in the "Unbound Sheets" section. If it is feasible to quantify or estimate other specific formats (e.g., photographs, domestic artifacts) by number of items, please record them in the relevant category and exclude them from the estimate of linear footage. If your thematic collections contain various media, provide estimates and record them in the appropriate categories.

18) We have never done a general condition assessment of our collections. How can we determine the percentages of materials in need of preservation?
Even if you have not undertaken a general condition assessment of all or part of your collections, provide your best estimate in each category, based on your working knowledge of the materials. Make sure that the percentages indicating condition in each line add up to 100 percent. If it is not possible to provide an estimate, indicate that percentage in the "unknown condition" column.

19) Our digital collections include back-up copies and online journal subscriptions. How should these be counted in question F5 "Digital Material Collections"?
You should include all collections for which you accept preservation responsibility. This would include service or back-up copies, since they would need to be maintained (e.g., through migration to another format).

However, you should not include digital materials that your institution makes available through a subscription service, such as electronic journals or databases, unless you or your parent institution maintains master digital files for these resources. In the case of most online or database subscriptions, the service provider would have the responsibility for preserving those materials, not your institution.

For example, if your institution owns original survey maps, purchased CD-ROMs with digital copies of these maps from a vendor, integrated those scanned maps into your online catalog, and subscribes to a database of survey maps from around the country, you would want to complete question F5 to record the original number of maps, number of CDs, and number of online files. You would not record the database subscription.

20) **Our digital collections include digital images of some photographs that are in our collection. How should these be counted in question F5 "Digital Material Collections"?**
You should consider whether these digital copies are a permanent part of your collection for which you take preservation responsibility. If they are, record the media on which they are stored in the "Digital Materials Collections" section of question F5.

The original photographs should also be recorded under "Photographic Collections" in question F5.

21) **There are several questions we cannot answer. Do you still want us to respond to the survey?**
In many cases, you have the option of selecting "don't know" or "unknown." Please complete the survey to the best of your ability and return it as directed, even if there are questions you cannot answer.

22) **If I have additional questions, who can help me?**
If you have questions about this survey, you can contact Christopher Reich, in the Office of Museum Services at the Institute of Museum and Library Services, via phone 202-653-4685 or email creich@imls.gov.

Appendix C. Empirical Relationship Crosstabulations for the index variables

C1 Tables

C1	C1a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	64.9%	28.1%	5.5%	1.5%	64.2%

C1	C2				
		Yes	No	Don't Know	Total
	Yes	53.2%	10.0%	1.0%	64.2%
	No	1.5%	32.4%	0.3%	34.2%
	Don't Know	0.2%	0.2%	1.2%	1.6%
	Total	55.0%	42.6%	2.5%	100%

C1	C2a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	53.7%	35.7%	6.1%	1.4%	96.8%
	No	0.6%	1.0%	0.4%	0.7%	2.8%

	Don't Know	0.0%	0.2%	0.0%	0.2%	0.4%
	Total	54.3%	36.8%	6.5%	2.3%	100%

		C3			
		Yes	No	Don't Know	Total
C1	Yes	48.0%	14.8%	1.4%	64.2%
	No	6.7%	26.9%	0.5%	34.1%
	Don't Know	0.1%	0.5%	1.1%	1.6%
	Total	54.8%	42.2%	3.0%	100%

		C3a			
		All areas	Only in storage	Only in exhibit	Don't Know	Total
C1	Yes	53.9%	18.8%	13.9%	1.1%	87.6%
	No	4.1%	3.9%	3.5%	0.6%	12.2%
	Don't Know	0.2%	0.0%	0.0%	0.0%	0.2%
	Total	58.2%	22.7%	17.4%	1.7%	100%

C1	C4			
		Yes	No	Don't Know	Total
Yes	57.0%	7.1%	0.2%	64.2%
No	6.7%	26.9%	0.5%	34.1%
Don't Know	0.1%	0.5%	1.1%	1.6%
Total	54.8%	42.2%	3.0%	100%

C1	D3			
		Yes	No	Don't Know	Total
Yes	41.8%	19.7%	2.6%	64.1%
No	12.2%	20.0%	2.0%	34.2%
Don't Know	0.6%	0.6%	0.5%	1.6%
Total	54.6%	40.4%	5.1%	100%

C1	D4			
		Yes	No	Don't Know	Total
Yes	45.9%	15.8%	2.3%	64.1%
No	9.8%	22.0%	2.5%	34.2%

	Don't Know	0.4%	0.8%	0.4%	1.6%
	Total	56.1%	38.7%	5.2%	100%

		D4a			
C1		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
	Yes	44.3%	27.7%	9.8%	81.9%
	No	7.0%	7.1%	3.3%	17.4%
	Don't Know	0.1%	0.2%	0.4%	0.7%
	Total	51.4%	35.0%	13.6%	100%

		D6			
C1		Yes	No	Don't Know	Total
	Yes	55.8%	8.2%	0.2%	64.2%
	No	18.2%	15.8%	0.2%	34.2%
	Don't Know	0.9%	0.6%	0.1%	1.6%
	Total	74.9%	24.5%	0.6%	100%

C1	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	63.3%	5.9%	3.8%	1.4%	74.4%
	No	15.3%	1.5%	5.7%	1.8%	24.3%
	Don't Know	0.7%	0.1%	0.5%	0.0%	1.3%
	Total	79.3%	7.5%	9.9%	3.2%	100%

C1	D7 - Paid Full Time staff		
		Yes	No	Total
	Yes	26.9%	37.2%	64.1%
	No	4.2%	30.0%	34.3%
	Don't Know	0.1%	1.5%	1.6%
	Total	31.2%	68.8%	100%

C1	D7 - Paid Part Time staff		
		Yes	No	Total
	Yes	18.1%	46.0%	64.1%
	No	4.8%	29.5%	34.3%

	Don't Know	0.2%	1.5%	1.6%
	Total	23.0%	77.0%	100%

	D7 - Volunteer Full Time staff			
		Yes	No	Total
C1	Yes	1.9%	62.1%	64.1%
	No	0.9%	33.4%	34.3%
	Don't Know	0.2%	1.5%	1.6%
	Total	3.0%	97.0%	100%

	D7 - Volunteer Part Time staff			
		Yes	No	Total
C1	Yes	17.1%	46.9%	64.1%
	No	12.8%	21.4%	34.3%
	Don't Know	0.6%	1.1%	1.6%
	Total	30.6%	69.4%	100%

C1	D7 - Staff from other depts		
		Yes	No	Total
	Yes	18.3%	45.8%	64.1%
	No	9.2%	25.1%	34.3%
	Don't Know	0.3%	1.4%	1.6%
	Total	27.8%	72.2%	100%

C1	D7 - Contracted staff		
		Yes	No	Total
	Yes	19.8%	44.3%	64.1%
	No	2.4%	31.9%	34.3%
	Don't Know	0.1%	1.6%	1.6%
	Total	22.2%	77.8%	100%

C1	D7 - Staff Don't Know		
		Yes	No	Total
	Yes	3.4%	60.7%	64.1%
	No	6.7%	27.6%	34.3%
	Don't Know	0.4%	1.2%	1.6%

	Total	10.5%	89.5%	100%

C1	D10			
		Yes	No	Don't Know	Total
	Yes	40.0%	22.1%	2.0%	64.0%
	No	13.2%	19.3%	1.8%	34.3%
	Don't Know	0.6%	0.4%	0.6%	1.7%
	Total	53.7%	41.8%	4.5%	100%

C1	D10a			
		Yes	No	Don't Know	Total
	Yes	21.8%	48.7%	4.0%	74.4%
	No	5.2%	17.4%	2.0%	24.5%
	Don't Know	0.2%	0.8%	0.1%	1.1%
	Total	27.1%	66.8%	6.0%	100%

C1	D11			
		Yes	No	Don't Know	Total
	Yes	52.2%	10.9%	0.9%	64.0%
	No	17.1%	16.6%	0.6%	34.3%
	Don't Know	0.9%	0.5%	0.2%	1.7%
	Total	70.3%	28.0%	1.7%	100%

C1	E2			
		Yes	No	Don't Know	Total
	Yes	48.4%	14.4%	1.5%	64.4%
	No	14.1%	18.2%	1.8%	34.2%
	Don't Know	0.5%	0.5%	0.4%	1.5%
	Total	63.1%	33.2%	3.7%	100%

C1	E3			
		Yes	No	Don't Know	Total
	Yes	44.3%	16.9%	3.2%	64.3%
	No	13.2%	18.1%	2.8%	34.1%
	Don't Know	0.4%	0.7%	0.4%	1.5%
	Total	57.9%	35.7%	6.4%	100%

C1	E6 - Federal		
		Yes	No	Total
	Yes	23.6%	40.6%	64.2%
	No	4.5%	29.8%	34.3%
	Don't Know	0.1%	1.4%	1.4%
	Total	28.2%	71.8%	100%

C1	E6 - State		
		Yes	No	Total
	Yes	16.2%	48.0%	64.2%
	No	5.7%	28.6%	34.3%
	Don't Know	0.2%	1.2%	1.4%

	Total	22.2%	77.8%	100%

		E6 - Municipal		
		Yes	No	Total
C1	Yes	8.3%	55.9%	64.2%
	No	4.6%	29.7%	34.3%
	Don't Know	0.3%	1.1%	1.4%
	Total	13.3%	86.7%	100%

		E6 - Corporation		
		Yes	No	Total
C1	Yes	8.3%	55.9%	64.2%
	No	2.6%	31.9%	34.3%
	Don't Know	0.1%	1.3%	1.4%
	Total	11.0%	89.0%	100%

C1	E6 - Foundation		
		Yes	No	Total
	Yes	28.1%	36.1%	64.2%
	No	6.0%	28.4%	34.3%
	Don't Know	0.2%	1.2%	1.4%
	Total	34.3%	65.7%	100%

C1	E6 - Individual donor		
		Yes	No	Total
	Yes	35.8%	28.5%	64.2%
	No	13.3%	21.1%	34.3%
	Don't Know	0.7%	0.7%	1.4%
	Total	49.8%	50.2%	100%

C1	E6 - None of the above		
		Yes	No	Total
	Yes	12.5%	51.8%	64.2%
	No	13.8%	20.5%	34.3%
	Don't Know	0.5%	0.9%	1.4%

	Total	26.8%	73.2%	100%

C1a Tables

C1a		C2			
		Yes	No	Don't Know	Total
	All areas	53.9%	9.8%	1.2%	64.9%
	Only in storage	24.5%	3.5%	0.1%	28.1%
	Only in exhibit	3.4%	1.9%	0.2%	5.5%
	Don't Know	1.1%	0.3%	0.1%	1.5%
	Total	83.0%	15.5%	1.6%	100%

C1a		C2a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	All areas	54.5%	7.6%	2.3%	0.6%	65.0%
	Only in storage	0.7%	29.0%	0.0%	0.0%	29.6%
	Only in exhibit	0.3%	0.0%	3.8%	0.0%	4.1%

	Don't Know	0.1%	0.2%	0.2%	0.8%	1.3%
	Total	55.6%	36.8%	6.3%	1.3%	100%

		C3			
		Yes	No	Don't Know	Total
C1a	All areas	53.4%	10.6%	0.9%	64.9%
	Only in storage	17.9%	9.3%	0.9%	28.1%
	Only in exhibits	3.1%	2.3%	0.1%	5.5%
	Don't know	0.6%	0.5%	0.3%	1.5%
	Total	75.0%	22.8%	2.2%	100%

		C3a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
C1a	All areas	53.4%	6.2%	10.9%	0.7%	71.2%
	Only in storage	6.5%	14.7%	2.7%	0.0%	23.8%
	Only in exhibit	1.7%	0.5%	2.0%	0.0%	4.2%

	Don't Know	0.1%	0.0%	0.4%	0.4%	0.9%
	Total	61.7%	21.4%	15.9%	1.1%	100%

		C4			
		Yes	No	Don't Know	Total
C1a	All areas	57.6%	7.2%	0.1%	64.9%
	Only in storage	25.5%	2.5%	0.1%	28.1%
	Only in exhibits	4.5%	1.0%	0.0%	5.5%
	Don't know	1.2%	0.2%	0.1%	1.5%
	Total	88.8%	10.9%	0.3%	100%

		D3			
		Yes	No	Don't Know	Total
C1a	All areas	45.5%	17.0%	2.4%	64.9%
	Only in storage	16.0%	10.9%	1.2%	28.1%
	Only in exhibits	3.1%	2.2%	0.2%	5.5%

	Don't know	0.7%	0.5%	0.2%	1.5%
	Total	65.4%	30.7%	3.9%	100%

		D4			
		Yes	No	Don't Know	Total
C1a	All areas	49.6%	13.8%	1.5%	64.9%
	Only in storage	19.3%	7.4%	1.4%	28.1%
	Only in exhibits	2.2%	2.6%	0.7%	5.5%
	Don't know	0.8%	0.6%	0.0%	1.5%
	Total	72.0%	24.5%	3.6%	100%

		D4a			
		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
C1a	All areas	39.5%	22.7%	6.6%	68.9%
	Only in storage	13.1%	9.7%	4.1%	26.9%

Only in exhibits	1.1%	1.1%	0.8%	3.1%
Don't know	0.4%	0.4%	0.4%	1.1%
Total	54.2%	33.9%	11.9%	100%

		D6			
		Yes	No	Don't Know	Total
C1a	All areas	58.3%	6.4%	0.2%	64.9%
	Only in storage	22.8%	5.1%	0.2%	28.1%
	Only in exhibits	4.5%	1.0%	0.0%	5.5%
	Don't know	1.3%	0.2%	0.0%	1.5%
	Total	86.9%	12.7%	0.4%	100%

		D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
C1a	All areas	61.1%	2.5%	2.3%	1.2%	67.1%
	Only in storage	19.8%	5.2%	1.1%	0.2%	26.2%

Only in exhibit	3.6%	0.1%	1.4%	0.1%	5.2%
Don't Know	0.7%	0.1%	0.3%	0.3%	1.5%
Total	85.2%	7.9%	5.1%	1.8%	100%

