

# HEALTH INFORMATION TECHNOLOGY USE & VALUE DELIVERED BY THE LONG-TERM & POST-ACUTE CARE (LTPAC) SECTOR

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Developed for:  
The National Coordinator for Health Information  
Technology (ONC)

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## EXECUTIVE SUMMARY

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The members of the Long-Term & Post-Acute Care (LTPAC) Health IT Collaborative are pleased to offer this brief from the LTPAC healthcare segment as requested by the National Coordinator for Health IT and HHS Acting Assistant Secretary for Health Karen DeSalvo, MD, MPH, MSc. We welcome follow up with ONC about this report and recommendations.

### ABOUT THIS BRIEF

Members of the LTPAC Health IT Collaborative ([Appendix A](#)) assisted in the development, content and review of this brief. The associations and organizations represented on the LTPAC Health IT Collaborative were not asked to approve this brief as it does not serve as a policy document, but rather an informative brief on the LTPAC segment of healthcare. Please note that we have included opinions drawn from individual experience, along with facts gathered from published studies or other data that support the statements and opinions expressed in this document. Providing a brief on a healthcare segment like LTPAC can be quite lengthy. We invite you to review the Executive Summary as a stand-alone document; we include additional sections and appendixes for your reference. The Executive Summary covers the following:

- Background
- About LTPAC Care and Providers
- LTPAC Valued Quality Care Coordination (VQCC) Differentials
  - Duration of Care
  - eAssessments
  - Chronic Care and Co-Morbidities
  - Medication Management
  - Technology
- Recommendations for Ongoing ONC Support
  - Increase LTPAC Sector Representation, Expertise, and Studies
  - “Double Down” on Supports and Assistance Targeted to LTPAC
  - Advance Person-Centric Longitudinal Care
  - Continue Targeted Standards Development Work
- Appendices

### BACKGROUND

The LTPAC Health IT Collaborative supports the Department of Health & Human Services’ (HHS’) triple aim of achieving better care, smarter spending and healthier people. We also understand that most of the focus on health IT has been on the eligible hospitals and professionals (and not the full spectrum of care) due to the parameters set forth under the *Health Information Technology for Economic & Clinical Health (HITECH) Act*. We believe that now is the time to consider how to expand that focus and incorporate the full spectrum of care – to include long term and post-acute care, behavioral health and other providers that did not receive the incentives

### About the LTPAC Health IT Collaborative

The LTPAC Health IT Collaborative formed in 2005 in response to the same Executive Order that called for the Office of the National Coordinator for Health Information Technology (ONC) to be established. Today, the Collaborative seeks to advance health IT issues by encouraging coordination among LTPAC provider organizations, policy makers, vendors, payers and other stakeholders. Members of the LTPAC Health IT Collaborative:

- Alliance for Nursing Informatics (ANI)
- The Society for Post-Acute and Long-Term Care Medicine (AMDA)
- American Association of Nurse Assessment Coordination (AANAC)
- American Health Care Association/ National Center for Assisted Living (AHCA/NCAL)
- American Health Information Management Association (AHIMA)
- American Medical Rehabilitation Providers Association (AMRPA)
- American Society of Consultant Pharmacists (ASCP)
- Leading Age/Center for Aging Services Technology (CAST)
- National Association for Home Care & Hospice/Home Care Technology Association of America (NAHC/HCTAA)
- National Association for the Support of Long Term Care (NASL)
- National PACE Association (NPA)

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under the *HITECH Act* and that have helped to offset costs and spur health IT adoption by providers working in acute care and ambulatory care settings. The healthcare system is involved in a paradigm shift from service-based care to episodic to predictive care, and eventually to the ultimate goal of preventative care with a focus on wellness.

This shift requires a significant upgrade to the country's health IT infrastructure one that the *Federal Health IT Strategic Plan (2015-2020)* and *Shared Nationwide Interoperability Roadmap (Draft Version 1.0)* are addressing.

Quality of care is a "given" within a patient's spectrum of care. In most cases, quality of care measurements are a regulatory requirement with associated penalties. In LTPAC, there are many quality measurements promulgated by different federal/state agencies and associations. Usually, these quality measurements (QM) are disease or function specific (*e.g.*, diabetes, falls or pressure ulcers). In chronic care, it is very difficult to measure specific quality measurements when a person might have multiple co-morbidities. In today's valued care, it is important to provide improved clinical outcomes and quality of life. The National Quality Forum (NQF) and the Centers for Medicare & Medicaid Services (CMS) are working on the harmonization of quality measurements between different care settings. As the healthcare system moves toward greater risk sharing and valued payment models, quality measurement will become increasingly important. Over time, we expect there will be greater focus on clinical outcome measurement, which will require quantifiable dynamic person-centric electronic longitudinal care, and chronic care/co-morbidity measurements.

In LTPAC, one of the major valued functions is the ability to provide comprehensive longitudinal chronic care over a long period of time. In LTPAC, a coordinated clinical, social, and administrative team provides the care. The team varies with the provider setting and as the person's level of acuity and care demands. Many times, the members of the ancillary coordination team are not employed by a facility, but are contract to the facility (*e.g.*, consultant pharmacists and therapists). These professionals are LTPAC clinical partners. While hospitals surely provide coordinated care, there are significant differences in care processes due to different lengths of stay. The most obvious valued quality of LTPAC is the capability of providing longitudinal care to the persons in their care.

Just as the process of digitizing the U.S. healthcare system began with hospitals and physician offices, the LTPAC HIT Collaborative considers these settings as start points for episodic care. In comparing the episodic care provided in these settings to the holistic care delivered by LTPAC providers, the Collaborative found five distinct Valued Quality Care Coordination (VQCC) Differentials that highlight how LTPAC's holistic approach to care benefits the individual. These differences include:

1. Duration of Care
2. eAssessments
3. Chronic Care and Co-Morbidities
4. Medication Management
5. Technology

We believe that these five differentials lead to improved clinical outcomes; less clinical risk; lower cost of care compared to other providers; and greater quality of care and quality of life for the individual. These differentials reflect not only LTPAC provider care best practices, but also some of the more unique aspects of LTPAC.

