

# 2022 HEALTH INFORMATION TECHNOLOGY (HIT) SURVEY

CASE MANAGEMENT



## Issue Brief # 1: Introduction & Methodology Overview

### Introduction

With the rise of digital health and the impact of the COVID pandemic, these and other forces have changed almost every facet of healthcare in recent years. How case managers interface with their patients and the tools they use to do so are prime examples of the changing landscape. The arrival of telehealth and the constant opportunity to use emerging technology applications only adds to the complexity and excitement in trying to communicate and interact effectively and efficiently with patients and among other members of the healthcare team. This has caused rapid transformation in the healthcare system, leading the way for new health information technology (HIT) solutions that enhance and streamline these processes.

Periodically, the case management community examines how health information technology (HIT) trends help to change the practice of case management, both positively and negatively. This has just taken place with the introduction of the 2022 Health Information Technology Survey that examined how HIT trends are impacting the practice of Case Management.

### Background

In 2008, Schooner Strategies and TCS Healthcare Technologies (now known as Chordline Health) approached a number of organizations to participate in the first in-depth survey of health information technology (HIT) trends impacting the care management field. The American Board of Quality Assurance and Utilization Review Physicians, Inc. (ABQAURP) and the Case Management Society of America (CMSA) agreed to co-sponsor the survey. In addition, Trajectory Healthcare, LLC (Trajectory®) joined the survey team for 2012.

An Advisory Panel<sup>1</sup> was formed with experienced case managers and representatives from the participating organizations and other experts in the field. The survey has now been completed four times (2008, 2010, 2012 and 2022) using a similar research design. Each year an online research service (originally Zoomerang and then SurveyMonkey) was used to administer and analyze the data for all the surveys.

The 2022 HIT survey is sponsored by CMSA and Schooner Strategies with additional research support provided by the Population Health Impact Institute.

### Survey Goals

The overall goals of all the surveys were to identify the primary trends in HIT systems, the role of case management software applications, the specific functionality within those applications and their impact on the field of case management. The research also looked at other HIT applications and resources that were used to support population health interventions and new strategies that may be needed to care for tomorrow's technology-related patients.



### Reporting

In a fashion similar to the [2012 HIT Survey](#), the 2022 survey results will be presented in a series of issue briefs, each focusing on a different aspect of HIT and how it applies to the care management industry. The issue briefs will cover the following topics:

- #1 Introduction and Methodology
- #2 Communications and Social Media
- #3 Case Management Functionality, Transitions of Care, and Readmission Prevention
- #4 Case Loads and Patient Engagement Strategies
- #5 Information Technology (IT) Infrastructure, Satisfaction, and the Adoption Curve
- #6 Data Analytics, Return on Investment, and the Value of HIT Systems
- #7 Executive Summary: Key Findings, Conclusions, and A Look Into the Future



The goal is to publish a written Issue Brief about every 6 weeks to allow case managers and others to focus on different aspects of the survey in a sequential manner and allow them time to absorb the large amount of data contained in the survey results over a period of time. There will also be webinar sessions to discuss the results of the survey.

### Methodology

#### Sampling Technique

All four of the HIT surveys reached out to individuals through electronic mail (e-mail) communications. Responses were collected through an online survey.

#### Survey Participants

A total of 521 respondents completed the survey in 2008, 670 in 2010, 642 in 2012, and 391 in 2022. For each survey, the majority of respondents appear to be affiliated with CMSA. Thus, the samples for all four years were heavily weighted to those in the case management industry, as well as physicians, clinical staff, and other healthcare leadership professionals.

The respondent pools are considered a convenience sample, in large part because the survey participants were volunteers and not a scientifically selected random sample of a pre-defined population.

There are two important observations about the 2022 HIT respondent pool. First, the 2022 HIT survey consisted of fewer participants (n = 391) compared to prior years. Secondly, significantly fewer physicians participated in the 2022 HIT survey (1%) than in 2012 (11%) because ABQAURP, a physician organization, was not participating as a sponsor for the 2022 HIT Survey.

The primary focus of the 2022 HIT Survey analysis was to analyze the “case manager” responses within both the 2022 HIT question set and occasionally regarding trends over time. The methodology and analysis techniques are described in more detail throughout this issue brief.