		D7 - Paid Full time		
		Yes	No	Total
C1a	All areas	30.1%	34.8%	64.9%
	Only in storage	10.2%	17.9%	28.1%
	Only in exhibits	1.3%	4.3%	5.5%
	Don't know	0.5%	1.0%	1.5%
	Total	42.1%	57.9%	100%

		D7 - Paid Part time		
		Yes	No	Total
C1a	All areas	18.5%	46.4%	64.9%
	Only in storage	7.9%	20.1%	28.1%
	Only in exhibits	1.4%	4.2%	5.5%
	Don't know	0.5%	1.0%	1.5%
	Total	71.7%	28.3%	100%

C1a	D7 - Volunteer Full time			
		Yes	No	Total
	All areas	2.0%	62.8%	64.9%
	Only in storage	0.6%	27.4%	28.1%
	Only in exhibits	0.3%	5.3%	5.5%
	Don't know	0.1%	1.4%	1.5%
	Total	3.0%	97.0%	100%

C1a	D7 - Volunteer Part time			
		Yes	No	Total
	All areas	17.1%	47.8%	64.9%
	Only in storage	6.8%	21.3%	28.1%
	Only in exhibits	2.1%	3.4%	5.5%
	Don't know	0.6%	0.8%	1.5%
	Total	26.7%	73.3%	100%

C1a	D7 - Staff from other depts			
		Yes	No	Total
	All areas	17.6%	47.3%	64.9%
	Only in storage	9.4%	18.7%	28.1%
	Only in exhibits	1.2%	4.3%	5.5%
	Don't know	0.5%	1.0%	1.5%
	Total	28.7%	71.3%	100%

C1a	D7 - Contracted staff			
		Yes	No	Total
	All areas	21.8%	43.1%	64.9%
	Only in storage	7.9%	20.1%	28.1%
	Only in exhibits	1.0%	4.5%	5.5%
	Don't know	0.3%	1.2%	1.5%
	Total	31.1%	68.9%	100%

C1a	D7 - Staff Don't Know			
		Yes	No	Total
	All areas	3.2%	61.6%	64.9%
	Only in storage	1.6%	26.5%	28.1%
	Only in exhibits	0.4%	5.2%	5.5%
	Don't know	0.1%	1.4%	1.5%
	Total	5.3%	94.7%	100%

C1a	D10				
		Yes	No	Don't Know	Total
	All areas	39.8%	23.3%	1.9%	65.0%
	Only in storage	19.5%	8.0%	0.6%	28.1%
	Only in exhibits	2.2%	2.8%	0.5%	5.5%
	Don't know	0.9%	0.4%	0.1%	1.4%
	Total	62.4%	34.4%	3.2%	100%

C1a	D10a			
		Yes	No	Don't Know	Total
	All areas	19.0%	41.0%	3.7%	63.7%
	Only in storage	8.8%	21.1%	1.3%	31.2%
	Only in exhibits	1.0%	2.4%	0.1%	3.6%
	Don't know	0.3%	1.0%	0.1%	1.5%
	Total	29.1%	65.5%	5.3%	100%

C1a	D11			
		Yes	No	Don't Know	Total
	All areas	53.9%	10.4%	0.7%	65.0%
	Only in storage	23.9%	3.9%	0.3%	28.1%
	Only in exhibits	2.8%	2.2%	0.5%	5.5%
	Don't know	1.2%	0.2%	0.0%	1.4%
	Total	81.8%	16.7%	1.5%	100%

C1a	E2			
		Yes	No	Don't Know	Total
	All areas	51.7%	12.3%	1.0%	65.0%
	Only in storage	19.1%	8.2%	1.0%	28.2%
	Only in exhibits	3.5%	1.6%	0.2%	5.3%
	Don't know	1.0%	0.3%	0.2%	1.4%
	Total	75.2%	22.4%	2.4%	100%

C1a	E3			
		Yes	No	Don't Know	Total
	All areas	46.9%	15.2%	3.0%	65.1%
	Only in storage	18.6%	8.0%	1.5%	28.2%
	Only in exhibits	2.7%	2.3%	0.3%	5.3%
	Don't know	0.8%	0.5%	0.2%	1.4%
	Total	69.0%	26.0%	5.0%	100%

C1a	E6 - Federal			
		Yes	No	Total
	All areas	25.6%	39.3%	64.9%
	Only in storage	10.1%	18.3%	28.5%
	Only in exhibits	0.9%	4.3%	5.2%
	Don't know	0.3%	1.2%	1.4%
	Total	36.9%	63.1%	100%

C1a	E6 - State			
		Yes	No	Total
	All areas	15.7%	49.1%	64.9%
	Only in storage	8.0%	20.5%	28.5%
	Only in exhibits	1.3%	4.0%	5.2%
	Don't know	0.2%	1.3%	1.4%
	Total	25.2%	74.8%	100%

C1a	E6 - Municipal		
		Yes	No	Total
	All areas	8.5%	56.4%	64.9%
	Only in storage	3.4%	25.1%	28.5%
	Only in exhibits	1.1%	4.2%	5.2%
	Don't know	0.0%	1.4%	1.4%
	Total	12.9%	87.1%	100%

C1a	E6 - Corporation		
		Yes	No	Total
	All areas	9.9%	54.9%	64.9%
	Only in storage	2.2%	26.3%	28.5%
	Only in exhibits	0.4%	4.8%	5.2%
	Don't know	0.3%	1.2%	1.4%
	Total	12.8%	87.2%	100%

C1a	E6 - Foundation		
		Yes	No	Total
	All areas	31.7%	33.2%	64.9%
	Only in storage	9.7%	18.8%	28.5%
	Only in exhibits	1.8%	3.4%	5.2%
	Don't know	0.7%	0.8%	1.4%
	Total	43.8%	56.2%	100%

C1a	E6 - Individual donor		
		Yes	No	Total
	All areas	38.4%	26.4%	64.9%
	Only in storage	13.7%	14.8%	28.5%
	Only in exhibits	2.9%	2.3%	5.2%
	Don't know	0.7%	0.8%	1.4%
	Total	55.7%	44.3%	100%

C1a	E6 - None of the above			
		Yes	No	Total
	All areas	11.2%	53.7%	64.9%
	Only in storage	6.6%	21.9%	28.5%
	Only in exhibits	1.3%	4.0%	5.2%
	Don't know	0.4%	1.1%	1.4%
	Total	19.4%	80.6%	100%

C2 Tables

C2	C2a					
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	54.3%	36.8%	6.5%	2.3%	100%
	Total	54.3%	36.8%	6.5%	2.3%	100%

C2	C3			
		Yes	No	Don't Know	Total
	Yes	43.5%	10.4%	1.1%	54.9%
	No	10.9%	31.1%	0.6%	42.6%
	Don't Know	0.5%	0.7%	1.3%	2.5%
	Total	54.8%	42.2%	3.0%	100%

C2	C3a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	49.6%	16.6%	12.2%	1.0%	79.3%
	No	8.1%	6.0%	5.0%	0.7%	19.8%
	Don't Know	0.5%	0.1%	0.2%	0.0%	0.9%
	Total	58.2%	22.7%	17.4%	1.7%	100%

C2	C4			
		Yes	No	Don't Know	Total
	Yes	49.4%	5.4%	0.1%	54.9%
	No	31.8%	10.7%	0.1%	42.6%

	Don't Know	1.9%	0.4%	0.2%	2.5%
	Total	83.1%	16.5%	0.4%	100%

		D3			
C2		Yes	No	Don't Know	Total
	Yes	36.9%	15.8%	2.2%	54.9%
	No	16.7%	23.7%	2.3%	42.6%
	Don't Know	1.0%	0.8%	0.6%	2.5%
	Total	54.6%	40.3%	5.1%	100%

		D4			
C2		Yes	No	Don't Know	Total
	Yes	40.9%	12.3%	1.7%	54.9%
	No	14.3%	25.4%	3.0%	42.6%
	Don't Know	1.0%	0.9%	0.5%	2.5%
	Total	56.1%	38.7%	5.2%	100%

C2	D4a			
	Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
Yes	41.1%	23.7%	8.0%	72.8%
No	9.8%	10.6%	5.0%	25.4%
Don't know	0.5%	0.7%	0.5%	1.8%
Total	51.4%	35.0%	13.6%	100%

C2	D6			
	Yes	No	Don't Know	Total
Yes	48.7%	6.0%	0.2%	55.0%
No	24.5%	17.9%	0.2%	42.6%
Don't know	1.6%	0.6%	0.2%	2.5%
Total	74.9%	24.5%	0.6%	100%

C2	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	56.1%	5.4%	2.6%	1.0%	65.2%
	No	21.8%	2.1%	6.7%	2.1%	32.7%
	Don't Know	1.5%	0.0%	0.6%	0.1%	2.2%
	Total	79.4%	7.5%	9.9%	3.2%	100%

C2	D7 - Paid Full time		
		Yes	No	Total
	Yes	24.0%	30.8%	54.9%
	No	6.8%	35.9%	42.7%
	Don't know	0.4%	2.1%	2.5%
	Total	31.2%	68.8%	100%

C2	D7 - Paid Part time		
		Yes	No	Total
	Yes	15.7%	39.1%	54.9%
	No	7.0%	35.7%	42.7%
	Don't know	0.4%	2.1%	2.5%

	Total	23.0%	77.0%	100%

		D7 - Volunteer Full time		
		Yes	No	Total
C2	Yes	1.7%	53.2%	54.9%
	No	1.2%	41.4%	42.7%
	Don't know	0.1%	2.4%	2.5%
	Total	3.0%	97.0%	100%

		D7 - Volunteer Part time		
		Yes	No	Total
C2	Yes	14.4%	40.4%	54.9%
	No	15.3%	27.4%	42.7%
	Don't know	0.8%	1.6%	2.5%
	Total	30.5%	69.5%	100%

C2	D7 - Staff from other depts			
		Yes	No	Total
	Yes	15.7%	39.1%	54.9%
	No	11.2%	31.5%	42.7%
	Don't know	0.8%	1.6%	2.5%
	Total	27.8%	72.2%	100%

C2	D7 - Contracted staff			
		Yes	No	Total
	Yes	17.8%	37.1%	54.9%
	No	4.2%	38.5%	42.7%
	Don't know	0.2%	2.2%	2.5%
	Total	22.2%	77.8%	100%

C2	D7 - Staff Don't Know			
		Yes	No	Total
	Yes	2.9%	52.0%	54.9%
	No	7.1%	35.6%	42.7%
	Don't know	0.5%	1.9%	2.5%

	Total	10.5%	89.5%	100%

		D10			
		Yes	No	Don't Know	Total
C2	Yes	34.8%	18.4%	1.7%	54.9%
	No	18.1%	22.5%	2.0%	42.6%
	Don't know	0.8%	0.9%	0.8%	2.5%
	Total	53.7%	41.8%	4.5%	100%

		D10a			
		Yes	No	Don't Know	Total
C2	Yes	19.6%	41.7%	3.5%	64.8%
	No	7.4%	24.0%	2.3%	33.7%
	Don't know	0.2%	1.1%	0.2%	1.5%
	Total	27.2%	66.8%	6.1%	100%

C2	D11			
		Yes	No	Don't Know	Total
	Yes	45.6%	8.6%	0.8%	54.9%
	No	23.3%	18.6%	0.7%	42.6%
	Don't know	1.4%	0.8%	0.2%	2.5%
	Total	70.3%	28.0%	1.7%	100%

C2	E2			
		Yes	No	Don't Know	Total
	Yes	42.7%	11.2%	1.5%	55.4%
	No	19.2%	21.2%	1.9%	42.3%
	Don't know	1.2%	0.9%	0.4%	2.4%
	Total	63.0%	33.2%	3.7%	100%

C2	E3			
		Yes	No	Don't Know	Total
	Yes	38.8%	13.9%	2.7%	55.3%
	No	18.5%	20.6%	3.2%	42.2%

	Don't know	0.7%	1.2%	0.5%	2.4%
	Total	57.9%	35.7%	6.4%	100%

		E6 - Federal		
		Yes	No	Total
C2	Yes	21.0%	34.1%	55.1%
	No	7.0%	35.6%	42.6%
	Don't know	0.2%	2.1%	2.3%
	Total	28.2%	71.8%	100%

		E6 - State		
		Yes	No	Total
C2	Yes	14.1%	41.0%	55.1%
	No	7.6%	34.9%	42.6%
	Don't know	0.4%	1.9%	2.3%
	Total	22.2%	77.8%	100%

C2	E6 - Municipal			
		Yes	No	Total
	Yes	7.2%	47.9%	55.1%
	No	5.6%	37.0%	42.6%
	Don't know	0.4%	1.9%	2.3%
	Total	13.3%	86.7%	100%

C2	E6 - Corporation			
		Yes	No	Total
	Yes	7.8%	47.3%	55.1%
	No	3.1%	39.4%	42.6%
	Don't know	0.1%	2.3%	2.3%
	Total	11.0%	89.0%	100%

C2	E6 - Foundation			
		Yes	No	Total
	Yes	24.6%	30.5%	55.1%
	No	9.3%	33.3%	42.6%
	Don't know	0.5%	1.9%	2.3%

	Total	34.4%	65.6%	100%

	E6 - Individual donor			
		Yes	No	Total
C2	Yes	31.6%	23.5%	55.1%
	No	17.1%	25.4%	42.6%
	Don't know	1.0%	1.4%	2.3%
	Total	49.7%	50.3%	100%

	E6 - None of the above			
		Yes	No	Total
C2	Yes	10.2%	44.9%	55.1%
	No	15.8%	26.8%	42.6%
	Don't know	0.8%	1.5%	2.3%
	Total	26.8%	73.2%	100%

C2a Tables

C2a	C3				
		Yes	No	Don't Know	Total
	All areas	47.5%	6.1%	0.6%	54.3%
	Only in storage	26.3%	9.5%	1.1%	36.9%
	Only in exhibits	4.6%	1.9%	0.0%	6.5%
	Don't know	0.9%	1.3%	0.2%	2.3%
	Total	75.0%	22.8%	1.9%	100%