To illustrate this point, we have outlined how these five Valued Quality Care Coordination Differentials compare to acute or ambulatory care settings and some of the new models of care such as Accountable Care Organizations (ACOs) or Medical Homes. We also frame these differentials in terms of alignment with HHS' Triple Aim and the valuable role that LTPAC serves in advancing preventative care and wellness.

- **Better care** – Because LTPAC settings typically employ a coordinated team of multi-disciplinary licensed healthcare professionals in delivering care for individuals over an extended period of time, there is more time to observe, diagnosis, and provide a holistic, longitudinal plan of care.
- **Smarter spending** – The periodic, comprehensive patient assessments and medication reconciliation and review processes required in LTPAC settings form an important foundation for benchmarking improvement. The data and insights collected through these assessments and medication reviews are crucial in caring for people with chronic care issues and multiple co-morbidities.
- **Healthier people** – The health IT systems that capture data from these comprehensive assessments already have the framework for a person-centric, electronic longitudinal care record. Such data can be shared with the entire care coordination team, analyzed and ultimately lead to greater quality improvements – for downstream providers, the individual and the overall population.

## EFFECTIVE DATE OF THE BRIEF

This brief is based on information as of May 1, 2015. Ongoing studies, demonstrations and pilots are expected to add relevant content to the topics covered here. A few such efforts are as follows:

- CMS' [survey](#) of LTPAC providers regarding EHR and health IT adoption, which was being conducted by Lantana; the survey period ended April 1, 2015.
- Bundled Payments for Care Improvement (BPCI) Initiative Demonstrations
- CMS proposed rule on Stage 3 of Meaningful Use, which was released on March 20, 2015.
- ONC proposed rule on Health IT Certification Criteria, which was released on March 20, 2015.
- CMS' Testing Experience & Functional Tools (TEFT) Grant
- National study of IT adoption and the effect on specific components of nursing home care (*e.g.*, patient care, clinical support and administrative activities) by the University of Missouri School of Nursing. The three-year study, which is being funded by a nearly \$1 million grant from the U.S. Agency for Healthcare Research & Quality (AHRQ), will be completed in 2017.
- Implementation of the *Improving Medicare Post-Acute Care Transformation (IMPACT) Act*, which was signed into law in October 2014.

## ABOUT LTPAC CARE AND PROVIDERS

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There are eight provider types that typically make up the LTPAC healthcare segment. This section will address the major LTPAC providers (see footnote).<sup>1</sup>

LTPAC care can be divided into two basic groups: facility care and community based care. The official government label for facility care is "Institutional Care." Facility Care Providers are: Nursing Centers (Skilled Nursing Facilities (SNFs) & Nursing Facilities (NFs), Assisted Living Residences (ALFs), Inpatient Rehabilitation Facilities (IRFs), Long Term Care Hospitals (LTCHs), and some Hospice Care. Individual care providers are Home Health Agencies (HHAs) and Hospice Care Agencies, Program of All-Inclusive Care for the Elderly (PACE), Independent Care, Pharmacists, Nurses, Therapists, Dieticians, Social Workers, and Behavioral Health. The Continuing Care Retirement Community (CCRC) for seniors combines attributes of both facility and independent living. Most of the large LTPAC provider organizations provide what might be called virtual CCRCs, where the person does not have to move to a CCRC campus per se, but can stay in their home of choice and have all the services necessary for their quality of care and quality of life. The PACE program could be called a virtual CCRC. You could call an ACO a virtual CCRC for all ages. There are also Private Duty Agencies, which provide non-skilled care that is either paid for by Medicaid, the patient, or a third payer.

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<sup>1</sup> The long term post-acute care services and support healthcare segment has been referred to by a number of terms and acronyms

## PERSONS RECEIVING CARE IN LTPAC SETTINGS

There are generally three types of persons receiving care from LTPAC providers. For the purposes of this brief, we will use these simple definitions:

- **Rehabilitation Therapy:** Persons receiving post-surgery rehabilitation therapy after being transferred from a hospital. These persons are of all ages and require immediate post-surgery therapy as they transition from the hospital to a less costly setting that may provide days, weeks or even months of therapy. Many persons receiving therapy in LTPAC settings may have disabilities caused by accidents or combat and are not age-related.
- **Long Term Care:** Persons with multiple co-morbidities usually require complex, chronic, longitudinal care. Many are permanent residents of a Nursing Center or of a Medical Model ALF. They require many years of cooperative care by a coordination team. These persons are referred to as Residents not Patients as the Nursing Center will most likely will be their home for their remaining years of life. They are also referred by CMS as Dual Eligible.
- **Chronic Care Management:** There are potentially three populations that require Chronic Care Management: 1) short-term post-acute, or post-hospital users with medical or functional impairments; 2) chronic care populations with on-going needs for condition management; 3) long term care populations which typically have acute and chronic conditions but need residential or supportive services to live safely in a residential or community-based setting.

All persons within LTPAC receive person-centric longitudinal care. Traditionally, this was done with the care coordination team using the paper clinical record. More and more, the electronic longitudinal care plan is monitored and planned using the LTPAC ONC Certified EHRs/EMRs software applications that are available today.

Many persons transitioned to LTPAC facility require chronic care as they have co-morbidities and not just a single disease state. At times, the urgency and complexity of the acute incident and the time under hospital care does not identify the underlying chronic condition. Or, the chronic condition is identified but it is not urgent, as it does not affect the hospital care required from the incident that caused the hospitalization, and is better handled in post-acute care. There is also the possibility that the acute care initiates a chronic condition that does not surface until post-acute care. Pressure ulcers, for example, form at the dermis level of skin, which may occur while in the hospital. Because a pressure ulcer typically is not visible or detected until reaching the epidermis, it is more likely to be diagnosed in the Nursing Center or HHA.

While the majority of individuals receiving LTPAC are elderly, persons of any age that may have been in an accident or combat that requires LTPAC rehabilitation therapy or other such care. With new pharmaceuticals, prosthetics, therapy, and longitudinal care, persons with disabilities now live longer and often require LTPAC to adjust their maintenance care plan and help with their new activities and quality of life. In longitudinal care, “quality of life” is as important as “quality of care.” There are also persons of all ages with an incurable complex medical condition or with behavioral health issues that require LTPAC care.