#### Questions and Data

For all four surveys, questions included binary (yes or no) responses, multiple-choice options, rating questions using Likert scales<sup>2</sup> and narrative responses. Each survey featured many sub-elements and responses within most of the core questions. In 2008 and 2010, the online survey was comprised of 30 questions; in 2012, the number of questions was increased to 39; and in 2022, the number of questions expanded to 43.

Every attempt was made to keep the questions the same from survey to survey, but if that was not possible, the questions were designed to be as similar as possible. New questions were added in the 2012 and 2022 surveys to reflect changing trends and topics of increased concern that have occurred in the past 10 years. Examples include questions regarding the value of HIT applications and their predictions for future trends. This made the analysis more difficult but provided additional meaningful data. The 2022 new questions are sometimes noted in the graphs and tables.



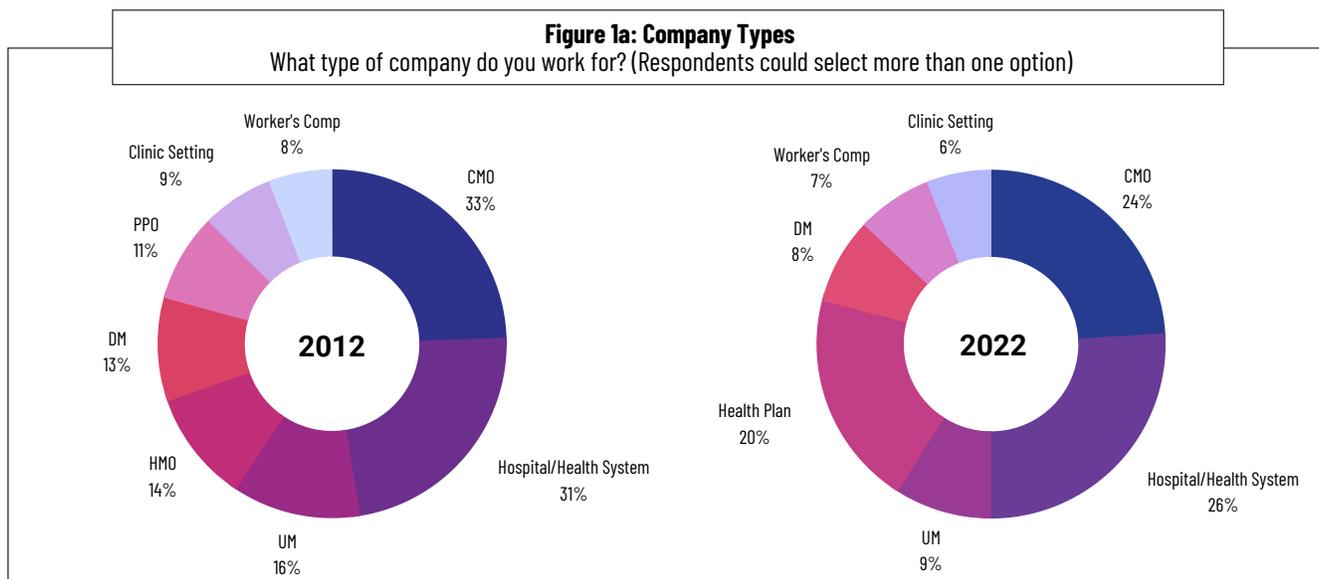
Respondent percentages are rounded to the closest whole number in the narrative findings, figures and summary tables. Therefore, it is possible that the totals will not add up exactly to 100%.

Raw data tables were tabulated to verify the total number of unique responses (“n” values) for most questions. Respondents were allowed to select more than one multiple-choice answer for some of the questions. As a result, some response-count values total more than 100%, which means their counts are higher than the N value of the total number of respondents for each survey respectively. For example, if 200 individuals responded to a question and 100 responded “yes,” then the “yes” percentage would be 50%.