C2a	C3a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	All areas	47.6%	3.8%	8.1%	0.5%	59.9%
	Only in storage	12.0%	16.8%	4.3%	0.1%	33.2%
	Only in exhibit	2.7%	0.4%	2.7%	0.0%	5.8%
	Don't Know	0.3%	0.0%	0.3%	0.5%	1.1%
	Total	62.5%	21.0%	15.3%	1.2%	100%

C2a	C4			
		Yes	No	Don't Know	Total
	All areas	48.6%	5.5%	0.1%	54.3%
	Only in storage	33.4%	3.4%	0.1%	36.9%
	Only in exhibits	5.7%	0.9%	0.0%	6.5%
	Don't know	2.2%	0.1%	0.0%	2.3%
	Total	89.9%	9.9%	0.2%	100%

C2a	D3			
		Yes	No	Don't Know	Total
	All areas	39.3%	13.2%	1.7%	54.3%
	Only in storage	22.8%	12.5%	1.6%	36.9%
	Only in exhibits	3.8%	2.5%	0.2%	6.5%
	Don't know	1.3%	0.7%	0.3%	2.3%
	Total	67.3%	28.9%	3.8%	100%

C2a	D4			
		Yes	No	Don't Know	Total
	All areas	44.7%	9.1%	0.5%	54.3%
	Only in storage	25.7%	9.6%	1.6%	36.9%
	Only in exhibits	3.0%	2.7%	0.9%	6.5%
	Don't know	1.1%	1.2%	0.1%	2.3%
	Total	74.4%	22.5%	3.1%	100%

C2a	D4a			
		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
	All areas	36.7%	18.1%	5.2%	60.0%
	Only in storage	17.8%	12.2%	4.6%	34.6%
	Only in exhibits	1.6%	1.7%	0.7%	4.0%
	Don't know	0.3%	0.6%	0.6%	1.4%
	Total	56.4%	32.6%	11.0%	100%

C2a	D6				
		Yes	No	Don't Know	Total
	All areas	50.2%	3.9%	0.2%	54.3%
	Only in storage	31.5%	5.1%	0.2%	36.8%
	Only in exhibits	5.2%	1.3%	0.0%	6.5%
	Don't know	1.8%	0.5%	0.0%	2.3%
	Total	88.7%	10.9%	0.4%	100%

C2a	D6a					
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	All areas	52.2%	2.2%	1.4%	0.8%	56.6%
	Only in storage	27.9%	6.0%	1.3%	0.2%	35.5%
	Only in exhibit	4.7%	0.1%	1.1%	0.0%	5.9%
	Don't Know	1.4%	0.0%	0.1%	0.5%	2.0%
	Total	86.2%	8.3%	4.0%	1.6%	100%

C2a	D7 - Paid Full time		
		Yes	No	Total
All areas	28.3%	26.0%	54.3%
Only in storage	13.4%	23.5%	37.0%
Only in exhibits	1.5%	4.8%	6.3%
Don't know	0.5%	1.8%	2.4%
Total	43.8%	56.2%	100%

C2a	D7 - Paid Part time		
		Yes	No	Total
All areas	15.3%	39.0%	54.3%
Only in storage	11.2%	25.8%	37.0%
Only in exhibits	1.4%	4.9%	6.3%
Don't know	0.8%	1.6%	2.4%
Total	28.6%	71.4%	100%

C2a	D7 - Volunteer Full time			
		Yes	No	Total
	All areas	1.8%	52.5%	54.3%
	Only in storage	1.1%	35.9%	37.0%
	Only in exhibits	0.1%	6.2%	6.3%
	Don't know	0.1%	2.3%	2.4%
	Total	3.1%	96.9%	100%

C2a	D7 - Volunteer Part time			
		Yes	No	Total
	All areas	13.2%	41.1%	54.3%
	Only in storage	9.4%	27.6%	37.0%
	Only in exhibits	2.7%	3.7%	6.3%
	Don't know	1.1%	1.3%	2.4%
	Total	26.3%	73.7%	100%

C2a	D7 - Staff from other depts			
		Yes	No	Total
	All areas	14.5%	39.8%	54.3%
	Only in storage	12.2%	24.8%	37.0%
	Only in exhibits	1.4%	4.9%	6.3%
	Don't know	0.6%	1.7%	2.4%
	Total	28.7%	71.3%	100%

C2a	D7 - Contracted staff			
		Yes	No	Total
	All areas	20.3%	34.0%	54.3%
	Only in storage	10.2%	26.8%	37.0%
	Only in exhibits	1.4%	4.9%	6.3%
	Don't know	0.5%	1.8%	2.4%
	Total	32.5%	67.5%	100%

C2a	D7 - Staff Don't Know			
		Yes	No	Total
	All areas	3.0%	51.3%	54.3%
	Only in storage	1.7%	35.3%	37.0%
	Only in exhibits	0.2%	6.1%	6.3%
	Don't know	0.3%	2.0%	2.4%
	Total	5.3%	94.7%	100%

C2a	D10				
		Yes	No	Don't Know	Total
	All areas	33.3%	19.6%	1.5%	54.4%
	Only in storage	26.2%	9.7%	0.9%	36.7%
	Only in exhibits	2.7%	3.4%	0.4%	6.6%
	Don't know	1.1%	0.9%	0.3%	2.3%
	Total	63.3%	33.6%	3.1%	100%

C2a	D10a			
		Yes	No	Don't Know	Total
	All areas	16.9%	32.9%	2.9%	52.6%
	Only in storage	11.6%	27.8%	2.0%	41.4%
	Only in exhibits	1.4%	2.4%	0.5%	4.3%
	Don't know	0.3%	1.4%	0.0%	1.7%
	Total	30.2%	64.4%	5.5%	100%

C2a	D11			
		Yes	No	Don't Know	Total
	All areas	45.7%	8.1%	0.6%	54.4%
	Only in storage	31.9%	4.5%	0.3%	36.7%
	Only in exhibits	3.9%	2.4%	0.3%	6.6%
	Don't know	1.5%	0.6%	0.1%	2.3%
	Total	83.0%	15.6%	1.4%	100%

C2a	E2			
		Yes	No	Don't Know	Total
	All areas	44.7%	9.2%	0.7%	54.5%
	Only in storage	26.5%	8.9%	1.2%	36.6%
	Only in exhibits	4.3%	1.5%	0.7%	6.5%
	Don't know	1.5%	0.7%	0.1%	2.3%
	Total	77.0%	20.3%	2.6%	100%

C2a	E3			
		Yes	No	Don't Know	Total
	All areas	40.2%	11.8%	2.5%	54.6%
	Only in storage	24.6%	10.4%	1.7%	36.7%
	Only in exhibits	4.1%	1.8%	0.6%	6.4%
	Don't know	1.2%	1.0%	0.1%	2.3%
	Total	70.1%	25.0%	4.9%	100%

C2a	E6 - Federal		
		Yes	No	Total
	All areas	23.5%	31.1%	54.9%
	Only in storage	12.9%	24.2%	37.1%
	Only in exhibits	1.0%	5.0%	6.1%
	Don't know	0.6%	1.7%	2.2%
	Total	38.0%	62.0%	100%

C2a	E6 - State		
		Yes	No	Total
	All areas	13.5%	41.1%	54.9%
	Only in storage	10.8%	26.3%	37.1%
	Only in exhibits	1.0%	5.0%	6.1%
	Don't know	1.8%	0.4%	2.2%
	Total	25.7%	74.3%	100%

C2a	E6 - Municipal			
		Yes	No	Total
	All areas	6.7%	47.9%	54.9%
	Only in storage	5.3%	31.8%	37.1%
	Only in exhibits	0.8%	5.3%	6.1%
	Don't know	0.3%	1.9%	2.2%
	Total	13.1%	86.9%	100%

C2a	E6 - Corporation			
		Yes	No	Total
	All areas	10.0%	44.6%	54.9%
	Only in storage	3.6%	33.5%	37.1%
	Only in exhibits	0.3%	5.7%	6.1%
	Don't know	0.3%	1.9%	2.2%
	Total	14.2%	85.8%	100%

C2a	E6 - Foundation			
		Yes	No	Total
	All areas	28.7%	25.9%	54.9%
	Only in storage	13.6%	23.5%	37.1%
	Only in exhibits	1.7%	4.4%	6.1%
	Don't know	0.7%	1.6%	2.2%
	Total	44.6%	55.4%	100%

C2a	E6 - Individual donor			
		Yes	No	Total
	All areas	33.5%	21.1%	54.9%
	Only in storage	19.4%	17.7%	37.1%
	Only in exhibits	2.7%	3.4%	6.1%
	Don't know	1.1%	1.1%	2.2%
	Total	57.4%	42.6%	100%

C2a	E6 - None of the above			
		Yes	No	Total
	All areas	8.9%	45.7%	54.9%
	Only in storage	7.3%	29.8%	37.1%
	Only in exhibits	1.8%	4.3%	6.1%
	Don't know	0.6%	1.7%	2.2%
	Total	18.5%	81.5%	100%

C3 Tables

C3	C3a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	58.2%	22.7%	17.4%	1.7%	100%
	Total	58.2%	22.7%	17.4%	1.7%	100%

C3	C4			
		Yes	No	Don't Know	Total
	Yes	49.6%	5.1%	0.1%	54.8%
	No	31.3%	10.8%	0.1%	42.2%

	Don't Know	2.2%	0.6%	0.2%	3.0%
	Total	83.1%	16.5%	0.4%	100%

		D3			
		Yes	No	Don't Know	Total
C3	Yes	37.9%	15.0%	1.9%	54.8%
	No	15.7%	24.0%	2.5%	42.2%
	Don't Know	0.9%	1.3%	0.8%	3.0%
	Total	54.6%	40.4%	5.1%	100%

		D4			
		Yes	No	Don't Know	Total
C3	Yes	40.6%	12.5%	1.8%	54.8%
	No	14.4%	24.9%	2.9%	42.2%
	Don't Know	1.2%	1.3%	0.5%	3.0%
	Total	56.2%	38.6%	5.2%	100%

C3	D4a			
	Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
Yes	40.9%	23.3%	8.0%	72.2%
No	10.0%	10.7%	4.9%	25.7%
Don't know	0.5%	1.0%	0.6%	2.2%
Total	51.4%	35.0%	13.6%	100%

C3	D6			
	Yes	No	Don't Know	Total
Yes	49.2%	5.3%	0.3%	54.8%
No	23.7%	18.2%	0.2%	42.2%
Don't know	2.0%	0.9%	0.1%	3.0%
Total	74.9%	24.5%	0.6%	100%

C3	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	56.4%	4.2%	3.8%	1.3%	65.8%
	No	21.0%	3.2%	5.7%	1.6%	31.6%
	Don't Know	2.0%	0.1%	0.3%	0.2%	2.7%
	Total	79.4%	7.5%	9.9%	3.2%	100%

C3	D7 - Paid Full time		
		Yes	No	Total
	Yes	23.6%	31.4%	55.0%
	No	7.3%	34.8%	42.0%
	Don't know	0.4%	2.6%	3.0%
	Total	31.3%	68.8%	100%

C3	D7 - Paid Part time		
		Yes	No	Total
	Yes	15.4%	39.6%	55.0%
	No	7.0%	35.0%	42.0%
	Don't know	0.6%	2.4%	3.0%

	Total	23.1%	76.9%	100%

C3	**D7 - Volunteer Full time**			
		Yes	No	Total
	Yes	1.8%	53.2%	55.0%
	No	1.1%	41.0%	42.0%
	Don't know	0.2%	2.8%	3.0%
	Total	3.0%	97.0%	100%

C3	**D7 - Volunteer Part time**			
		Yes	No	Total
	Yes	15.0%	39.9%	55.0%
	No	14.6%	27.4%	42.0%
	Don't know	0.9%	2.1%	3.0%
	Total	30.5%	69.5%	100%

C3	D7 - Staff from other depts			
		Yes	No	Total
	Yes	15.3%	39.6%	55.0%
	No	11.6%	30.5%	42.0%
	Don't know	0.8%	2.2%	3.0%
	Total	27.7%	72.3%	100%

C3	D7 - Contracted staff			
		Yes	No	Total
	Yes	18.5%	36.5%	55.0%
	No	3.6%	38.4%	42.0%
	Don't know	0.2%	2.8%	3.0%
	Total	22.2%	77.8%	100%

C3	D7 - Staff Don't Know			
		Yes	No	Total
	Yes	2.5%	52.4%	55.0%
	No	7.5%	34.5%	42.0%
	Don't know	0.4%	2.6%	3.0%

	Total	10.5%	89.5%	100%

		D10			
		Yes	No	Don't Know	Total
C3	Yes	34.7%	18.7%	1.4%	54.8%
	No	17.8%	22.0%	2.4%	42.2%
	Don't know	1.2%	1.1%	0.8%	3.0%
	Total	53.7%	41.8%	4.5%	100%

		D10a			
		Yes	No	Don't Know	Total
C3	Yes	19.4%	41.9%	3.3%	64.6%
	No	7.5%	23.3%	2.4%	33.2%
	Don't know	0.3%	1.5%	0.3%	2.2%
	Total	27.2%	66.8%	6.1%	100%

C3	D11			
		Yes	No	Don't Know	Total
	Yes	45.4%	8.9%	0.5%	54.8%
	No	23.3%	17.9%	0.9%	42.2%
	Don't know	1.6%	1.1%	0.3%	3.0%
	Total	70.3%	28.0%	1.7%	100%

C3	E2			
		Yes	No	Don't Know	Total
	Yes	42.2%	12.1%	1.0%	55.3%
	No	19.5%	19.9%	2.3%	41.7%
	Don't know	1.3%	1.2%	0.4%	3.0%
	Total	63.1%	33.2%	3.7%	100%

C3	E3			
		Yes	No	Don't Know	Total
	Yes	40.1%	13.0%	2.3%	55.4%
	No	16.9%	21.4%	3.4%	41.7%
	Don't know	1.0%	1.3%	0.7%	3.0%
	Total	58.0%	35.7%	6.4%	100%