### Major Services and Support

1. Multi-disciplinary (medical/physician, nursing, nutrition, social services, therapeutic recreation)
2. Therapy (physical, occupational, speech, respiratory)
3. Services (pharmacy, laboratory, radiology)
4. Community Supports (transportation, meal services)
5. Technology - including EHR systems, billing systems, hand-held communication devices, sensors and monitors, and other tools such as touch pads, mobile devices, etc.

The following table summarizes the major LTPAC providers ranked by capacity of the provider on any one day of care. Profiles use by LTPAC healthcare provider segments are available from the LeadingAge Center for Aging Services Technology<sup>2</sup> and information about health IT use in the appendices listed in the table.

Table 1: LTPAC Providers Listed by Capacity by Provider in Any One Day<sup>3</sup>

PROVIDER SITE	# OF PROVIDER UNITS	PERSON CAPACITY	AVERAGE LOS	APPENDIX
Home Healthcare Agencies (HHA)	12,600 Agencies	3,500,000	Est 60 Days	<u>B</u>
Program of All-Inclusive Care for the Elderly (PACE )	103 Organizations	3,210,000	>100 Days	
Nursing Centers - Skilled Nursing Facilities (SNF)/Nursing Facilities (NF)	15,650 Facilities	1,410,000	28 days Rehab >100 Days Resident	<u>C</u>
Hospice Care Agencies	3,900 Hospices	1,300,000		<u>D</u>
Assisted Living Facilities (ALF)	24,600 Facilities	885,000	Years	<u>E</u>
Continuing Care Retirement Communities (CCRC)	1,921 Communities	745,000	Years	
Adult Day Centers	4,800 Centers	273,000	No LOS	
Inpatient Rehabilitation Facilities (IRF) (Inpatient Rehabilitation Hospital/Units - IRH/Us)	1,143 Hospital/Units	NA	12.69 days.	<u>F</u>
Long Term Acute Care Hospitals (LTAH)	408 in 2006	40,353 Admissions in 2006 <sup>4</sup>	30 days or Longer	<u>G</u>

## BEYOND BETTER CARE, SMARTER SPENDING & HEALTHIER PEOPLE

“...while the use of EHRs and HIE adoption is not widespread in LTPAC settings at present, almost all nursing home, home health, and inpatient rehab providers have the health IT capacity to capture and transmit standardized assessments for payment and quality reporting. That said, Eligible Professionals (EPs) and Eligible Hospitals (EHs) who strive to meet Stage 2 Meaningful Use still may share patient information and coordinate care with LTPAC providers during transitions of care or referrals. In addition, emerging payment and delivery system changes driven by the Affordable Care Act will reward providers for demonstrating improved care coordination, quality, and reduced costs.

LTPAC providers deliver care to the highly vulnerable including the elderly, frail, and disabled. LTPAC patients typically have a wider range of conditions and more complex, chronic care needs that result in frequent transitions between their homes, acute, post-acute, and long-term care settings. In 2008, almost 40 percent (38.7%) of all Medicare beneficiaries discharged from acute-care hospitals received post-acute care. Of these beneficiaries, 15.5 percent were readmitted to the acute care hospital within 30 days.

The range of LTPAC providers and care settings, and the frequent movement of patients among them, necessitates the exchange of relevant, timely care data. Care coordination ensures continuity of care and services needed for the recovery, rehabilitation, and health maintenance of the patient, and helps to reduce duplication of care services, conflicting health plans and medical errors and re-hospitalizations that

<sup>2</sup> LeadingAge 2015 Sector Snapshot Report; (<http://www.leadingage.org/MarketSnapshotReports/>)

<sup>3</sup> LeadingAge 2015 Sector Snapshot Report; (<http://www.leadingage.org/MarketSnapshotReports/>)

<sup>4</sup> Caring for the Critically Ill Patient | June 9, 2010; Long-term Acute Care Hospital Utilization After Critical Illness Jeremy M. Kahn, MD, MSc; Nicole M. Benson, BS; Dina Appleby, MS; Shannon S. Carson, MD; Theodore J. Iwashyna, MD, PhD JAMA June 9, 2010, Vol 303, No. 22

lead to cost savings. Coordination of care is essential, as is the need for systems to support information capture, use and exchange. As frequent providers of services for LTPAC patients, EPs and EH's need to work closely with LTPAC providers in coordinating care using the best practices from Meaningful Use Care Coordination specifications. When EPs/EHs support and customize care coordination, at the time of transition to LTPAC providers, patients receiving LTPAC services require fewer emergency room visits and readmissions resulting in lowered health care costs.”<sup>5</sup>

The Agency for Healthcare Research and Quality, of the U.S. Department of Health and Human Services, has defined care coordination this way:

“Care coordination is the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services. Organizing care involves the marshaling of personnel and other resources needed to carry out all required patient care activities, and is often managed by the exchange of information among participants responsible for different aspects of care.”<sup>6</sup>

Just as caring for individuals who require long term and post-acute care and services can be demanding, implementation of health information technology in this sector is a challenge. One health IT vendor described it this way:

“Interoperability requirements and implementation for LTPAC health IT are more complex than those for the acute care world, in large part for one simple reason. In the acute world, the acute care setting is often part of a larger system that has a span of control over health IT for ancillary services such as pharmacy, labs, nutrition and more, which simplifies the development and implementation of interoperability between the systems used by those functions. For the vast majority of LTPAC providers, that is not the case. They work with multiple types of healthcare provider partners, as well as several different providers in one area (*i.e.*, multiple hospitals, physician practices, etc.). Achieving interoperability begins with developing good relationships with these partners – a prerequisite for beginning a dialogue about interoperability, let alone initiating the complicated process to implement interoperability between disparate systems. This reality has required LTPAC providers and health IT vendors to develop more sophisticated and flexible approaches to interoperability.”<sup>7</sup>

Home healthcare agencies have shown a steady trajectory toward health IT adoption, which has been attributed to the electronic reporting through the Outcome & Assessment Information Set (OASIS-C) as required for HHA participation in the Medicare program. One national study found that adoption of health IT had risen from 43 percent of HHAs using electronic medical record software applications in 2007 to 78.1 percent by 2013.<sup>8</sup>

It is unclear if implementation of the *IMPACT Act* law will have a similar effect on health IT adoption by LTPAC settings, especially the four care settings cited in the law – Skilled Nursing Facilities (SNFs), Inpatient Rehabilitation Facilities (IRFs), Long Term Care Hospitals (LTCHs) and Home Health Agencies (HHAs).