### Company Type and Size

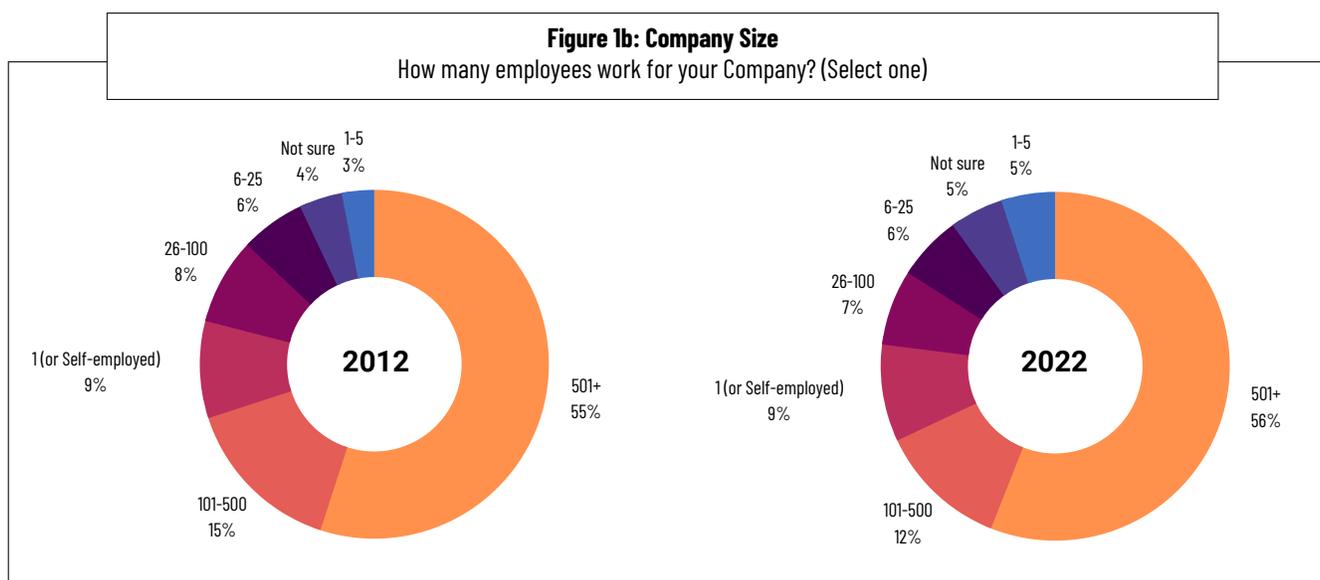
The survey populations in all four surveys were similar in terms of where respondents work with some minor variations. For example, respondents who reported working for case management organizations (CMOs) fluctuated over time with a steady decline noted since 2010 (2008 = 32%; 2010 = 42%; 2012 = 33%; and 2022 = 24%). In addition, roughly three out of every ten respondents reported working for a hospital or health system in the previous surveys (2008 = 30%; 2010 = 32%, and 2012 = 31%), however, only one out of four (26%) reported those work settings in the 2022 survey.

Figure 1a highlights in more detail the type of companies the respondents worked for at the time of the 2012 and 2022 HIT surveys (see Tables in the Appendix for more detailed responses on all Figures/Graphs in this document). However, note that several company types were changed from earlier surveys when compared to the 2022 survey, so it is not an apples-to-apples comparison. These changes may also account for the decline in respondents in the companies noted above, because more respondents reported working for health plans, TPAs, consulting firms, and outpatient settings in 2022.



The researchers concluded that a trend comparison over time between questions should be interpreted conservatively since there are some reported variations in the respondent pools. However as described below, the researchers have a higher confidence level in the “case manager” to “case manager” comparisons over time in part due to the sampling technique (e.g., consistency of reaching out to CMSA members for all four HIT surveys).

As highlighted in Figure 1b, the distribution of company size between the respondents in 2012 and 2022 is very similar. For example, most respondents in each survey worked for large companies (more than 100 employees) and the response rates were very similar from 2012 (70%) to 2022 (68%). Similarly, respondents who worked for small companies (less than 100 employees) remained consistent from 2012 (17%) to 2022 (18%).