C3	E6 - Federal		
		Yes	No	Total
	Yes	20.7%	34.6%	55.4%
	No	7.1%	34.6%	41.7%
	Don't know	0.4%	2.5%	2.9%
	Total	28.2%	71.8%	100%

C3	E6 - State		
		Yes	No	Total
	Yes	14.0%	41.4%	55.4%
	No	7.8%	34.0%	41.7%
	Don't know	0.4%	2.5%	2.9%

	Total	22.2%	77.8%	100%

		E6 - Municipal		
		Yes	No	Total
C3	Yes	7.3%	48.1%	55.4%
	No	5.4%	36.4%	41.7%
	Don't know	0.6%	2.3%	2.9%
	Total	13.3%	86.7%	100%

		E6 - Corporation		
		Yes	No	Total
C3	Yes	8.4%	47.0%	55.4%
	No	2.6%	39.1%	41.7%
	Don't know	0.1%	2.8%	2.9%
	Total	11.0%	89.0%	100%

		E6 - Foundation		
		Yes	No	Total
C3	Yes	26.0%	29.4%	55.1%

	No	7.8%	33.9%	42.6%
	Don't know	0.6%	2.3%	2.3%
	Total	34.4%	65.6%	100%

	E6 - Individual donor			
		Yes	No	Total
C3	Yes	32.9%	22.5%	55.4%
	No	15.6%	26.1%	41.7%
	Don't know	1.2%	1.7%	2.9%
	Total	49.8%	50.2%	100%

	E6 - None of the above			
		Yes	No	Total
C3	Yes	10.1%	45.3%	55.4%
	No	15.7%	26.0%	41.7%
	Don't know	1.0%	1.9%	2.9%
	Total	26.8%	73.2%	100%

C3a Tables

C3a	C4			
		Yes	No	Don't Know	Total
	All areas	53.4%	4.7%	0.1%	58.2%
	Only in storage	19.5%	3.1%	0.1%	22.7%
	Only in exhibits	16.0%	1.4%	0.0%	17.4%
	Don't know	1.5%	0.2%	0.0%	1.7%
	Total	90.4%	9.4%	0.2%	100%

C3a	D3			
		Yes	No	Don't Know	Total
	All areas	44.4%	12.6%	1.3%	58.3%
	Only in storage	13.6%	7.7%	1.5%	22.7%
	Only in exhibits	10.0%	6.7%	0.6%	17.4%
	Don't know	1.2%	0.4%	0.0%	1.6%
	Total	69.2%	27.4%	3.4%	100%

C3a	D4			
		Yes	No	Don't Know	Total
	All areas	45.5%	11.1%	1.6%	58.2%
	Only in storage	15.2%	6.6%	1.0%	22.7%
	Only in exhibits	12.2%	4.6%	0.6%	17.4%
	Don't know	1.2%	0.4%	0.1%	1.7%
	Total	74.0%	22.7%	3.3%	100%

C3a	D4a			
		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
	All areas	36.4%	19.5%	5.5%	61.4%
	Only in storage	11.0%	6.8%	2.7%	20.5%
	Only in exhibits	8.5%	5.5%	2.5%	16.5%
	Don't know	0.7%	0.4%	0.4%	1.6%
	Total	56.6%	32.2%	11.1%	100%

C3a	D6				
		Yes	No	Don't Know	Total
	All areas	54.5%	3.4%	0.3%	58.2%
	Only in storage	18.1%	4.4%	0.2%	22.7%
	Only in exhibits	15.6%	1.8%	0.0%	17.4%
	Don't know	1.6%	0.1%	0.0%	1.7%
	Total	89.8%	9.7%	0.5%	100%

C3a	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	All areas	55.6%	1.8%	2.5%	0.8%	60.7%
	Only in storage	14.3%	4.0%	1.7%	0.1%	20.1%
	Only in exhibit	14.6%	0.5%	1.5%	0.7%	17.4%
	Don't Know	1.2%	0.1%	0.1%	0.4%	1.8%
	Total	85.7%	6.4%	5.8%	2.0%	100%

C3a	D7 - Paid Full time			
		Yes	No	Total
	All areas	28.0%	29.9%	57.9%
	Only in storage	8.8%	14.1%	22.9%
	Only in exhibits	5.4%	12.1%	17.5%
	Don't know	0.8%	1.0%	1.7%
	Total	42.9%	57.1%	100%

C3a	D7 - Paid Part time			
		Yes	No	Total
	All areas	17.5%	40.5%	57.9%
	Only in storage	5.8%	17.1%	22.9%
	Only in exhibits	4.4%	13.1%	17.5%
	Don't know	0.3%	1.4%	1.7%
	Total	28.0%	72.0%	100%

C3a	D7 - Volunteer Full time			
		Yes	No	Total
	All areas	1.9%	56.0%	57.9%
	Only in storage	0.9%	22.0%	22.9%
	Only in exhibits	0.4%	17.1%	17.5%
	Don't know	0.0%	1.7%	1.7%
	Total	3.1%	96.8%	100%

C3a	D7 - Volunteer Part time			
		Yes	No	Total
	All areas	15.9%	42.1%	57.9%
	Only in storage	6.0%	16.8%	22.9%
	Only in exhibits	5.2%	12.3%	17.5%
	Don't know	0.3%	1.4%	1.7%
	Total	27.4%	72.6%	100%

C3a	D7 - Staff from other depts			
		Yes	No	Total
	All areas	16.1%	41.8%	57.9%
	Only in storage	6.5%	16.3%	22.9%
	Only in exhibits	4.9%	12.6%	17.5%
	Don't know	0.3%	1.4%	1.7%
	Total	27.9%	72.1%	100%

C3a	D7 - Contracted staff			
		Yes	No	Total
	All areas	23.0%	35.0%	57.9%
	Only in storage	4.9%	17.9%	22.9%
	Only in exhibits	5.2%	12.3%	17.5%
	Don't know	0.5%	1.2%	1.7%
	Total	33.6%	66.4%	100%

C3a	D7 - Staff Don't Know		
		Yes	No	Total
All areas	2.7%	55.3%	57.9%
Only in storage	1.5%	21.4%	22.9%
Only in exhibits	0.4%	17.1%	17.5%
Don't know	0.0%	1.7%	1.7%
Total	4.6%	95.4%	100%

C3a	D10			
		Yes	No	Don't Know	Total
All areas	37.1%	19.4%	1.6%	58.1%
Only in storage	16.5%	5.9%	0.5%	23.0%
Only in exhibits	8.6%	8.3%	0.3%	17.3%
Don't know	1.1%	0.5%	0.0%	1.6%
Total	63.3%	34.2%	2.5%	100%

C3a	D10a			
		Yes	No	Don't Know	Total
	All areas	18.9%	36.5%	3.2%	58.6%
	Only in storage	6.8%	18.1%	1.2%	26.1%
	Only in exhibits	3.9%	9.0%	0.7%	13.6%
	Don't know	0.3%	1.4%	0.0%	1.7%
	Total	30.0%	64.9%	5.1%	100%

C3a	D11			
		Yes	No	Don't Know	Total
	All areas	49.6%	7.9%	0.6%	58.1%
	Only in storage	18.1%	4.9%	0.0%	23.0%
	Only in exhibits	13.9%	3.1%	0.2%	17.3%
	Don't know	1.2%	0.4%	0.0%	1.6%
	Total	82.8%	16.3%	0.9%	100%

C3a	E2			
		Yes	No	Don't Know	Total
	All areas	47.1%	10.9%	0.4%	58.4%
	Only in storage	15.9%	6.4%	0.7%	22.9%
	Only in exhibits	12.1%	4.2%	0.7%	17.0%
	Don't know	1.2%	0.3%	0.1%	1.7%
	Total	76.3%	21.8%	1.9%	100%

C3a	E3			
		Yes	No	Don't Know	Total
	All areas	44.3%	12.0%	2.2%	58.6%
	Only in storage	14.7%	7.5%	0.7%	22.9%
	Only in exhibits	12.6%	3.2%	1.1%	16.9%
	Don't know	0.8%	0.7%	0.2%	1.7%
	Total	72.4%	23.4%	4.2%	100%

C3a	E6 - Federal			
		Yes	No	Total
	All areas	24.5%	34.2%	58.8%
	Only in storage	7.2%	15.7%	23.0%
	Only in exhibits	5.4%	11.4%	16.7%
	Don't know	0.3%	1.2%	1.6%
	Total	37.5%	62.5%	100%

C3a	E6 - State			
		Yes	No	Total
	All areas	13.7%	45.0%	58.8%
	Only in storage	5.7%	17.3%	23.0%
	Only in exhibits	5.7%	11.0%	16.7%
	Don't know	0.1%	1.4%	1.6%
	Total	25.2%	74.8%	100%

C3a	E6 - Municipal			
		Yes	No	Total
	All areas	7.7%	51.1%	58.8%
	Only in storage	2.6%	20.4%	23.0%
	Only in exhibits	2.8%	13.9%	16.7%
	Don't know	0.1%	1.4%	1.6%
	Total	13.2%	86.8%	100%

C3a	E6 - Corporation			
		Yes	No	Total
	All areas	10.4%	48.4%	58.8%
	Only in storage	1.8%	21.2%	23.0%
	Only in exhibits	3.0%	13.7%	16.7%
	Don't know	0.0%	1.6%	1.6%
	Total	15.2%	84.8%	100%

C3a	E6 - Foundation		
		Yes	No	Total
	All areas	30.4%	28.3%	58.8%
	Only in storage	8.0%	14.9%	23.0%
	Only in exhibits	8.0%	8.7%	16.7%
	Don't know	0.4%	1.1%	1.6%
	Total	46.9%	53.1%	100%

C3a	E6 - Individual donor		
		Yes	No	Total
	All areas	38.2%	20.5%	58.8%
	Only in storage	10.1%	12.8%	23.0%
	Only in exhibits	10.5%	6.2%	16.7%
	Don't know	0.6%	1.0%	1.6%
	Total	59.4%	40.6%	100%

C3a	E6 - None of the above			
		Yes	No	Total
	All areas	9.3%	49.5%	58.8%
	Only in storage	6.0%	16.9%	23.0%
	Only in exhibits	2.5%	14.3%	16.7%
	Don't know	0.4%	1.1%	1.6%
	Total	18.2%	81.8%	100%

C4 Tables

C4	D3			
		Yes	No	Don't Know	Total
	Yes	48.7%	30.5%	3.8%	83.0%
	No	5.8%	9.7%	1.1%	16.6%
	Don't Know	0.0%	0.2%	0.2%	0.4%
	Total	54.6%	40.4%	5.1%	100%

C4	D4			
		Yes	No	Don't Know	Total
	Yes	49.3%	30.0%	3.7%	83.0%
	No	6.7%	8.5%	1.4%	16.6%
	Don't Know	0.1%	0.2%	0.1%	0.4%
	Total	56.1%	38.7%	5.2%	100%

C4	D4a			
		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
	Yes	45.8%	30.3%	11.8%	87.9%
	No	5.6%	4.6%	1.7%	11.9%
	Don't know	0.0%	0.1%	0.1%	0.2%
	Total	51.4%	35.0%	13.6%	100%

C4	D6			
		Yes	No	Don't Know	Total
Yes	65.1%	17.5%	0.4%	83.0%
No	9.7%	6.8%	0.1%	16.6%
Don't know	0.2%	0.1%	0.1%	0.4%
Total	75.0%	24.5%	0.6%	100%

C4	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
Yes	69.6%	6.6%	8.1%	2.7%	86.9%
No	9.5%	0.9%	1.9%	0.5%	12.9%
Don't Know	0.2%	0.0%	0.0%	0.0%	0.2%
Total	79.4%	7.5%	9.9%	3.2%	100%

C4	D7 - Paid Full time		
		Yes	No	Total
	Yes	28.1%	54.8%	82.9%
	No	3.1%	13.5%	16.7%
	Don't know	0.0%	0.4%	0.4%
	Total	31.2%	68.8%	100%

C4	D7 - Paid Part time		
		Yes	No	Total
	Yes	20.2%	62.7%	82.9%
	No	2.8%	13.8%	16.7%
	Don't know	0.0%	0.4%	0.4%
	Total	23.0%	77.0%	100%

C4	D7 - Volunteer Full time		
		Yes	No	Total
	Yes	2.8%	80.2%	82.9%
	No	0.2%	16.4%	16.7%
	Don't know	0.0%	0.4%	0.4%

	Total	3.0%	97.0%	100%

	D7 - Volunteer Part time			
		Yes	No	Total
C4	Yes	26.0%	56.9%	82.9%
	No	4.6%	12.1%	16.7%
	Don't know	0.1%	0.4%	0.4%
	Total	30.6%	69.4%	100%

	D7 - Staff from other depts			
		Yes	No	Total
C4	Yes	22.9%	60.1%	82.9%
	No	4.8%	11.9%	16.7%
	Don't know	0.1%	0.3%	0.4%
	Total	27.7%	72.3%	100%

C4	D7 - Contracted staff			
		Yes	No	Total
	Yes	20.4%	62.5%	82.9%
	No	1.8%	14.9%	16.7%
	Don't know	0.1%	0.4%	0.4%
	Total	22.2%	77.8%	100%

C4	D7 - Staff Don't Know			
		Yes	No	Total
	Yes	6.4%	76.3%	82.9%
	No	3.7%	13.0%	16.7%
	Don't know	0.2%	0.2%	0.4%
	Total	10.5%	89.5%	100%

C4	D10				
		Yes	No	Don't Know	Total
	Yes	47.2%	32.4%	3.5%	83.1%
	No	6.5%	9.32%	0.8%	16.5%
	Don't know	0.1%	0.1%	0.2%	0.4%

| | Total | 53.8% | 41.7% | 4.5% | 100% |

C4	D10a				
		Yes	No	Don't Know	Total
	Yes	23.6%	58.9%	5.2%	87.7%
	No	3.6%	7.7%	0.8%	12.1%
	Don't know	0.0%	0.1%	0.1%	0.2%
	Total	27.2%	66.7%	6.0%	100%