## LTPAC VALUED QUALITY COORDINATION CARE DIFFERENTIALS

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A wide range of care and service providers support person-centric longitudinal care. Within the scope of their specific care and service responsibilities, they are all currently undergoing four important paradigm shifts:

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<sup>5</sup> Care Coordination Tool for Transition to Long-Term and Post-Acute Care; The National Learning Consortium (NLC); Developed by the Health Information Technology Research Center (HITRC) 2014

<sup>6</sup> Shojania, McDonald, AHRQ, & University of California, 2007.

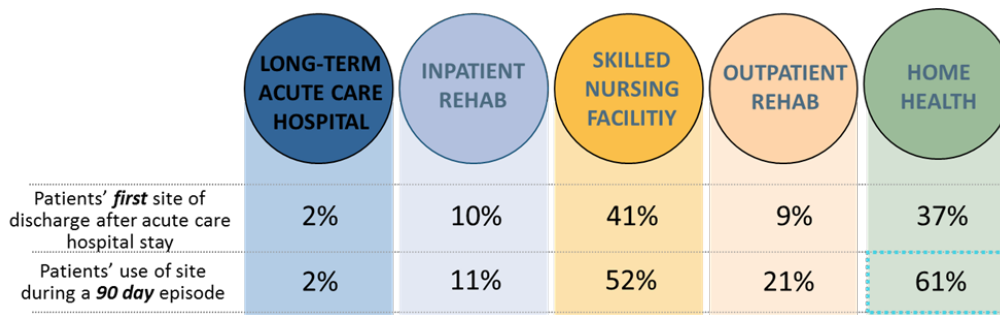
<sup>7</sup> Vendor Response to NASL request for information, April 2015.

<sup>8</sup> National State of Home Care Industry Study 2013; Fazzi Healthcare Solutions

1. Shifting from an episodic stage to a predictive stage and finally to a Preventative Stage healthcare system with a focus on wellness;
2. Shifting from a provider-focused care to person-centric focused care where the person is involved in his or her own healthcare;
3. Shifting from the fixing of an incident to electronic longitudinal care where there is trending over a long period of time with alerts to potential future incidents; and
4. Shifting from treating a disease state to treating and maintaining a person’s chronic care with co-morbidities.

Today most of the paradigm shifts originate when a person is admitted to a hospital for an incident and then discharged. The person’s disease state is diagnosed with expensive state of art sophisticated technology; treated, usually by undergoing surgery; stabilized in postop; prepared for their transition of care; and in 40% to 60% of the cases, transitioned to a nursing home for rehabilitation therapy or to a home healthcare agency (see Figure 1).

Figure 1: Post-hospital Transition of Care Percentages<sup>9</sup>



For example, upon the transition of care from the hospital to a nursing home or HHA a number of positive LTPAC Valued Quality Coordinated Care Differential events take place facilitating the paradigm shifts:

“In the hospital setting most of the services are provided by onsite services and instrumentation like: Imaging, laboratory, medications, cardiology, oncology, dietary etc. In most cases these services are brought to the inpatient person or the inpatient person is taken to the service within the same facility. Once the person is admitted to LTPAC multiple disconnected providers usually provide the resident person care requirements and more important many times the resident patient must go to the provider. In the past, the only common care knowledge link communication was between providers. In today’s world, the top LTPAC Health IT EMR developer corporations provide the knowledge link.”<sup>10</sup>

The Collaborative has identified five categories of LTPAC Valued Quality Coordinated Care (VQCC) Differentials that distinguish a person’s care and underscores the value delivered when compared to other providers. The five VQCC Differentials are outlined below and further detailed in the Appendix referenced.

1. **VQCC #1 LTPAC Duration of Care Differential** ([Appendix H](#))
  - Prolonged care duration over a hospital length of stay for continued diagnosis, care, and clinical outcomes;
  - Person centric clinical, activities of daily living, and social observations over a long course of care;
  - The development of a person-centric electronic Longitudinal Care Plan; and
  - The trending of clinical information to establish alerts, early potential intervention and

<sup>9</sup> Source: RTI, 2009: Examining Post Acute Care Relationships in an Integrated Hospital System

<sup>10</sup> Frank Grosso, RPh, Executive Director of the American Society of Consultant Pharmacy



prevention care as well as a beginning of care maintenance and wellness goals.

**2. VQCC #2 LTPAC eAssessments Differential (Appendix I)**

- A comprehensive clinical and functional total patient electronic assessment;
- An eAssessment under CMS regulations and approved standards that is updated to a schedule and as necessary;
- An eAssessment conducted by a coordinated team of licensed personnel in accordance with CMS regulations; and
- Clinical knowledge over a long duration of time therefore allowing an Electronic Medical Record (EMR) software application to develop trending and alerts to potential incidents and prevent possible rehospitalizations, regardless of the site of care.

**3. VQCC #3 LTPAC Chronic Care – Co-Morbidity Care Differential (Appendix J)**

- LTPAC Providers as one of the first providers after hospital discharge to coordinate care, have coordinated staff, and use health IT capability to conduct Chronic Care co-morbidity eAssessments;
- A complete clinical profile of the patient identifying the diagnostic; care; treatment; and/or maintenance plan; and observation requirements for chronic care and co-morbidities;
- A person-centric longitudinal care record based on coordinated team care in a controlled environment; and
- A plan that prepares the person (and their family) for the next level of care or the home of their choice.

**4. VQCC #4 LTPAC Medication Management Differential (Appendix K)**

- Provides a comprehensive review of the whole person's medication management and reconciliation by a Licensed Consultant Pharmacist<sup>11</sup> as it relates to all factors that affect the clinical outcomes of medications including laboratory, diet, and therapy. Clinical information reconciliation (CIR) which include medication reconciliation, medication indication for use, allergies, allergy intolerance or reactions;
- Reviews the hospital transition of care reconciled medication results as it pertains to medications taken before hospitalization, the potential drug interactions, and manages polypharmacy. It ensures that each medication has an indication;
- A Nursing Center has a medication team of the nurse, medical director, primary care provider, institutional pharmacy, and consultant pharmacist to conduct a comprehensive integrated person-centric management of medications the, EHR, electronic medication administration record, and in some nursing homes an automated medication dispensing instrument; and
- Provides medication counseling when transitioning to another provider or home.