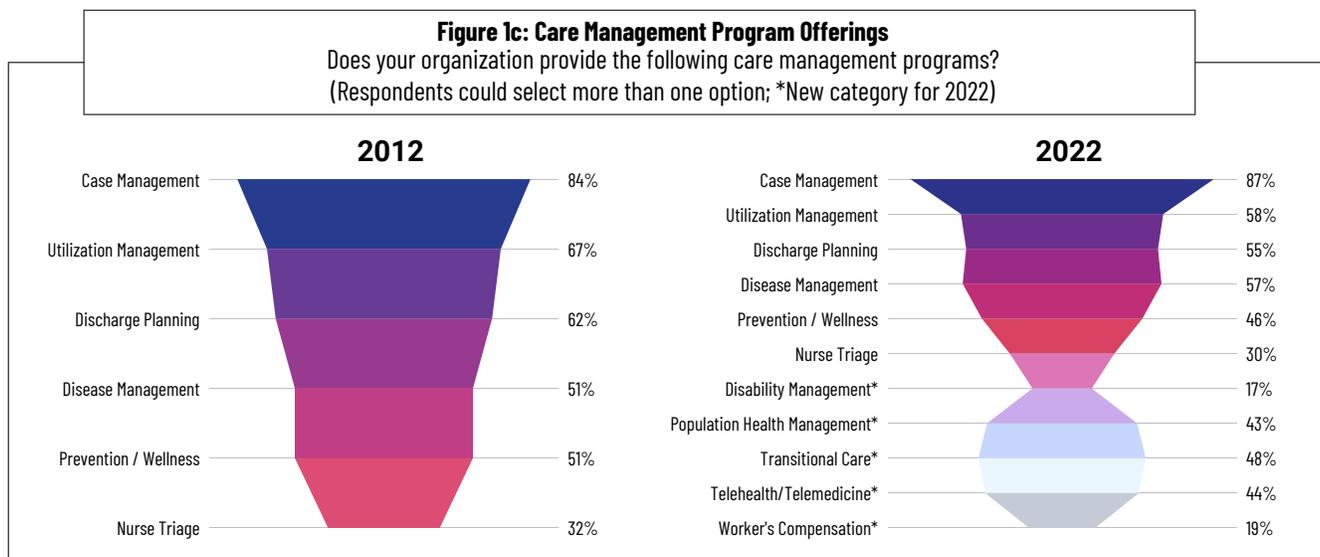


### Care Management Programs

As highlighted in Figure 1c, the survey also asked respondents which care management programs their employers offered. The majority of respondents noted that their organizations offer case management services (2012 = 84%; 2022 = 87%). In addition, more than half indicated their companies also offer utilization management (2012 = 67%; 2022 = 58%), disease management (2012 = 53%; 2022 = 57%), and discharge planning (2012 = 62%; and 2022 = 55%) programs. Prevention and wellness programs decreased slightly over the past ten years (from 51% in 2012 to 46% in 2022).



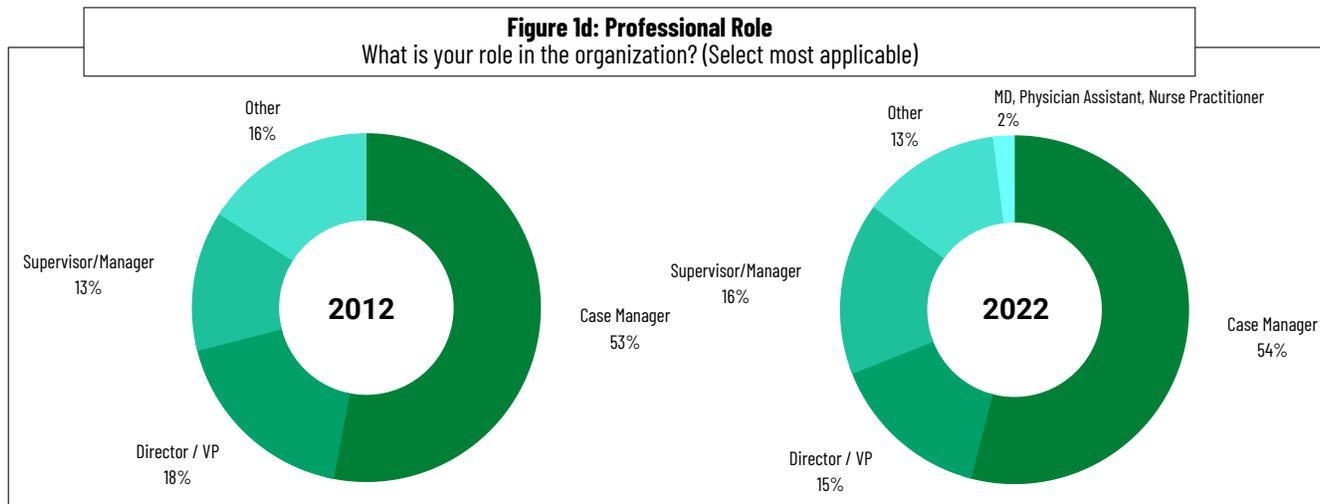
Some variability in the results may be tied to the addition of the new program categories added in the 2022 HIT Survey as highlighted in Figure 1c: Transitional Care (48%); Telehealth/Telemedicine (44%), Population Health (43%), Workers Comp (19%) and Disability Management (17%), all of which are programs that are trending at this time. It will be interesting to see if they continue to increase. Again, respondents could select more than one program in this question set.