C4	D11				
		Yes	No	Don't Know	Total
	Yes	61.6%	20.1%	1.4%	83.1%
	No	8.5%	7.7%	0.3%	16.5%
	Don't know	0.2%	0.1%	0.1%	0.4%
	Total	70.4%	27.9%	1.7%	100%

C4	E2			
		Yes	No	Don't Know	Total
	Yes	55.8%	25.2%	2.9%	83.9%
	No	7.3%	7.7%	0.7%	15.7%
	Don't know	0.1%	0.2%	0.2%	0.4%
	Total	63.1%	33.2%	3.7%	100%

C4	E3			
		Yes	No	Don't Know	Total
	Yes	52.0%	27.0%	4.9%	83.9%
	No	5.9%	8.5%	1.3%	15.7%
	Don't know	0.1%	0.1%	0.2%	0.4%
	Total	58.0%	35.6%	6.4%	100%

C4	E6 - Federal		
		Yes	No	Total
Yes	25.9%	58.1%	84.0%
No	2.3%	13.3%	15.6%
Don't know	0.0%	0.4%	0.4%
Total	28.2%	71.8%	100%

C4	E6 - State		
		Yes	No	Total
Yes	19.7%	64.3%	84.0%
No	2.4%	13.2%	15.6%
Don't know	0.0%	0.4%	0.4%
Total	22.1%	77.9%	100%

C4	E6 - Municipal		
		Yes	No	Total
Yes	11.6%	72.4%	84.0%
No	1.7%	13.8%	15.6%
Don't know	0.0%	0.4%	0.4%

	Total	13.3%	86.7%	100%

	E6 - Corporation			
		Yes	No	Total
C4	Yes	10.0%	74.0%	84.0%
	No	1.0%	14.5%	15.6%
	Don't know	0.1%	0.3%	0.4%
	Total	11.1%	88.9%	100%

	E6 - Foundation			
		Yes	No	Total
C4	Yes	31.4%	52.7%	84.0%
	No	2.8%	12.8%	15.6%
	Don't know	0.1%	0.2%	0.4%
	Total	34.3%	65.7%	100%

C4	E6 - Individual donor			
		Yes	No	Total
	Yes	44.3%	39.8%	84.0%
	No	5.4%	10.2%	15.6%
	Don't know	0.1%	0.2%	0.4%
	Total	49.8%	50.2%	100%

C4	E6 - None of the above			
		Yes	No	Total
	Yes	19.7%	64.3%	84.0%
	No	6.8%	8.8%	15.6%
	Don't know	0.2%	0.2%	0.4%
	Total	26.8%	73.2%	100%

D3 Tables

D3		D4			
		Yes	No	Don't Know	Total
	Yes	37.9%	15.0%	1.8%	54.6%
	No	16.2%	22.2%	2.0%	40.4%
	Don't Know	2.0%	1.6%	0.1%	5.0%
	Total	56.0%	38.7%	5.2%	100%

D3		D4a			
		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
	Yes	37.4%	21.9%	8.2%	67.5%
	No	12.4%	11.9%	4.6%	28.9%
	Don't know	1.7%	1.3%	0.6%	3.5%
	Total	51.5%	35.1%	13.5%	100%

D3	D6			
		Yes	No	Don't Know	Total
Yes	46.3%	8.0%	0.3%	54.6%
No	25.0%	15.2%	0.1%	40.3%
Don't know	3.6%	1.3%	0.2%	5.1%
Total	74.9%	24.5%	0.6%	100%

D3	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
Yes	50.7%	4.8%	4.8%	1.7%	62.0%
No	25.7%	2.0%	4.2%	1.4%	33.3%
Don't Know	3.0%	0.7%	0.9%	0.1%	4.7%
Total	79.3%	7.5%	9.9%	3.2%	100%

D3	D7 - Paid Full time		
		Yes	No	Total
Yes	21.7%	33.0%	54.7%
No	8.7%	31.6%	40.3%
Don't know	0.8%	4.2%	5.0%
Total	31.2%	68.8%	100%

D3	D7 - Paid Part time		
		Yes	No	Total
Yes	15.2%	39.5%	54.7%
No	6.8%	33.5%	40.3%
Don't know	1.0%	4.0%	5.0%
Total	23.0%	77.0%	100%

D3	D7 - Volunteer Full time		
		Yes	No	Total
Yes	1.9%	52.8%	54.7%
No	1.1%	39.2%	40.3%
Don't know	0.0%	5.0%	5.0%

	Total	3.0%	97.0%	100%

		D7 - Volunteer Part time		
		Yes	No	Total
D3	Yes	16.4%	38.3%	54.7%
	No	12.5%	27.7%	40.3%
	Don't know	1.7%	3.3%	5.0%
	Total	30.6%	69.4%	100%

		D7 - Staff from other depts		
		Yes	No	Total
D3	Yes	15.8%	38.9%	54.7%
	No	10.8%	29.4%	40.3%
	Don't know	1.2%	3.8%	5.0%
	Total	27.8%	72.2%	100%

D3	D7 - Contracted staff		
		Yes	No	Total
Yes	17.1%	37.6%	54.7%
No	4.5%	35.8%	40.3%
Don't know	0.6%	4.4%	5.0%
Total	22.2%	77.8%	100%

D3	D7 - Staff Don't Know		
		Yes	No	Total
Yes	2.5%	52.2%	54.7%
No	7.1%	33.2%	40.3%
Don't know	0.9%	4.1%	5.0%
Total	10.5%	89.5%	100%

D3	D10			
		Yes	No	Don't Know	Total
Yes	33.3%	19.8%	1.5%	54.6%
No	18.3%	20.2%	1.9%	40.4%
Don't know	2.1%	1.8%	1.1%	5.0%

	Total	53.7%	41.8%	4.5%	100%

		D10a			
		Yes	No	Don't Know	Total
D3	Yes	21.2%	37.6%	3.2%	62.0%
	No	5.6%	26.9%	1.5%	34.1%
	Don't know	0.4%	2.2%	1.3%	4.0%
	Total	27.3%	66.7%	6.0%	100%

		D11			
		Yes	No	Don't Know	Total
D3	Yes	44.0%	9.9%	0.7%	54.6%
	No	23.6%	16.5%	0.3%	40.4%
	Don't know	2.7%	1.6%	0.7%	5.0%
	Total	70.3%	28.0%	1.7%	100%

D3	E2			
		Yes	No	Don't Know	Total
	Yes	40.9%	13.0%	1.5%	55.3%
	No	19.7%	18.7%	1.2%	39.7%
	Don't know	2.4%	1.5%	1.0%	5.0%
	Total	63.1%	33.2%	3.7%	100%

D3	E3			
		Yes	No	Don't Know	Total
	Yes	37.3%	15.3%	2.7%	55.2%
	No	18.6%	18.6%	2.6%	39.8%
	Don't know	2.0%	1.8%	1.2%	5.0%
	Total	57.9%	35.7%	6.4%	100%

D3	E6 - Federal		
		Yes	No	Total
Yes	21.3%	34.0%	55.3%
No	6.3%	33.6%	39.9%
Don't know	0.5%	4.3%	4.7%
Total	28.2%	71.8%	100%

D3	E6 - State		
		Yes	No	Total
Yes	14.1%	41.2%	55.3%
No	7.5%	32.5%	39.9%
Don't know	0.6%	4.1%	4.7%
Total	22.2%	77.8%	100%

D3	E6 - Municipal		
		Yes	No	Total
Yes	8.2%	47.1%	55.3%
No	4.6%	35.4%	39.9%
Don't know	0.6%	4.2%	4.7%

	Total	13.3%	86.7%	100%

	E6 - Corporation			
		Yes	No	Total
D3	Yes	7.4%	47.9%	55.3%
	No	3.4%	36.5%	39.9%
	Don't know	0.3%	4.4%	4.7%
	Total	11.1%	88.9%	100%

	E6 - Foundation			
		Yes	No	Total
D3	Yes	23.7%	31.7%	55.3%
	No	9.4%	30.5%	39.9%
	Don't know	1.2%	3.5%	4.7%
	Total	34.3%	65.7%	100%

	E6 - Individual donor			
		Yes	No	Total
D3	Yes	31.2%	24.2%	55.3%

		16.9%	23.0%	39.9%
	Don't know	1.7%	3.0%	4.7%
	Total	49.8%	50.2%	100%

	E6 - None of the above		
		Yes	No	Total
D3	Yes	10.5%	44.9%	55.3%
	No	14.5%	25.4%	39.9%
	Don't know	1.7%	3.0%	4.7%
	Total	26.7%	73.3%	100%

D4 Tables

	D4a			
		Has emergency plan and updates it	Has emergency plan and does not update it	Developing emergency plan	Total
D4	Yes	51.4%	35.0%	13.6%	100%
	Total	51.4%	35.0%	13.6%	100%

D4	D6			
		Yes	No	Don't Know	Total
	Yes	48.2%	7.5%	0.3%	54.1%
	No	23.3%	15.4%	0.1%	38.7%
	Don't know	3.3%	1.6%	0.2%	5.2%
	Total	74.9%	24.5%	0.6%	100%

D4	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	54.5%	4.5%	4.0%	1.5%	64.5%
	No	21.9%	2.3%	5.3%	1.6%	31.1%
	Don't Know	3.1%	0.7%	0.5%	0.2%	4.5%
	Total	79.4%	7.5%	9.9%	3.2%	100%

D4	D7 - Paid Full time		
		Yes	No	Total
	Yes	23.8%	32.4%	56.2%
	No	6.8%	31.8%	38.6%
	Don't know	0.6%	4.7%	5.2%

		Total	31.2%	68.8%	100%

		D7 - Paid Part time		
		Yes	No	Total
D4	Yes	15.6%	40.6%	56.2%
	No	6.8%	31.8%	38.6%
	Don't know	0.6%	4.6%	5.2%
	Total	23.0%	77.0%	100%

		D7 - Volunteer Full time		
		Yes	No	Total
D4	Yes	1.4%	54.8%	56.2%
	No	1.6%	36.9%	38.6%
	Don't know	0.0%	5.2%	5.2%
	Total	3.0%	97.0%	100%

D4	D7 - Volunteer Part time		
		Yes	No	Total
Yes	13.5%	42.6%	56.2%
No	15.7%	22.9%	38.6%
Don't know	1.4%	3.9%	5.2%
Total	30.6%	69.4%	100%

D4	D7 - Staff from other depts		
		Yes	No	Total
Yes	17.7%	38.5%	56.2%
No	8.4%	30.2%	38.6%
Don't know	1.7%	3.5%	5.2%
Total	27.8%	72.2%	100%

D4	D7 - Contracted staff		
		Yes	No	Total
Yes	18.4%	37.8%	56.2%
No	3.3%	35.3%	38.6%
Don't know	0.5%	4.8%	5.2%

	Total	22.2%	77.8%	100%

		D7 - Staff Don't Know		
		Yes	No	Total
D4	Yes	3.5%	52.7%	56.2%
	No	5.9%	32.7%	38.6%
	Don't know	1.1%	4.1%	5.2%
	Total	10.5%	89.5%	100%

		D10			
		Yes	No	Don't Know	Total
D4	Yes	35.8%	18.9%	1.3%	56.0%
	No	15.8%	20.8%	2.1%	38.8%
	Don't know	2.1%	2.0%	1.1%	5.2%
	Total	53.7%	41.8%	4.5%	100%

D4	D10a			
		Yes	No	Don't Know	Total
Yes	19.6%	43.8%	3.2%	66.6%
No	7.1%	20.4%	1.9%	29.5%
Don't know	0.4%	2.5%	1.0%	4.0%
Total	27.1%	66.8%	6.0%	100%

D4	D11			
		Yes	No	Don't Know	Total
Yes	47.4%	8.3%	0.4%	56.1%
No	20.4%	17.7%	0.6%	38.7%
Don't know	2.5%	2.0%	0.7%	5.2%
Total	70.3%	28.0%	1.7%	100%

D4	E2			
		Yes	No	Don't Know	Total
	Yes	42.4%	12.7%	1.4%	56.6%
	No	18.5%	18.6%	1.5%	38.6%
	Don't know	2.1%	1.9%	0.8%	4.8%
	Total	63.1%	33.2%	3.7%	100%

D4	E3			
		Yes	No	Don't Know	Total
	Yes	40.0%	13.9%	2.7%	56.6%
	No	16.2%	20.0%	2.5%	38.7%
	Don't know	1.8%	1.8%	1.2%	4.8%
	Total	57.9%	35.7%	6.4%	100%

D4	E6 - Federal		
		Yes	No	Total
	Yes	21.8%	34.8%	56.6%
	No	5.6%	33.2%	38.8%
	Don't know	0.7%	3.9%	4.6%

	Total	28.2%	71.8%	100%

		E6 - State		
		Yes	No	Total
D4	Yes	15.2%	41.3%	56.6%
	No	6.4%	32.4%	38.8%
	Don't know	0.6%	4.1%	4.6%
	Total	22.2%	77.8%	100%

		E6 - Municipal		
		Yes	No	Total
D4	Yes	7.3%	49.2%	56.6%
	No	5.5%	33.3%	38.8%
	Don't know	0.5%	4.1%	4.6%
	Total	13.3%	86.7%	100%

D4	E6 - Corporation		
		Yes	No	Total
Yes	7.7%	48.9%	56.6%
No	3.1%	35.7%	38.8%
Don't know	0.2%	4.4%	4.6%
Total	11.1%	88.9%	100%

D4	E6 - Foundation		
		Yes	No	Total
Yes	25.4%	31.2%	56.6%
No	8.3%	30.6%	38.8%
Don't know	0.7%	3.9%	4.6%
Total	34.3%	65.7%	100%

D4	E6 - Individual donor		
		Yes	No	Total
Yes	31.5%	25.1%	56.6%
No	16.3%	22.5%	38.8%
Don't know	2.0%	2.6%	4.6%

	Total	49.8%	50.2%	100%

		E6 - None of the above		
		Yes	No	Total
D4	Yes	11.1%	45.5%	56.6%
	No	13.9%	24.9%	38.8%
	Don't know	1.7%	2.9%	4.6%
	Total	26.7%	73.3%	100%