**5. VQCC #5 LTPAC Technology Differential (Appendix L)**

- Provides a person-centric electronic longitudinal care EMRs that covers a long duration of care;
- Aggregates all person medical data functions over a long duration of care allowing trending and alerts to prevent incidents;

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<sup>11</sup> What is a Consultant Pharmacists, American Society of Consultant Pharmacist (ASCP), [https://www.ascp.com/sites/default/files/WhatisaCP\\_Final.pdf](https://www.ascp.com/sites/default/files/WhatisaCP_Final.pdf), accessed April 22, 2015.

- Uses devices to track Activities of Daily Living; and
- Provides a controlled clinical environment where advanced clinical technology can be tested and utilized by hundreds of persons to assist in public health technology.

In emerging service delivery and payment models, members of the care coordination team (acute, ambulatory, and LTPAC) must understand the capabilities (and cost and risk) of all providers within the spectrum of care to support a person's quality of care and quality of life. The LTPAC VQCC Differentials identify the major differentiators which in turn help the care team achieve the goals of the Triple Aim (Care, Health, and Cost).

"Improving the U.S. health care system requires simultaneous pursuit of three aims: improving the experience of care, improving the health of populations, and reducing per capita costs of health care. Preconditions for this include the enrollment of an identified population, a commitment to universality for its members, and the existence of an organization (an "integrator") that accepts responsibility for all three aims for that population. The integrator's role includes at least five components: partnership with individuals and families, redesign of primary care, population health management, financial management, and macro system integration."<sup>12</sup>

Finally, we would like to note that the myriad regulations promulgated by CMS, States, counties and cities are often considered disadvantages for LTPAC providers and health IT vendors that must comply with an intricate array of policies and priorities. We believe that it is time to reconsider that viewpoint and look at how these differentials advantage LTPAC compared. In fact, care partners could view these requirements as added assurance that quality is performed; that surveys are conducted; and compliance with privacy and security regulations is a standard practice for LTPAC.

## RECOMMENDATIONS FOR ONC

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The LTPAC Health IT Collaborative respectfully submits the following recommendations as to how ONC leadership could encourage broader health IT adoption and health information exchange with and among LTPAC settings. We would like to acknowledge and thank ONC for your leadership and collaboration with both HHS and non HHS agencies to advance health IT and interoperability health information exchange.

### INCREASE LTPAC SECTOR REPRESENTATION, EXPERTISE AND STUDIES

We applaud ONC for including a LTPAC representatives – providers, health IT vendors and other stakeholders – on the Health IT Policy & Standards Committees/Workgroups and for proposing a modular approach to health IT certification that will be open and inclusive to all stakeholders including LTPAC. These have been important steps to seek the sector's expertise and collaboration. In addition, we request that --

- LTPAC representation be expanded for future health policy development initiatives around health IT and interoperability to include the insights and obtain the broad support needed to achieve the Triple Aim
- ONC and HHS continue to seek LTPAC and all stakeholder feedback on new health IT initiatives and programs
- Provide (or encourage) federal funding or other supports to be directed toward research studies involving LTPAC health IT including quantifying the value of LTPAC in supporting coordinated care initiatives detailed in this document (such as the creation or implementation of a coordination care plan)

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<sup>12</sup> The Triple Aim: Care, Health, And Cost; Donald M. Berwick, Thomas Persons. Nolan and John Whittington; Health Aff May 2008 vol. 27 no. 3

## “DOUBLE DOWN” ON SUPPORTS AND ASSISTANCE TARGETED TO LTPAC

The LTPAC HIT Collaborative recognizes the important work that ONC and HHS has supported over the past 5 years including Challenge grants focused on LTPAC HIE, a CMS QIO study in three states, hosting an LTPAC Round Table, Standards & Interoperability Framework initiatives, etc. Each has helped to build the foundation, but more financial and technical assistance support is needed to advance the use of interoperable health IT and HIE. We believe that it is imperative to double down efforts to address the gap and request that ONC --

- Evaluate opportunities with existing programs and initiatives to include LTPAC providers and/or specific use cases
- Help advance the use of health IT by targeting functionality that is unique to the LTPAC sector and important for service delivery and payment such as duration of care, e-assessments, electronic care plans, co-morbidities and chronic care management, medication management, and pain management, etc.
- Consider targeted funding supports (e.g. grants, loan programs) particularly for small, rural and unaffiliated providers who don't have the same market economy changes to support health IT advancements
- Collaborate with other agencies to evaluate/implement payment and regulatory approaches that encourage the use of health IT and HIE by and with LTPAC to improve care and reduce costs such as --
  - Designing demonstration programs in collaboration with CMS to evaluate the costs and outcomes where LTPAC providers lead HIT-enabled care coordination models and/or accountable care organizations
  - Evaluate existing processes such as the survey to evaluate the use of a health IT-enabled process to augment in-person surveys (e.g., reducing administrative regulatory burdens by allowing health IT-enabled processes for providers with top quality reporting ratings)

## ADVANCE PERSON-CENTRIC LONGITUDINAL CARE

Foundational work has begun to advance person-centered longitudinal care, but more is needed to achieve the goals of a reformed healthcare system. The LTPAC sector is experienced working with individuals to support their health and wellness goals while coordinating services across their care team. Based on this expertise, we recommend actions on the following barriers to advancing patient-centered longitudinal care --

- Require bidirectional and multidirectional exchange of electronic health information as part of the EHR Incentive Program
- Support the development of a person-centric electronic longitudinal care record for LTPAC by working with members of the LTPAC Health IT Collaborative to develop a framework or template to support a person-centric longitudinal care record that originates in the LTPAC setting
- Require that all electronic prescriptions prescribed in all settings add an indication for medication use
- Allow payers, eligible professionals and hospitals, and new healthcare payment models to absorb some of the transition of care costs for electronic exchange with LTPAC settings

## CONTINUE TARGETED STANDARDS DEVELOPMENT WORK

The 2015 NPRM for Certification proposed significant changes to the health IT certification process making it more open and accessible. We applaud ONC for hearing the challenges of LTPAC and other stakeholders and redesigning the process. We recognize the importance of standards development activities and certification for achieving interoperability and offer the following recommendations --

- Recognize that the industry standards expected to be applied across various stakeholders need to be assessed for broad applicability across settings and workflow processes before they can be rolled out.