### Professional Role

As highlighted in Figure 1d, respondents were asked “What is your role in the organization?” They were only allowed to select one response. The responses were fairly consistent from 2012 to 2022:

- Case Managers (53% to 54%)
- Director / VP / Senior Management (18% to 15%)
- Supervisor / Manager (13% to 16%)



Note: Minor edits were made to this question between 2012 and 2022 (see Table 1d for detail).

### Comparison Populations

The 2022 HIT survey examines and analyzes the responses to the survey questions from the respondents in two different approaches:

- **All Respondents Over Time:** All respondents for 2012 versus 2022 responses (and occasionally for earlier years as well)
- **Case Manager Respondents Over Time:** Case manager responses for 2012 versus 2022 responses were based on how they answered Question 4: “What is your role in the organization?” As highlighted again in Figure 1d, the case manager group identifies those who self-identified as a case manager.

### Drawing Conclusions and Generalizations

This report is intended to inform readers about the individuals who responded to the 2022 survey and to compare their responses to the three previous surveys if the change was pertinent. Because questions were not distributed to a fully randomized population for any of the surveys, drawing conclusions or making generalized observations about the industry or population as a whole should be done with caution. Since the demographic makeup for the respondent pools is similar, the three populations can be viewed as mostly equivalent. However, it is important to keep in mind the intrinsic challenges that come with generalization of any self-reported survey, including accurately capturing the complexity of the HIT issues being queried.

### Final Thoughts

To the best of the researchers’ knowledge, this is the most detailed study looking at care management practices and software systems. No specific references are inferred or made to any particular companies that participated directly or indirectly in this research. A core objective of the HIT surveys is to assess the general trends related to HIT systems, especially the trends for care management software applications and specific capabilities within those applications.



### Annotations

<sup>1</sup> The Advisory panel of researchers were all volunteers and includes the following individuals: Garry Carneal, JD, MA; Jeff Frater, BSN, RN; Mary Beth Newman, MSN, RN, CMGT-BC, CCM; Rebecca Perez, MSN, RN, CCM; Pat Stricker, MEd, RN; and Thomas Wilson, PhD, DrPH

<sup>2</sup> Likert scale: A Likert scale is commonly involved in survey research to scale responses to questionnaires. It is often used interchangeably with a rating scale, though there are other types of rating scales. They are widely used to measure attitudes and opinions to a greater degree than using a simple yes/no question.

### Appendix

Below are summary tables highlighting the demographics associated with the SurveyMonkey findings. More analysis will be presented in each issue brief. Respondent percentages are rounded to the closest whole number in the narrative findings, figures and summary tables. Therefore, it is possible that the totals will not add up exactly to 100%.