D4a Tables

		D6			
		Yes	No	Don't Know	Total
D4a	Has emergency plan and updates it	46.2%	5.1%	0.1%	51.4%
	Has emergency plan and does not update it	29.4%	5.4%	0.2%	35.0%
	Developing emergency plan	10.4%	2.9%	0.2%	13.6%
	Total	86.0%	13.5%	0.5%	100%

D4a	D6a				
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Has emergency plan and updates it	47.4%	3.8%	1.8%	0.7%	53.7%
	Has emergency plan and does not update it	27.9%	2.7%	2.4%	1.2%	34.3%
	Developing emergency plan	9.1%	0.6%	1.9%	0.4%	12.0%
	Total	84.4%	7.0%	6.2%	2.3%	100%

D4a	D7 - Paid Full time		
		Yes	No	Total
	Has emergency plan and updates it	26.5%	24.9%	51.4%
	Has emergency plan and does not update it	11.8%	23.2%	34.9%
	Developing emergency plan	4.1%	9.5%	13.6%
	Total	42.4%	57.6%	100%

D4a	**D7 - Paid Part time**			
		Yes	No	Total
	Has emergency plan and updates it	15.6%	35.8%	51.4%
	Has emergency plan and does not update it	8.8%	26.1%	34.9%
	Developing emergency plan	3.4%	10.3%	13.6%
	Total	27.8%	72.2%	100%

D4a	**D7 - Volunteer Full time**			
		Yes	No	Total
	Has emergency plan and updates it	1.0%	50.4%	51.4%
	Has emergency plan and does not update it	1.2%	33.8%	34.9%
	Developing emergency plan	0.2%	13.4%	13.6%
	Total	2.4%	97.6%	100%

D4a	D7 - Volunteer Part time		
		Yes	No	Total
	Has emergency plan and updates it	10.7%	40.7%	51.4%
	Has emergency plan and does not update it	8.8%	26.1%	34.9%
	Developing emergency plan	4.6%	9.0%	13.6%
	Total	24.1%	75.9%	100%

D4a	D7 - Staff from other depts		
		Yes	No	Total
	Has emergency plan and updates it	15.4%	36.0%	51.4%
	Has emergency plan and does not update it	12.2%	22.8%	34.9%
	Developing emergency plan	3.9%	9.8%	13.6%
	Total	31.5%	68.5%	100%

D4a	D7 - Contracted Staff			
		Yes	No	Total
	Has emergency plan and updates it	17.7%	33.7%	51.4%
	Has emergency plan and does not update it	11.9%	23.1%	34.9%
	Developing emergency plan	3.3%	10.4%	13.6%
	Total	32.8%	67.2%	100%

D4a	D7 - Staff Don't Know			
		Yes	No	Total
	Has emergency plan and updates it	2.5%	48.9%	51.4%
	Has emergency plan and does not update it	2.1%	32.9%	34.9%
	Developing emergency plan	1.6%	12.1%	13.6%
	Total	6.2%	93.8%	100%

D4a	D10			
		Yes	No	Don't Know	Total
	Has emergency plan and updates it	33.6%	17.2%	0.6%	51.5%
	Has emergency plan and does not update it	22.8%	11.2%	1.2%	35.1%
	Developing emergency plan	7.5%	5.4%	0.5%	13.4%
	Total	63.9%	33.8%	2.3%	100%

D4a	D10a			
		Yes	No	Don't Know	Total
	Has emergency plan and updates it	19.8%	30.4%	2.5%	52.6%
	Has emergency plan and does not update it	8.3%	25.4%	2.0%	35.6%
	Developing emergency plan	1.3%	10.1%	0.3%	11.7%
	Total	29.4%	65.8%	4.8%	100%

D4a	D11			
		Yes	No	Don't Know	Total
	Has emergency plan and updates it	45.0%	6.1%	0.3%	51.5%
	Has emergency plan and does not update it	29.6%	5.4%	0.1%	35.1%
	Developing emergency plan	9.8%	3.4%	0.2%	13.4%
	Total	84.5%	14.9%	0.6%	100%

D4a	E2			
		Yes	No	Don't Know	Total
	Has emergency plan and updates it	42.2%	9.1%	0.6%	51.9%
	Has emergency plan and does not update it	24.2%	9.5%	1.2%	34.9%
	Developing emergency plan	8.5%	4.0%	0.6%	13.1%
	Total	75.0%	22.5%	2.5%	100%

D4a	E3			
		Yes	No	Don't Know	Total
	Has emergency plan and updates it	39.2%	10.8%	1.9%	51.9%
	Has emergency plan and does not update it	22.8%	10.2%	1.9%	34.9%
	Developing emergency plan	8.6%	3.7%	0.9%	13.2%
	Total	70.6%	24.6%	4.8%	100%

D4a	E6 - Federal		
		Yes	No	Total
	Has emergency plan and updates it	22.7%	28.9%	51.5%
	Has emergency plan and does not update it	12.0%	23.4%	35.4%
	Developing emergency plan	3.9%	9.2%	13.1%
	Total	38.6%	61.4%	100%

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D4a	E6 - State			
		Yes	No	Total
	Has emergency plan and updates it	14.4%	37.1%	51.5%
	Has emergency plan and does not update it	8.9%	26.5%	35.4%
	Developing emergency plan	3.6%	9.5%	13.1%
	Total	26.9%	73.1%	100%

D4a	E6 - Municipal			
		Yes	No	Total
	Has emergency plan and updates it	6.0%	45.5%	51.5%
	Has emergency plan and does not update it	4.5%	30.9%	35.4%
	Developing emergency plan	2.5%	10.6%	13.1%
	Total	13.0%	87.0%	100%

D4a	E6 - Corporation			
		Yes	No	Total
	Has emergency plan and updates it	7.1%	44.4%	51.5%
	Has emergency plan and does not update it	4.7%	30.7%	35.4%
	Developing emergency plan	1.9%	11.2%	13.1%
	Total	13.6%	86.4%	100%

D4a	E6 - Foundation			
		Yes	No	Total
	Has emergency plan and updates it	25.4%	26.1%	51.5%
	Has emergency plan and does not update it	14.2%	21.2%	35.4%
	Developing emergency plan	5.3%	7.7%	13.1%
	Total	44.9%	55.1%	100%

D4a	E6 - Individual donor			
		Yes	No	Total
	Has emergency plan and updates it	30.7%	20.8%	51.5%
	Has emergency plan and does not update it	17.6%	17.8%	35.4%
	Developing emergency plan	7.3%	5.8%	13.1%
	Total	55.7%	44.3%	100%

D4a	E6 - None of the above			
		Yes	No	Total
	as emergency plan and updates it	7.5%	44.0%	51.5%
	Has emergency plan and does not update it	8.8%	26.6%	35.4%
	Developing emergency plan	3.3%	9.8%	13.1%
	Total	19.6%	80.4%	100%

D6 Tables

D6	D6a					
		All areas	Only in storage	Only in exhibit	Don't Know	Total
	Yes	79.4%	7.5%	9.9%	3.2%	100%
	Total	79.4%	7.5%	9.9%	3.2%	100%

D6	D7 - Paid Full time		
		Yes	No	Total
	Yes	27.0%	47.9%	74.9%
	No	4.1%	20.4%	24.5%
	Don't know	0.1%	0.5%	0.6%
	Total	31.2%	68.8%	100%

D6	D7 - Paid Part time		
		Yes	No	Total
	Yes	18.7%	56.2%	74.9%
	No	4.2%	20.2%	24.5%
	Don't know	0.1%	0.5%	0.6%

	Total	23.0%	77.0%	100%

		D7 - Volunteer Full time		
		Yes	No	Total
D6	Yes	2.2%	72.7%	74.9%
	No	0.8%	23.7%	24.5%
	Don't know	0.1%	0.5%	0.6%
	Total	3.0%	97.0%	100%

		D7 - Volunteer Part time		
		Yes	No	Total
D6	Yes	21.1%	53.8%	74.9%
	No	9.5%	15.0%	24.5%
	Don't know	0.0%	0.6%	0.6%
	Total	30.6%	69.4%	100%

		D7 - Staff from other depts		
		Yes	No	Total
D6	Yes	22.0%	52.9%	74.9%

		5.7%	18.8%	24.5%
	No	5.7%	18.8%	24.5%
	Don't know	0.1%	0.5%	0.6%
	Total	27.8%	72.2%	100%

		D7 - Contracted staff		
		Yes	No	Total
D6	Yes	20.8%	54.1%	74.9%
	No	1.3%	23.2%	24.5%
	Don't know	0.1%	0.5%	0.6%
	Total	22.2%	77.8%	100%

		D7 - Staff Don't Know		
		Yes	No	Total
D6	Yes	5.2%	69.7%	74.9%
	No	5.0%	19.5%	24.5%
	Don't know	0.2%	0.4%	0.6%
	Total	10.5%	89.5%	100%

D6	D10			
		Yes	No	Don't Know	Total
	Yes	43.4%	28.6%	2.8%	74.7%
	No	10.1%	13.0%	1.5%	24.7%
	Don't know	0.3%	0.1%	0.2%	0.6%
	Total	53.7%	41.8%	4.5%	100%

D6	D10a			
		Yes	No	Don't Know	Total
	Yes	22.9%	53.1%	4.6%	80.7%
	No	4.2%	13.3%	1.3%	18.8%
	Don't know	0.1%	0.3%	0.1%	0.5%
	Total	27.2%	66.7%	6.0%	100%

D6	D11			
		Yes	No	Don't Know	Total
	Yes	58.1%	15.6%	1.1%	74.7%
	No	11.9%	12.3%	0.5%	24.7%

Don't know	0.4%	0.1%	0.1%	0.6%
Total	70.3%	28.0%	1.7%	100%

D6	E2			
		Yes	No	Don't Know	Total
	Yes	52.3%	20.5%	2.3%	75.0%
	No	10.7%	12.5%	1.3%	24.4%
	Don't know	0.1%	0.2%	0.2%	0.5%
	Total	63.1%	33.2%	3.7%	100%

D6	E3			
		Yes	No	Don't Know	Total
	Yes	48.2%	22.3%	4.5%	75.0%
	No	9.5%	13.2%	1.8%	24.5%
	Don't know	0.3%	0.1%	0.1%	0.5%
	Total	57.9%	35.7%	6.4%	100%

D6	E6 - Federal		
		Yes	No	Total
Yes	24.7%	50.5%	75.2%
No	3.4%	20.9%	24.3%
Don't know	0.1%	0.4%	0.5%
Total	28.2%	71.8%	100%

D6	E6 - State		
		Yes	No	Total
Yes	18.4%	56.8%	75.2%
No	3.7%	20.6%	24.3%
Don't know	0.1%	0.4%	0.5%
Total	22.2%	77.8%	100%

D6	E6 - Municipal		
		Yes	No	Total
Yes	9.9%	65.2%	75.2%
No	3.3%	21.0%	24.3%
Don't know	0.1%	0.4%	0.5%

	Total	13.3%	86.7%	100%

	E6 - Corporation			
		Yes	No	Total
D6	Yes	9.7%	65.4%	75.2%
	No	1.4%	23.0%	24.3%
	Don't know	0.0%	0.5%	0.5%
	Total	11.1%	88.9%	100%

	E6 - Foundation			
		Yes	No	Total
D6	Yes	30.6%	44.6%	75.2%
	No	3.6%	20.8%	24.3%
	Don't know	0.2%	0.3%	0.5%
	Total	34.3%	65.7%	100%

D6	E6 - Individual donor			
		Yes	No	Total
	Yes	39.9%	35.2%	75.2%
	No	9.7%	14.6%	24.3%
	Don't know	0.1%	0.4%	0.5%
	Total	49.8%	50.2%	100%

D6	E6 - None of the above			
		Yes	No	Total
	Yes	17.1%	58.1%	75.2%
	No	9.6%	14.7%	24.3%
	Don't know	0.1%	0.4%	0.5%
	Total	26.7%	73.3%	100%

D6a Tables

D6a		D7 - Paid Full time		
		Yes	No	Total
	All areas	30.9%	48.4%	79.4%
	Only in storage	2.9%	4.6%	7.5%
	Only in exhibits	1.7%	8.3%	10.0%
	Don't know	0.5%	2.7%	3.1%
	Total	36.1%	63.9%	100%

D6a		D7 - Paid Part time		
		Yes	No	Total
	All areas	20.1%	59.3%	79.4%
	Only in storage	2.6%	4.9%	7.5%
	Only in exhibits	1.7%	8.3%	10.0%
	Don't know	0.7%	2.4%	3.1%
	Total	25.0%	75.0%	100%

D6a	D7 - Volunteer Full time		
		Yes	No	Total
All areas	2.2%	77.2%	79.4%
Only in storage	0.0%	7.5%	7.5%
Only in exhibits	0.3%	9.7%	10.0%
Don't know	0.4%	2.8%	3.1%
Total	2.9%	97.1%	100%

D6a	D7 - Volunteer Part time		
		Yes	No	Total
All areas	21.7%	57.6%	79.4%
Only in storage	1.7%	5.8%	7.5%
Only in exhibits	4.0%	6.0%	10.0%
Don't know	0.9%	2.3%	3.1%
Total	28.3%	71.7%	100%

D6a	D7 - Staff from other depts			
		Yes	No	Total
	All areas	23.5%	55.9%	79.4%
	Only in storage	2.1%	5.4%	7.5%
	Only in exhibits	3.1%	6.9%	10.0%
	Don't know	0.6%	2.5%	3.1%
	Total	29.4%	70.6%	100%

D6a	D7 - Contracted staff			
		Yes	No	Total
	All areas	24.1%	55.3%	79.4%
	Only in storage	2.0%	5.5%	7.5%
	Only in exhibits	0.9%	9.1%	10.0%
	Don't know	0.6%	2.5%	3.1%
	Total	27.6%	72.4%	100%