- Consider how to standardize, leverage, and integrate data gathered by emerging personal health/activity tracking, remote monitoring technology, and other patient monitoring devices to inform and enhance and supplement available data including assessment data that is part of the IMPACT Act
- Encourage support for the development and use of SNOMED and other accepted vocabularies in LTPAC

## CONCLUSION

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The members of the LTPAC Health IT Collaborative – providers, health IT developers/vendors, ancillary service providers and other stakeholders – appreciate the opportunity to share our thoughts with the National Coordinator for Health IT. We especially wish to acknowledge the support that the ONC and HHS staff have provided over the years and we look forward to continuing this work together.

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## APPENDIX A: LTPAC HIT COLLABORATIVE CONTRIBUTORS AND ACKNOWLEDGEMENTS

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The LTPAC Collaborative would like to acknowledge the contributions of the following individuals and their organizations who supplied content to the ONC Brief:

- Gregory L. Alexander, PhD, RN, FAAN; Associate Professor Sinclair School of Nursing; University of Missouri, Columbia, Missouri, USA
- Majd Alwan, Ph.D., SVP of Technology, LeadingAge; Executive Director, Center for Aging Services Technologies (CAST)
- Alex Bardakh, MPP, PLC; Director, Public Policy; AMDA – The Society for Post-Acute and Long-Term Care Medicine
- Richard D. Brennan, Jr., M.A., VP of Technology Policy and Government Affairs; National Association for Home Care & Hospice, Executive Director Home Care Technology Association of America
- Arnold E. Clayman, PD, FASCP; VP of Pharmacy Practice & Government Affairs; American Society of Consultant Pharmacists
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**The Organizer Biography of John F. Derr, RPh:** Fifty years of Executive Level Healthcare most recently as the SVP, CIO of Golden Living, LLC a LTPAC corporation. Previous to Golden Living in chronological sequence: Director of Product Development and Strategic Planning for E.R. Squibb and Sons; VP and Division Manager for Ultrasound and Nuclear Medicine for Siemens Medical Systems; SVP International Medical Enterprises (Tenet); and EVP American Health Care Association and National Center for Assisted Living. He has been on the HHS Federal Advisory Committee for Health Information Standards since 2009. John is a founding member of the LTPAC Health IT Collaborative and is CEO of JD & Associates Enterprises ([jfderr@mac.com](mailto:jfderr@mac.com)).

## APPENDIX B: HOME HEALTH AGENCIES (HHA)

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The HHA LTPAC agencies provide licensed medical care to persons in their home. The Licensed home care nurse, physical therapist, occupational therapist, speech therapist, social worker, and aid provide a wide range of healthcare for an illness or injury.

The Primary Care Physician (PcP) orders are needed to start home care. Once the PcP refers a person for home health services, the home care nurse or physician therapist will visit the person's home and discuss the person's needs and health. The HHA will also talk to the PcP about the persons care and keep them informed about the progress relative to an agreed upon longitudinal care plan.

Examples of skilled home health services include:

- Medication management
- Wound care for pressure sores or a surgical wound
- Patient and caregiver education
- Intravenous or nutrition therapy
- Injections
- Monitoring serious illness and unstable health status
- Physical, Occupational, and Speech therapy through contracted or employed licensed therapists

The HHA assists a person to get better, regain their independence, and become as self-sufficient as possible. In the visits to the home the home care staff will not only treat the medical condition and assist with the longitudinal care plan but also will be able to assess the living conditions of the person in their home and in the family environment. This assists in the longitudinal treatment of the whole person. It also helps the care coordination team to educate the person on becoming engaged in his/her own agreed upon longitudinal care plan. Home health staff also provide education and resources to family caregivers who play an instrumental role in supplementing the non-skilled care that is provided by home health aides to address self-care activities or activities of daily living (ADL).

Examples of what the HHA will do for the person in their home care environment in addition to the skilled services include:

- Nutrition: Check eating and drinking;
- Monitoring vital signs: Check blood pressure, temperature, heart rate, and breathing;
- Medication management: Check that the person is taking their medications correctly and determine if there are any side effects;
- Pain management: Determine if there is pain and if so, the level of pain;
- Check the safety of the home in relationship to the persons condition;
- Observations of the person's home and family life;
- Behavioral Health observations; and
- Administer assessments to measure physical or cognitive decline and or risk of rehospitalizations.

The HHA will accept the Transitions of Care electronic summary care document into the HHA Electronic Medical Record software application. One of the byproducts of the HHA EMR is the electronic Outcome and Assessment Information Set (OASIS).

In 2014 the business Intelligence Division of Fazzi Associates published the 2013- 2014 National State of the

Home Care and Hospice Industry Report ([http://www.nahc.org/NAHCReport/nr140507\\_1/](http://www.nahc.org/NAHCReport/nr140507_1/)). Over 1,100 home health agency leaders were interviewed. The focus of the study was on the present and future use of key technology and clinical practices. Major findings are:

- HHAs are becoming strong partners with other care providers within the new care models of care and payment:
- 18.7 % of the 12,600 HHA are participating in Accountable Care Organizations (ACOs);
- 6.4% in pay for performance bundled payments programs;
- 12.3% provide care in-patient centered homes;
- 20.3% included in transitional care programs;
- 78.1% use electronic medical record software;
- 57.8% Point of Care Systems (POC)
  - 80.5% of all HHAs require clinical documentation via POC in the person's home;
  - 58.6% of clinicians that use POC documentation onsite fifty percent or more of the time;
  - 31.2% of HHAs achieving the highest 25% score in quality use POC systems
- 28.7% use telehealth remote patient monitoring systems with the following on care delivery:
  - 72.9% increase in overall quality;
  - 64.4% increase in care coordination;
  - 64.2% increase in patient satisfaction;
  - 56.1% increase in patient self-care;
  - 69.8% lower unplanned hospitalizations; and
  - 65.1% lower emergent care admissions.