<b>Table 1a: Company Types</b>		
What type of company do you work for? (Respondents could select more than one option)		
	<b>2012</b>	<b>2022</b>
Health Maintenance Organization (HMO)	14%	n/a
Preferred Provider Organization (PPO)	11%	n/a
Point of Service (POS)	8%	n/a
Indemnity / Fee-for-Service	7%	n/a
Payer: Health Plan / Insurer	n/a	20%
Payer: Third Parity Administrator	n/a	5%
Case Management / Care Management Organizations (CMOs)	33%	24%
Utilization Management (UM)	16%	9%
Disease Management (DM)	13%	8%
Nurse Triage / Medical Advice Services	6%	4%
Independent Review Organization (IRO) / External Review	4%	4%
Pharmacy Benefits Manager (PBM)	5%	4%
Hospital or Health System	31%	26%
Medical Group / Clinic Setting	9%	6%
Home Care	5%	2%
Skilled Nursing Facility (SNF) or Long-Term Care (LTC) Facility	4%	1%
Behavioral Health (BH) Facility	2%	2%
Research or Academic Medical Center	1%	1%
Retail Clinic	1%	0%
Post-Acute Care	n/a	2%
Worker's Compensation (WC)	8%	7%
Government: Military/Dept. of Defense (DoD) / Veterans Affairs	5%	8%
Government: Medicaid	4%	3%

<b>Table 1a: Company Types (Cont.)</b>		
What type of company do you work for? (Respondents could select more than one option)		
	<b>2012</b>	<b>2022</b>
Government: Medicare	4%	3%
Consumer Directed Health Services	2%	0.3%
Quality Improvement Organization	1%	1%
Government: Indian Health	0%	1%
Consulting firm benefits	n/a	1%
Consulting firm general	n/a	4%
Other, please specify	n/a	11%

<b>Table 1b: Company Size</b>		
How many employees work for your Company? (Select one)		
<b>Response</b>	<b>2012</b>	<b>2022</b>
A: 1 (or self-employed)	9%	9%
B: 1-5	3%	5%
C: 6-25	6%	6%
D: 26 - 100	8%	7%
E: 101 - 500	15%	12%
F: 501 or more	55%	56%
G: Not sure	4%	5%
<b>Total</b>	<b>100%</b>	<b>100%</b>

<b>Table 1c: Care Management Program Offerings</b>		
Does your organization provide the following care management programs? (Respondents could select more than one option)		
<b>Programs</b>	<b>2012</b>	<b>2022</b>
Case Management (CM)	84%	87%
Utilization Management (UM) Services	67%	58%
Discharge Planning (DCP)	62%	55%
Prevention or Wellness Support	51%	46%
2012 = Disease Management (DM) 2022 = Disease / Condition Management*	53%	57%
Nurse Triage	32%	30%
Not Applicable	6%	4%
None of the Above	n/a	4%
Other, please specify	8%	5%
Disability Management*	n/a	17%
Population Health Management*	n/a	43%
Transitional Care*	n/a	48%
Telehealth / Telemedicine*	n/a	44%
Workers' Compensation*	n/a	19%

\*New Category for 2022

Table 1d: Professional Role		
What is your role in the organization? (Select most applicable)		
Role	2012	2022
2012: Case Manager/Front Line/End User 2022: Case Manager	53%	54%
2012: Director / VP / Senior Management / Medical Director 2022: Director / VP / Senior Management	18%	N/A
2022: Physician MD/DO, Medical Director	N/A	1%
Supervisor, Manager	13%	16%
Nurse Practitioner, Physician Assistant	N/A	1%
Other	16%	14%
<b>Total</b>	<b>100%</b>	<b>100%</b>

## Survey Sponsors

The **Case Management Society of America (CMSA)** is an international, non-profit organization founded in 1990, dedicated to the support and development of the profession of case management through educational forums, networking opportunities and legislative involvement. Unique in its composition as an international organization with almost 60 affiliated and prospective chapters in a tiered democratic structure, CMSA's success and strength is its structure as a member-driven society. For more information, visit [www.cmsa.org](http://www.cmsa.org).