D6a	D7 - Staff Don't Know		
		Yes	No	Total
	All areas	5.1%	74.3%	79.4%
	Only in storage	0.5%	7.0%	7.5%
	Only in exhibits	0.9%	9.1%	10.0%
	Don't know	0.6%	2.6%	3.1%
	Total	7.0%	93.0%	100%

D6a	D10			
		Yes	No	Don't Know	Total
	All areas	46.6%	30.2%	2.6%	79.5%
	Only in storage	4.8%	2.2%	0.5%	7.4%
	Only in exhibits	5.1%	4.6%	0.2%	9.9%
	Don't know	1.6%	1.2%	0.4%	3.2%
	Total	58.0%	38.2%	3.7%	100%

D6a	D10a			
		Yes	No	Don't Know	Total
	All areas	24.8%	51.2%	4.4%	80.4%
	Only in storage	1.8%	5.7%	0.7%	8.2%
	Only in exhibits	1.2%	7.2%	0.3%	8.7%
	Don't know	0.5%	1.8%	0.4%	2.7%
	Total	28.4%	65.9%	5.7%	100%

D6a	D11			
		Yes	No	Don't Know	Total
	All areas	63.4%	15.0%	1.0%	79.4%
	Only in storage	6.4%	1.0%	0.1%	7.4%
	Only in exhibits	5.8%	3.9%	0.3%	10.0%
	Don't know	2.1%	0.9%	0.2%	3.2%
	Total	77.8%	20.7%	1.5%	100%

D6a	E2			
		Yes	No	Don't Know	Total
	All areas	58.1%	19.8%	1.7%	79.6%
	Only in storage	4.8%	2.3%	0.4%	7.5%
	Only in exhibits	5.1%	3.9%	0.7%	9.8%
	Don't know	1.5%	1.4%	0.2%	3.1%
	Total	69.6%	27.4%	3.0%	100%

D6a	E3			
		Yes	No	Don't Know	Total
	All areas	53.7%	21.9%	4.1%	79.7%
	Only in storage	4.4%	2.3%	0.8%	7.5%
	Only in exhibits	4.7%	4.0%	1.1%	9.7%
	Don't know	1.5%	1.6%	0.1%	3.1%
	Total	64.2%	29.7%	6.0%	100%

D6a	E6 - Federal			
		Yes	No	Total
	All areas	27.9%	51.6%	79.5%
	Only in storage	2.6%	4.9%	7.6%
	Only in exhibits	1.9%	8.0%	9.9%
	Don't know	0.6%	2.5%	3.1%
	Total	32.9%	67.1%	100%

D6a	E6 - State			
		Yes	No	Total
	All areas	19.3%	60.1%	79.5%
	Only in storage	2.1%	5.5%	7.6%
	Only in exhibits	2.5%	7.4%	9.9%
	Don't know	0.7%	2.5%	3.1%
	Total	24.5%	75.5%	100%

D6a	E6 - Municipal			
		Yes	No	Total
	All areas	9.9%	69.6%	79.5%
	Only in storage	0.7%	6.8%	7.6%
	Only in exhibits	1.7%	8.1%	9.9%
	Don't know	0.8%	2.3%	3.1%
	Total	13.1%	86.9%	100%

D6a	E6 - Corporation			
		Yes	No	Total
	All areas	10.4%	69.0%	79.5%
	Only in storage	0.5%	7.1%	7.6%
	Only in exhibits	1.6%	8.3%	9.9%
	Don't know	0.5%	2.6%	3.1%
	Total	13.0%	87.0%	100%

D6a	E6 - Foundation			
		Yes	No	Total
	All areas	34.3%	45.2%	79.5%
	Only in storage	2.5%	5.0%	7.6%
	Only in exhibits	2.8%	7.1%	9.9%
	Don't know	1.1%	2.1%	3.1%
	Total	40.7%	59.3%	100%

D6a	E6 - Individual donor			
		Yes	No	Total
	All areas	44.9%	34.5%	79.5%
	Only in storage	2.4%	5.2%	7.6%
	Only in exhibits	4.5%	5.3%	9.9%
	Don't know	1.2%	1.9%	3.1%
	Total	53.1%	46.9%	100%

D6a	E6 - None of the above			
		Yes	No	Total
	All areas	16.8%	62.7%	79.5%
	Only in storage	2.1%	5.4%	7.6%
	Only in exhibits	2.6%	7.2%	9.9%
	Don't know	1.2%	1.9%	3.1%
	Total	22.8%	77.2%	100%

D10 Tables

D10	D7 - Paid Full time			
		Yes	No	Total
	Yes	22.0%	31.8%	53.7%
	No	8.9%	33.0%	41.8%
	Don't know	0.4%	4.0%	4.5%
	Total	31.2%	68.8%	100%

D10	D7 - Paid Part time			
		Yes	No	Total
	Yes	15.2%	38.5%	53.7%
	No	7.3%	34.6%	41.8%
	Don't know	0.6%	3.9%	4.5%
	Total	23.0%	77.0%	100%

D10	D7 - Volunteer Full time			
		Yes	No	Total
	Yes	2.0%	51.8%	53.7%
	No	0.9%	40.9%	41.8%
	Don't know	0.1%	4.3%	4.5%
	Total	3.0%	97.0%	100%

D10	D7 - Volunteer Part time			
		Yes	No	Total
	Yes	15.9%	37.8%	53.7%
	No	12.8%	29.0%	41.8%
	Don't know	1.8%	2.6%	4.5%

	Total	30.6%	69.4%	100%

		D7 - Staff from other depts		
		Yes	No	Total
D10	Yes	16.1%	37.6%	53.7%
	No	10.7%	31.1%	41.8%
	Don't know	1.0%	3.5%	4.5%
	Total	27.8%	72.2%	100%

		D7 - Contracted staff		
		Yes	No	Total
D10	Yes	14.1%	39.6%	53.7%
	No	7.5%	34.3%	41.8%
	Don't know	0.5%	3.9%	4.5%
	Total	22.1%	77.9%	100%

D10	D7 - Staff Don't Know			
		Yes	No	Total
	Yes	3.0%	50.7%	53.7%
	No	6.5%	35.3%	41.8%
	Don't know	0.9%	3.6%	4.5%
	Total	10.5%	89.5%	100%

D10	D10a				
		Yes	No	Don't Know	Total
	Yes	27.2%	66.7%	6.0%	100%
	Total	27.2%	66.7%	6.0%	100%

D10	D11				
		Yes	No	Don't Know	Total
	Yes	48.2%	5.3%	0.2%	53.7%
	No	19.8%	21.3%	0.7%	41.8%
	Don't know	2.3%	1.4%	0.8%	4.5%
	Total	70.3%	28.0%	1.7%	100%

D10	E2			
		Yes	No	Don't Know	Total
	Yes	40.6%	12.2%	1.5%	54.2%
	No	20.6%	19.1%	1.8%	41.5%
	Don't know	1.9%	1.9%	0.5%	4.3%
	Total	63.1%	33.2%	3.7%	100%

D10	E3			
		Yes	No	Don't Know	Total
	Yes	36.2%	15.5%	2.6%	54.3%
	No	20.3%	18.3%	2.8%	41.4%
	Don't know	1.4%	1.9%	1.0%	4.3%
	Total	57.9%	35.7%	6.4%	100%

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D10	E6 - Federal			
		Yes	No	Total
	Yes	20.1%	34.2%	54.3%
	No	7.6%	33.9%	41.5%
	Don't know	0.4%	3.8%	4.2%
	Total	28.2%	71.8%	100%

D10	E6 - State			
		Yes	No	Total
	Yes	13.9%	40.4%	54.3%
	No	7.8%	33.6%	41.5%
	Don't know	0.4%	3.8%	4.2%
	Total	22.2%	77.8%	100%

D10	E6 - Municipal			
		Yes	No	Total
	Yes	7.0%	47.3%	54.3%
	No	5.5%	36.0%	41.5%
	Don't know	0.8%	3.4%	4.2%

	Total	13.3%	86.7%	100%

	E6 - Corporation			
		Yes	No	Total
D10	Yes	7.0%	47.4%	54.3%
	No	4.0%	37.5%	41.5%
	Don't know	0.1%	4.1%	4.2%
	Total	11.1%	88.9%	100%

	E6 - Foundation			
		Yes	No	Total
D10	Yes	22.7%	31.7%	54.3%
	No	11.0%	30.4%	41.5%
	Don't know	0.6%	3.6%	4.2%
	Total	34.3%	65.7%	100%

D10	E6 - Individual donor		
		Yes	No	Total
	Yes	29.9%	24.4%	54.3%
	No	17.9%	23.6%	41.5%
	Don't know	2.0%	2.2%	4.2%
	Total	49.8%	50.2%	100%

D10	E6 - None of the above		
		Yes	No	Total
	Yes	10.7%	43.6%	54.3%
	No	14.4%	27.0%	41.5%
	Don't know	1.6%	2.6%	4.2%
	Total	26.7%	73.3%	100%

D10a Tables

D10a	D7 - Paid Full time		
		Yes	No	Total
	Yes	14.1%	13.0%	27.0%
	No	24.6%	42.4%	67.0%

	Don't know	2.2%	3.8%	6.0%
	Total	40.9%	59.1%	100%

	D7 - Paid Part time			
		Yes	No	Total
D10a	Yes	8.4%	18.6%	27.0%
	No	18.4%	48.6%	67.0%
	Don't know	1.4%	4.5%	6.0%
	Total	28.2%	71.8%	100%

	D7 - Volunteer Full time			
		Yes	No	Total
D10a	Yes	1.4%	25.6%	27.0%
	No	2.0%	65.0%	67.0%
	Don't know	0.2%	5.8%	6.0%
	Total	3.7%	96.3%	100%

	D7 - Volunteer Part time			
		Yes	No	Total

D10a				
	Yes	8.1%	18.9%	27.0%
	No	19.7%	47.3%	67.0%
	Don't know	1.8%	4.2%	6.0%
	Total	29.6%	70.4%	100%

		D7 - Staff from other depts		
		Yes	No	Total
D10a	Yes	7.3%	19.7%	27.0%
	No	21.3%	45.7%	67.0%
	Don't know	1.4%	4.5%	6.0%
	Total	30.0%	70.0%	100%

		D7 - Contracted staff		
		Yes	No	Total
D10a	Yes	6.9%	20.2%	27.0%
	No	17.8%	49.2%	67.0%
	Don't know	1.6%	4.4%	6.0%
	Total	26.2%	73.8%	100%

D10a	D7 - Staff Don't Know			
		Yes	No	Total
	Yes	1.0%	26.0%	27.0%
	No	4.0%	63.0%	67.0%
	Don't know	0.7%	5.3%	6.0%
	Total	5.6%	94.4%	100%

D10a	D11				
		Yes	No	Don't Know	Total
	Yes	25.6%	1.4%	0.1%	27.1%
	No	58.9%	7.8%	0.1%	66.8%
	Don't know	5.3%	0.5%	0.2%	6.0%
	Total	89.8%	9.8%	0.4%	100%

D10a	E2				
		Yes	No	Don't Know	Total
	Yes	22.4%	4.8%	0.4%	27.6%
	No	48.1%	16.4%	1.7%	66.2%

	Don't know	4.4%	1.2%	0.6%	6.2%
	Total	74.8%	22.5%	2.7%	100%

	E3			
		Yes	No	Don't Know	Total
D10a	Yes	20.1%	7.2%	0.4%	27.8%
	No	43.0%	19.7%	3.4%	66.1%
	Don't know	3.5%	1.7%	1.0%	6.2%
	Total	66.6%	28.5%	4.8%	100%

	E6 - Federal		
		Yes	No	Total
D10a	Yes	12.2%	15.2%	27.4%
	No	23.1%	43.5%	66.7%
	Don't know	1.7%	4.2%	5.9%
	Total	37.1%	62.9%	100%

D10a	E6 - State		
		Yes	No	Total
Yes	8.2%	19.3%	27.4%
No	16.4%	50.2%	66.7%
Don't know	1.0%	4.9%	5.9%
Total	25.6%	74.4%	100%

D10a	E6 - Municipal		
		Yes	No	Total
Yes	2.7%	24.7%	27.4%
No	9.9%	56.8%	66.7%
Don't know	0.3%	5.6%	5.9%
Total	12.9%	87.1%	100%

D10a	E6 - Corporation		
		Yes	No	Total
Yes	4.1%	23.4%	27.4%
No	8.0%	58.6%	66.7%
Don't know	0.7%	5.2%	5.9%

	Total	12.8%	87.2%	100%

D10a	**E6 - Foundation**			
		Yes	No	Total
	Yes	11.9%	15.5%	27.4%
	No	28.0%	38.7%	66.7%
	Don't know	1.8%	4.1%	5.9%
	Total	41.7%	58.3%	100%

D10a	**E6 - Individual donor**			
		Yes	No	Total
	Yes	16.9%	10.5%	27.4%
	No	35.5%	31.2%	66.7%
	Don't know	2.7%	3.2%	5.9%
	Total	55.1%	44.9%	100%

D10a	E6 - None of the above		
		Yes	No	Total
	Yes	3.7%	23.7%	27.4%
	No	14.3%	52.4%	66.7%
	Don't know	1.7%	4.2%	5.9%
	Total	19.7%	80.3%	100%

D11 Tables

D11	D7 - Paid Full time		
		Yes	No	Total
	Yes	27.7%	42.7%	70.4%
	No	3.3%	24.6%	27.9%
	Don't know	0.2%	1.5%	1.7%
	Total	31.2%	68.8%	100%

D11	D7 - Paid Part time			
		Yes	No	Total
	Yes	19.5%	51.0%	70.4%
	No	3.2%	24.7%	27.9%
	Don't know	0.4%	1.2%	1.7%
	Total	23.0%	77.0%	100%

D11	D7 - Volunteer Full time			
		Yes	No	Total
	Yes	2.1%	68.3%	70.4%
	No	0.8%	27.1%	27.9%
	Don't know	0.0%	1.7%	1.7%
	Total	3.0%	97.0%	100%

D11	D7 - Volunteer Part time			
		Yes	No	Total
	Yes	20.2%	50.2%	70.4%
	No	9.9%	18.0%	27.9%
	Don't know	0.5%	1.2%	1.7%