## APPENDIX C: NURSING CENTERS (SKILLED NURSING FACILITIES/NURSING FACILITIES)

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Most reports, analysis, etc use the term Skilled Nursing Facilities (SNF). Over the last few years the profile of the traditional SNF has been changing. With the changing of healthcare systems; care and payment models; and persons being admitted into these facilities the image is changing and so is the name. The name that is being used by the American Health Care Association is Nursing Centers.

There is a grey provider area the LTPAC facilities sector. These facilities have various names including: Senior Residences, Group Homes, as well as other titles. There is a major difference between these homes and a Skilled Nursing Facility that is: A CMS license. These homes provide care for average daily living (ADL) activities like getting in and out of bed, eating, bathing, dressing, and using the bathroom. These facilities don't provide a full Nursing Center spectrum of care. They may have certified professional healthcare workers on staff like nurses and doctors. However, Medicare or Medicaid does not cover these homes as they are not licensed, certified, and regulated by HHS. Some states do have minimal licensing for these facilities. As for health IT capabilities and electronic Transitions of Care, they usually do not have the technology nor the infrastructure for interoperability.<sup>13</sup>

There are three additional areas where LTPAC can play an important role in Valued Quality of Care Coordination: Rural Health, Critical Access Hospitals (CAH), and Veteran Community Care. There are over 50,000 various LTPAC Provider facilities and agencies in the US and an undetermined large percentage are in rural areas. In some small towns a Nursing Center is the only 24x7 healthcare provider. As for Veterans, the 2014 Choice Act gave veterans in rural areas the opportunity to use community providers if a VA facility was more than 40 miles away or appointments were delayed more than 30 days. There are contract rehabilitation therapists within the LTPAC healthcare segment that could assist the rural primary care physician with experienced disabled long-term rehabilitation therapy.

Within the care of Nursing Centers there are two types of persons: Long term care (Dual Eligible Residents) and post-acute care rehabilitation Residents. The percentage split between these two groups of Residents varies by Nursing Center. For the last fifteen years the number of CMS licensed Nursing Centers has remained about 16,000 (now 15,650) and 1.6M beds. The number has been declining slowly with some consolidation of Provider organizations. Nursing Centers are divided into: For Profit; Not for Profit; Large National organizations; Regional organizations, and Independents. The current CMS reimbursement system based on RUGs is also a census model and the census curve continues to slant downward. The traditional SNF census has dropped below 90%, which reflects the trend to transition persons to lower cost settings like Assisted Living Facilities. The new payment models have a focus on reducing length of stay and clinical outcomes during the length of stay. This encourages throughput of persons rather than census model.

If a person requires 24x7 skilled nursing high acuity chronic care following a hospital stay they maybe referred to a Nursing Center by the person's PcP or the hospital. As their clinical outcome improves and the person is maintained, they will be transitioned to a lower acuity care provider like a custodial Assisted Living Facility (ALF) or home to the community.

Nursing Centers are now offering expanded services in pharmacy, home care, hospice care, ventilator, and dialysis services. Within the Nursing Center there are all the clinical and social services and a health IT infrastructure required for valued quality of longitudinal chronic care of persons transitioning from a hospital including: nursing, post-surgical rehabilitation, medication management, dietary, therapy, social, activity, acclimation to quality of life conditions of normal living, and transitions to the next care provider or to the persons home.

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<sup>13</sup> What's the Difference Between Skilled Nursing and a Nursing Home? Marlo Sollitto Contributing Editor; 2015 AgingCare, LLC.



## ADOPTION OF HEALTH INFORMATION TECHNOLOGY

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“Nursing home residents, a population with complex healthcare needs, experience frequent transitions between healthcare settings. These individuals typically have multiple chronic illnesses that may require medical attention from various specialists; often resulting in duplication of services, care fragmentation, and inaccurate, incomplete, or delayed transfer of health information. Electronic exchange of health information, implemented in the context of a robust HIT infrastructure, is an important tool to help coordinate care for these patients. By giving providers across settings access to timely, accurate, and comprehensive health information, health information exchange (HIE) systems can contribute to a reduction in unplanned care and re-hospitalizations so, and can improve healthcare outcomes. The business and clinical cases for implementing more effective technology in nursing homes will only be strengthened as the LTC sector continues to grow. The US Census Bureau projects a sharp rise in the number of older Americans moving into LTC settings, as members of the baby boomer generation reach retirement age and begin to use these services.

“Although there is increasing momentum in the implementation of HIT in nursing homes, the majority of facilities historically have functioned using mostly paper-based systems and have been slow to implement technology. Even now, when computer technology is implemented in nursing homes.”<sup>14</sup>

The question of adoption of health IT comes up almost every time there is a discussion of LTPAC Providers and health IT adoption and capability. Even though the above quotation is specific to Nursing Centers, the same statement could be made for the other Providers of LTPAC. Most answers to the adoption question usually lead the policy makers and researchers to the wrong conclusion: That LTPAC does not have the health IT capability to be a partner and has less capability than a hospital or physician health IT.

“Interoperability requirements and implementation for LTPAC HIT are more complex than those for the acute care world, in large part for one simple reason. In the acute world, the acute care setting is often part of a larger system that has a span of control over HIT for ancillary services such as pharmacy, lab, nutrition, etc., which simplifies the development and implementation of interoperability between the systems used by those functions. For the vast majority of LTPAC providers, that is not the case. They not only work with multiple types of healthcare provider partners but also several different providers in one area (i.e. multiple hospitals, physician practices, etc.). Achieving interoperability begins with developing good relationships with these partners, a requirement to even begin a dialogue about interoperability, let alone begin the complicated process of implementing interoperability between disparate systems. This reality has required LTPAC providers and HIT vendors to develop more sophisticated and flexible approaches to interoperability.”<sup>15</sup>

The LTPAC healthcare segment is basically 100% electronic. CMS requires assessments to be electronic and it is through the eAssessments that the LTPAC Providers get reimbursed for the Medicare services they provide. Today, there are a range of sophisticated EMRs available to all LTPAC providers but some Providers have not upgraded their health IT infrastructure because of a lack of funds or other regulatory priorities.