**Schooner Strategies (Schooner)** is a leading force in healthcare policy development, accreditation programs, government relations support, operational management, and business development benefiting dozens of clients since 2007. Schooner arms clients with the tools, resources and industry knowledge to optimize their business mission and goals. Schooner provides the ideas, strategies and tactics to conduct original research, gather vital industry-specific data and acquire important market intelligence and trends information. Schooner also can help clients manage and staff their organizations. The consulting firm is located in downtown historic Annapolis, Maryland. For more information visit [www.schoonerstrategies.com](http://www.schoonerstrategies.com) or call (410) 280-0025.

## Research Support

### Population Health Impact Institute (PHI Institute)

Founded in 2004 by Thomas Wilson, PhD, DrPH, the Population Health Impact Institute is a 501c3 non-profit organization founded in 2004 to promote credible, transparent, standardized, and replicable impact evaluations of defined population health programs; to conduct sponsored population health research; and to provide advanced analytics for population health survey and assessment tools. For more information, visit [www.phiinstitute.org](http://www.phiinstitute.org).

### Survey Administrators

Parthenon Management Group and Schooner Strategies administered this survey.

Contact:

Garry Carneal, President & CEO, Schooner Strategies

326 First Street, Suite 29, Annapolis, MD 21403

[www.schoonerstrategies.com](http://www.schoonerstrategies.com)

[gcarneal@schoonerstrategies.com](mailto:gcarneal@schoonerstrategies.com)

Phone: 410.863.7316

### Acknowledgments

- **Issue Brief # 1 Credits:** Researchers/Authors - Garry Carneal, JD, MA, and Thomas Wilson, PhD, DrPH; Editor - Pat Stricker, RN, MEd
- **Research Advisors:** Special thanks to Melanie Prince, MSN, BSN, NE-BC, CCM, FAAN, FCM, and Anne Llewellyn, MS, BHSA, RN, CCM, CRRN, CMF, FCM, who were instrumental in initiating this survey
- **Research Co-Chairs:** Garry Carneal, JD, MA, and Pat Stricker, MEd, RN
- **Designer:** Kelley Norris, CMSA Membership and Marketing Manager
- **The Advisory Panel of researchers were all volunteers and include the following individuals:**

#### **Garry Carneal, JD, MA: Sponsor and Primary Researcher**

[Garry Carneal](#) is a leading expert in healthcare. He has researched, written and published extensively on quality, medical management, information technology and regulatory trends. Currently, Carneal heads up [Schooner Strategies](#), based in Annapolis, MD, which provides an array of consulting and management services.

Carneal has spearheaded and launched 25 accreditation programs since 1996. Among other accomplishments, he has served as [URAC's](#) President & CEO, worked with the [American Telemedicine Association](#) to develop national standards for telemedicine and remote patient monitoring, and currently runs [RadSite](#) which offers five accreditation programs for advanced diagnostic imaging.

In the medical management field, Carneal: developed numerous accreditation programs supporting population health programs; runs [RegQuest](#), a regulatory tracking service, helped draft medical management regulations with the [NAIC](#); has run a self-funded health plan; and is an active volunteer supporting the [Case Management Society of America](#) (CMSA).

#### **Jeff Frater, BSN, RN: HIT Infrastructure Analyst and Author**

Jeff Frater is a registered nurse specializing in case management with experience in a variety of settings. He is a frequently sought speaker and educator on case management, healthcare systems and healthcare financing. Mr. Frater has long-standing involvement with the [Case Management Society of America](#) (CMSA). He served on CMSA's Board of Directors from 2003 to 2006 and became President of the organization from June 2008 to June 2009. He continues to serve on and lead a variety of committees for CMSA.

### **Jeff Frater, BSN, RN: HIT Infrastructure Analyst and Author (cont.)**

In his current professional role, he is the clinical lead for the software firm [Cadalys](#) and subject matter expert regarding case management for the Cadalys [CareIQ](#) application. Previously Jeff was Senior Vice President of Clinical Strategy for [Zynx Health](#), Director of Partner Development for the software firm [TCS Healthcare Technologies](#), and Account Executive and Clinical Educator for [MCG](#) (formerly Milliman Care Guidelines).

Mr. Frater's overall professional interest involves reform of the care delivery system and financing of healthcare services with an emphasis on the patient as a consumer of healthcare with full ownership of the process, medical record and the ultimate outcome.