	Total	30.6%	69.4%	100%

D11	D7 - Staff from other depts			
		Yes	No	Total
	Yes	20.3%	50.1%	70.4%
	No	7.1%	20.8%	27.9%
	Don't know	0.3%	1.4%	1.7%
	Total	27.7%	72.3%	100%

D11	D7 - Contracted staff			
		Yes	No	Total
	Yes	19.5%	50.9%	70.4%
	No	2.5%	25.4%	27.9%
	Don't know	0.1%	1.5%	1.7%
	Total	22.1%	77.9%	100%

D11	D7 - Staff Don't Know		
		Yes	No	Total
Yes	4.1%	66.3%	70.4%
No	5.9%	22.0%	27.9%
Don't know	0.5%	1.2%	1.7%
Total	10.5%	89.5%	100%

D11	E2			
		Yes	No	Don't Know	Total
Yes	51.2%	17.8%	2.0%	70.9%
No	11.4%	14.7%	1.3%	27.5%
Don't know	0.5%	0.7%	0.4%	1.6%
Total	63.1%	33.2%	3.7%	100%

D11	E3			
		Yes	No	Don't Know	Total
Yes	47.5%	20.0%	3.5%	71.0%
No	9.8%	15.1%	2.4%	27.4%
Don't know	0.5%	0.5%	0.5%	1.6%

	Total	57.9%	35.7%	6.4%	100%

		E6 - Federal		
		Yes	No	Total
D11	Yes	25.6%	45.6%	71.2%
	No	2.3%	25.0%	27.3%
	Don't know	0.2%	1.2%	1.5%
	Total	28.2%	71.8%	100%

		E6 - State		
		Yes	No	Total
D11	Yes	18.5%	52.7%	71.2%
	No	3.6%	23.7%	27.3%
	Don't know	0.0%	1.5%	1.5%
	Total	22.1%	77.9%	100%

D11	E6 - Municipal			
		Yes	No	Total
	Yes	8.6%	62.6%	71.2%
	No	4.3%	23.0%	27.3%
	Don't know	0.4%	1.0%	1.5%
	Total	13.3%	86.7%	100%

D11	E6 - Corporation			
		Yes	No	Total
	Yes	8.8%	62.4%	71.2%
	No	2.2%	25.2%	27.3%
	Don't know	0.1%	1.4%	1.5%
	Total	11.1%	88.9%	100%

D11	E6 - Foundation			
		Yes	No	Total
	Yes	29.4%	41.8%	71.2%
	No	4.7%	22.6%	27.3%
	Don't know	0.1%	1.4%	1.5%

	Total	34.3%	65.7%	100%

	E6 - Individual donor			
D11		Yes	No	Total
	Yes	38.9%	32.3%	71.2%
	No	10.3%	17.0%	27.3%
	Don't know	0.6%	0.9%	1.5%
	Total	49.8%	50.2%	100%

	E6 - None of the above			
D11		Yes	No	Total
	Yes	14.8%	56.4%	71.2%
	No	11.3%	16.0%	27.3%
	Don't know	0.6%	0.9%	1.5%
	Total	26.8%	73.2%	100%

E2 Tables

E2	D7 - Paid Full time		
		Yes	No	Total
Yes	26.4%	36.7%	63.1%
No	4.5%	28.7%	33.2%
Don't know	0.9%	2.8%	3.7%
Total	31.8%	68.2%	100%

E2	D7 - Paid Part time		
		Yes	No	Total
Yes	17.9%	45.2%	63.1%
No	4.2%	29.0%	33.2%
Don't know	1.2%	2.5%	3.7%
Total	23.3%	76.7%	100%

E2	D7 - Volunteer Full time		
		Yes	No	Total
Yes	2.0%	61.2%	63.1%
No	1.0%	32.2%	33.2%
Don't know	0.1%	3.6%	3.7%
Total	3.1%	96.9%	100%

E2	D7 - Volunteer Part time		
		Yes	No	Total
Yes	18.8%	44.4%	63.1%
No	10.1%	23.1%	33.2%
Don't know	1.5%	2.1%	3.7%
Total	30.4%	69.6%	100%

E2	D7 - Staff from other depts		
		Yes	No	Total
Yes	17.7%	45.4%	63.1%
No	9.5%	23.7%	33.2%
Don't know	0.5%	3.2%	3.7%

	Total	27.7%	72.3%	100%

	D7 - Contracted staff			
		Yes	No	Total
E2	Yes	17.7%	45.5%	63.1%
	No	4.7%	28.5%	33.2%
	Don't know	0.1%	3.6%	3.7%
	Total	22.5%	77.5%	100%

	D7 - Staff Don't Know			
		Yes	No	Total
E2	Yes	3.1%	60.1%	63.1%
	No	6.6%	26.6%	33.2%
	Don't know	0.8%	2.9%	3.7%
	Total	10.4%	89.6%	100%

E2	E3			
		Yes	No	Don't Know	Total
	Yes	42.9%	17.5%	2.7%	63.2%
	No	14.1%	17.5%	1.6%	33.2%
	Don't know	0.9%	0.7%	2.1%	3.7%
	Total	58.0%	35.6%	6.4%	100%

E2	E6 - Federal		
		Yes	No	Total
	Yes	22.4%	40.8%	63.2%
	No	5.1%	28.2%	33.2%
	Don't know	0.7%	2.9%	3.6%
	Total	28.2%	71.8%	100%

E2	E6 - State		
		Yes	No	Total
	Yes	16.8%	46.4%	63.2%
	No	5.0%	28.2%	33.2%
	Don't know	0.4%	3.1%	3.6%

	Total	22.2%	77.8%	100%

		E6 - Municipal		
		Yes	No	Total
E2	Yes	9.2%	53.9%	63.2%
	No	3.5%	29.8%	33.2%
	Don't know	0.6%	3.0%	3.6%
	Total	13.3%	86.7%	100%

		E6 - Corporation		
		Yes	No	Total
E2	Yes	8.6%	54.6%	63.2%
	No	2.3%	30.9%	33.2%
	Don't know	0.2%	3.4%	3.6%
	Total	11.1%	88.9%	100%

E6 - Foundation			
	Yes	No	Total
E2 Yes	26.7%	36.5%	63.2%
No	7.2%	26.0%	33.2%
Don't know	0.4%	3.1%	3.6%
Total	34.3%	65.7%	100%

E6 - Individual donor			
	Yes	No	Total
E2 Yes	37.4%	25.8%	63.2%
No	11.0%	22.2%	33.2%
Don't know	1.4%	2.2%	3.6%
Total	49.8%	50.2%	100%

E6 - None of the above			
	Yes	No	Total
E2 Yes	11.3%	51.9%	63.2%
No	14.0%	19.2%	33.2%
Don't know	1.4%	2.2%	3.6%

	Total	26.7%	73.3%	100%

E3 Tables

		D7 - Paid Full time		
E3		Yes	No	Total
	Yes	24.6%	33.1%	57.7%
	No	5.8%	30.0%	35.8%
	Don't know	1.4%	5.0%	6.5%
	Total	31.9%	68.1%	100%

		D7 - Paid Part time		
E3		Yes	No	Total
	Yes	16.7%	41.1%	57.7%
	No	5.4%	30.4%	35.8%
	Don't know	1.4%	5.1%	6.5%
	Total	23.4%	76.6%	100%

E3	D7 - Volunteer Full time		
		Yes	No	Total
	Yes	1.7%	56.1%	57.7%
	No	1.3%	34.5%	35.8%
	Don't know	0.1%	6.3%	6.5%
	Total	3.1%	96.9%	100%

E3	D7 - Volunteer Part time		
		Yes	No	Total
	Yes	17.8%	39.9%	57.7%
	No	10.7%	25.1%	35.8%
	Don't know	1.8%	4.7%	6.5%
	Total	30.3%	69.7%	100%

E3	D7 - Staff from other depts		
		Yes	No	Total
	Yes	16.2%	41.6%	57.7%
	No	9.9%	25.9%	35.8%
	Don't know	1.7%	4.8%	6.5%

	Total	27.7%	72.3%	100%

		D7 - Contracted staff		
E3		Yes	No	Total
	Yes	17.6%	40.2%	57.7%
	No	4.1%	31.7%	35.8%
	Don't know	0.8%	5.7%	6.5%
	Total	22.5%	77.5%	100%

		D7 - Staff Don't Know		
E3		Yes	No	Total
	Yes	2.6%	55.1%	57.7%
	No	6.7%	29.1%	35.8%
	Don't know	1.0%	5.4%	6.5%
	Total	10.4%	89.6%	100%

E3	E6 - Federal		
		Yes	No	Total
	Yes	22.6%	35.2%	63.2%
	No	4.8%	31.2%	33.2%
	Don't know	0.9%	5.4%	3.6%
	Total	28.2%	71.8%	100%

E3	E6 - State		
		Yes	No	Total
	Yes	16.6%	41.3%	63.2%
	No	5.0%	30.9%	33.2%
	Don't know	0.7%	5.6%	3.6%
	Total	22.2%	77.8%	100%

E3	E6 - Municipal		
		Yes	No	Total
	Yes	8.5%	49.4%	63.2%
	No	3.9%	32.1%	33.2%
	Don't know	0.9%	5.4%	3.6%

	Total	13.2%	86.8%	100%

		E6 - Corporation		
		Yes	No	Total
E3	Yes	9.0%	48.9%	63.2%
	No	2.0%	34.0%	33.2%
	Don't know	0.1%	6.1%	3.6%
	Total	11.1%	88.9%	100%

		E6 - Foundation		
		Yes	No	Total
E3	Yes	28.2%	29.6%	63.2%
	No	5.2%	30.8%	33.2%
	Don't know	1.0%	5.3%	3.6%
	Total	34.3%	65.7%	100%

E3	E6 - Individual donor		
		Yes	No	Total
Yes	37.2%	20.6%	63.2%
No	10.1%	25.8%	33.2%
Don't know	2.5%	3.7%	3.6%
Total	49.8%	50.2%	100%

E3	E6 - None of the above		
		Yes	No	Total
Yes	6.2%	51.6%	63.2%
No	17.9%	18.1%	33.2%
Don't know	2.6%	3.6%	3.6%
Total	26.7%	73.3%	100%

Appendix D. Size Groupings by Organizational Type

The following size groupings are adapted from the Heritage Health Index 2004

final report by Heritage Preservation (Heritage Preservation, 2005, p.17-19).

When available, Heritage Preservation adapted definitions of size from other

professional associations' publications or surveys to make the 2004 Heritage

Health Index as comparable to other studies as possible. All size criteria are

approximate due to the inconsistency in reporting across sources, and the

variation in the sector.

A review of the budget and collection size data provided in the original report

included comparing the size criteria against the 2014 distributions of the HHI

respondent pool. Both proved suitable to use as originally outlined. Staffing

counts were taken from the HHI 2014 data and compared to reports from

professional associations.

For this dissertation, all but 100 cases could be classified accurately by these

size parameters with reported data from the 2014 survey. For the remaining 100

that did not provide budget or collections item counts in 2014, staff counts are

used as a size criteria to impute the budget and collections sizes. In instances

where the absence of reported data for all three size criteria, size was imputed

through comparison to the 2004 data and professional associations indications of

staffing or budget. In a few cases, missing reported data in 2014 was overcome

by reported data in 2004 that were adapted for approximate size criteria for budget, total collections size, and staff counts.

Archives

The size of archives was based on the quantity of unbound sheets, which is the primary measurement for collections items count.

Archives	
Large	Archives with greater than $1,000,000 budgets, more than 5,000 linear feet of unbound sheets, or more than 10 staff
Medium	Archives with greater than $500,000 budgets, more than 1,000 and less than 4,999 linear feet of unbound sheets, or less than 10 staff and more than 5 staff
Small	Archives with less than $500,000 budgets, fewer than 1,000 linear feet of unbound sheets, or less 5 staff

Libraries

The size of libraries was based on the total volume holdings of respondents as reported in the American Library Directory. Holdings here is synonymous with collections items.

Libraries	
Large	Libraries with budgets greater than $1,000,000, more than 1,500,000 total volume holdings, and more than 10 staff
Medium	Libraries with budgets less than $1,000,000 more than $150,000, 250,000-1,499,999 total volume holdings or 5 to 10 staff

Small	Libraries with budgets less than $150,000, fewer than 250,000 total volume holdings or less than 5 staff

Museums & Historical Societies

The size of museums and historical societies was based on the institutional budget as reported in the 2004 Heritage Health. Definitions are based on what the American Alliance of Museums and the Association of State and Local History had used in several reports. If institutional budget information was not provided for museums or historical societies, the number of total collections items was consulted for organizational size.

Museums & Historical Societies	
Large	Museums and historical societies with budgets more than $1,500,000, total collections greater than 1,500,000 items and staff is greater than 10
Medium	Museums and historical societies with budgets less than $1,500,000 and greater than $500,000, total collections of greater than 50,000 and less than 1,500,000 items or staff greater than 5 less than 9
Small	Museums and historical societies with budgets less than $500,000, total collections of less than 50,000 or staff less than 5

Scientific/Archaeological Repositories

The size of archaeological repositories was based on the quantity of individually and/or bulk cataloged archaeological collections. If the collection size was not provided, decisions were made on institutional budget size, except in the case of labs that offered archaeological services, which often have larger budgets.

Scientific/Archaeological Repositories	
Large	Collections with budgets greater than $500,000, total collections with more than 500,000 individually cataloged archaeological collections and/or botanical specimens and/or zoological specimens and/or geological and/or paleontological specimens, or staff larger than 5
Medium	Collections with budgets more than $5,000 and less than $499,999, total collections with more than 5,000 individually cataloged archaeological collections and/or botanical specimens and/or zoological specimens and/or geological and/or paleontological specimens and less than 499,999, or staff less than 5 and more than 2
Small	Collections with budgets less than $5,000, total collections with less than 5,000 individually cataloged archaeological collections and/or botanical specimens and/or zoological specimens and/or geological and/or paleontological specimens, or staff less than 2

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