### **Mary Beth Newman, MSN, RN, CMGT-BC, CCM: Clinical Content Analyst and Author**

Mary Beth Newman has 20+ years of experience in health plan clinical care management and population health operations spanning commercial, Medicare, and Medicaid populations. She has focused her career on building and supporting best-practice, quality-driven case management programs.

Mary Beth is a Past President of [CMSA](#) and maintains a recognized industry leadership presence in case management through professional presentations, publications, and volunteer activities for CMSA. She is currently a Senior Assistant Vice President at [EXL Health](#) where she supports clinical product development.

### **Rebecca Perez, MSN, RN, CCM: Clinical Content Analyst and Author**

Rebecca Perez is an experienced RN with a master's degree in nursing and years of experience in case management. She is a certified case manager, a member of the Gamma Omega Chapter of Sigma Theta Tau International Nursing Honor Society and Capella University's National Society of Leadership and Success.

Rebecca is the author of numerous professional articles and the primary author for CMSA's *CMAG 2020*. She is also the co-author of *CMSA's Integrated Case Management: A Manual for Case Managers by Case Managers*, and a developer of the Integrated Case Management Training Program, as well as a master trainer.

Rebecca joined [Parthenon Management Group](#) in 2020 as the Senior Manager of Education and Strategic Partnerships for the [Case Management Society of America](#) and was appointed to the Leadership Consortium for the National Quality Forum in 2022.

### **Pat Stricker, MEd, RN: Research Analyst and Project Coordinator**

Pat Stricker spent the last thirty years working in the clinical care management field in directorial and senior management positions. She has been responsible for development, implementation, and operations of: care management application systems; education and curriculum programs for staff and clients; call center operational programs; clinical implementations and clinical sales and marketing support for triage, utilization, case, disease, and population health management programs.

She also worked as a consultant in the United Kingdom, implementing a Care Facilitation (case management) program for the National Healthcare System. Most recently she worked for [TCS Healthcare Technologies](#), a case management software system provider, as Senior Vice-President of Clinical Services. Pat has also been a monthly contributor to the CMSA newsletter, as well as the author of articles for other nursing publications on topics related to care management and healthcare information technology.

### Thomas Wilson, PhD, DrPH: Primary Researcher

Thomas Wilson is an independent pragmatic epidemiologist specializing in the design, evaluation, and science-based improvement of health programs. He is currently the Board Chair of the non-profit [Population Health Impact Institute](#) and Affiliate Professor in the Department of Kinesiology at the [University of New Hampshire](#). Wilson has been a research analyst and significant contributor to all three of CMSA's prior HIT surveys.

His academic credentials include an MPH and DrPH in epidemiology from the School of Public Health at University of California, Los Angeles and a PhD in bio-history from BGSU (Ohio); he also did post-doctoral work at the London School of Tropical Hygiene and Medicine and the CR Drew University of Medicine and Science in Los Angeles.

Wilson's prior positions include Fulbright Instructor at the [University of the West Indies](#), Cave Hill Barbados; Instructor at [UC Berkeley School of Public Health](#); Assistant Professor of Clinical Medicine at [Columbia University School of Public Health](#), Corporate Epidemiologist/Director at [Anthem Blue Cross Blue Shield](#) in Mason, Ohio; and CEO of [Trajectory Healthcare, LLC](#) in Loveland, Ohio.

In 2004, he was named one of the top 25 leaders in the nation in disease management (DM) by *Managed Healthcare Executive*, a leading health care industry journal.

### Issue Brief Series Downloads

Single copies of the Issue Briefs may be downloaded at <https://cmsa.org/HIT2022> or [www.schoonerstrategies.com](http://www.schoonerstrategies.com) for individual use only. Please contact Garry Carneal at [info@schoonerstrategies.com](mailto:info@schoonerstrategies.com) for any other use requests such as distributing copies of this report to a group or other third party.

### Disclaimer

All information contained herein is for informational purposes only. Statements and findings reported in this publication do not necessarily represent the public policy positions of any of the sponsoring organizations.



© 2022 All rights reserved by CMSA and Schooner Strategies

With special thanks to