Almost all of the published reports on LTPAC health IT adoption are seven or more years old and do not reflect today’s adoption levels. In order to put adoption in perspective there is a study currently being conducted by AHRQ and the University of Missouri that will update the adoption of health IT by LTPAC providers.

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<sup>14</sup> Building a Health Information Technology Infrastructure in Long-Term Care; Author(s): Elizabeth O. Babalola, MPH • Rosa R. Baier, MPH • Stefan Gravenstein, MD, MPH • Lauren Capizzo, MBA, CPEHR • Amy Zimmerman, MPH • Rebekah Gardner, MD; Annuals of Long Term Care Issue Number: Volume 22 - Issue 6 - June 2014 (/issue/2045)

<sup>15</sup> Vendor Response to NASL request for information, April 2015

The following is current status of this AHRQ study (NOTE: Year 1 results of this study have not been completely finalized, so these results should be interpreted with caution).

“A national nursing home study being funded by the Agency for Health Care Research and Quality (PI: G.L. Alexander (2014-2017)) is evaluating trends in IT adoption over time. Year 1 results are promising that IT adoption appears to be increasing compared to previous national reports occurring just over a decade ago (1). For instance, in a sample of over 600 nursing homes representing each state in the U.S. nearly 82% of facilities are using computers for resident admissions, 75% for discharges, and 63% for transfers. Approximately 13% of facilities have no computerization for these activities. Computerized documents reported to be used during these clinical processes include discharge summaries (47%), physician order entry (51%), physician order sheets (52%), progress notes (50%), and results reporting (31%). Few of these systems appear to be incorporating artificial intelligence (1%) or clinical decision support systems (6%) in resident care management to help clinicians make better decisions. Findings are showing that most resident management systems in nursing homes have little integration with other clinical systems internally or externally. For instance, resident care systems are not able to interface with external entities' computerized systems (e.g. clinics, clinical laboratory, hospitals, other nursing homes, etc.) in 60% of the homes. In another example, 64% of resident care systems are not integrated with other computerized laboratory systems internally in this sample of nursing homes.

“In this study we are also finding some interesting correlations in the trends in IT adoption and quality measures. For example, the percent of long stay residents who are incontinent appear to be positively correlated with increasing IT adoption. In other words, as IT adoption increases there appears to be a positive step towards identifying residents with incontinence. Also, IT adoption appears to be negatively correlated with antipsychotic use in nursing residents. So, as IT adoption appears to increase the percentage of residents receiving antipsychotics appear to be decreasing. These preliminary findings are just a few of the current findings in this national study. “

It must be stated that LTPAC Providers are upgrading their health IT capability without the financial incentives that eligible hospitals and professionals received under the HITECH Act. Much of the LTPAC associations and ancillary vendor time is now concentrated on educating LTPAC Providers as to what software systems are necessary for them to be valued quality partner in the new care and payment models (ACO, HIE, Etc.) making up tomorrow's Spectrum of Care and valued payment models.

The major barriers to full LTPAC Provider health IT adoption are (these are not meant to be negative statements just LTPAC experiences):

**Financial** – LTPAC was not included in the HITECH Act health IT Incentives and to make the situations worse, many times there are regular cuts in reimbursements or low percent annual increases. Also financial penalty management of the regulations cuts into available investment working capital. While this is also true of hospitals and other providers, LTPAC providers tend to have smaller revenue bases which limits investment in technology.

**Turnover in Staff** – There is a large percentage of turnover in qualified LTPAC staff, which requires continued training with a focus on the priorities of quality of care. In the past it was difficult to continually train new staff on software. Today that is not as much a problem, especially since CMS runs regular training on the required assessment tools. The current LTPAC health IT applications have also helped with software help menus, videos, and online training programs. It has been found that in most cases staff turnover has been reduced when a provider moves away from paper clinical records to EMRs allowing staff to concentrate on care;

**Daily Care Load** – The LTPAC Provider care load is heavy due to the caring for persons with a high acuity and co-morbidities along with regulatory requirements; and

**Regulations** – There are many administrative duties caused by regulations including surveys that take time away from direct care. With cuts in reimbursement there are limited funds for non-direct care staff. Going to an EMR with electronic access to specific sections for surveyors will be more efficient for staff and allow more direct care focus.

LTPAC Providers and Health IT vendors, as well as the support professionals, have worked together to take the standard and certified ToC electronic health record information from the C-CDA<sup>16</sup> and incorporate it into the LTPAC EMR [NEED SOME CONNECTION HERE... NOT SURE WHAT IT'S SAYING] therefore developing a dynamic person-centric electronic longitudinal care plan. This longitudinal care plan is implemented, adjusted to the duration of provided care, and finalized to be in the standard ToC to the person's home or to the next care setting.

LTPAC health IT Vendors have the development capability and are currently working toward development of a dynamic person-centric electronic longitudinal care plan.. They are developing the person-centric electronic longitudinal plan because it has to be done mainly because of the listed VQCCs. Persons in LTPAC are receiving care that is regulated, valued quality and coordinated care for weeks, months, and years. These persons, whether in the care of a LTPAC Provider for a week or a year, require electronic longitudinal care. The outdated paper clinical care plan currently in use is longitudinal, but it is a static plan being made up of a series of observations over a long duration of quality of care time and reviewed by nursing in the routine daily clinical briefing. A static longitudinal care plan cannot aggregate clinical knowledge, create alerts, and move persons to preventative care.

**S&I Framework Longitudinal Care Committee (LCC) and the CMS 2014 TEFT Grant:** The ONC S&I Framework Longitudinal Care Committee (LCC) chaired by Terrance (Terry) O'Malley, MD of Partners Healthcare and Lawrence (Larry) Garber, MD of the Reliant Medical Group of Boston worked on the criteria for a longitudinal plan. Their work and the volunteer team of LTPAC thought leaders has provided the platform for putting the individual into the middle of the care planning process, although the workgroup did not make a distinction between short plans, long plans, treatment plans, care plans, plans of care, interdisciplinary plans, or multidisciplinary plans. In the LCC approach, "a plan is a plan." The LCC worked on the criteria for a longitudinal plan. Their work and the volunteer team of LTPAC thought leaders provided the platform for putting the individual into the middle of the care planning process. The LCC developed a list of "Health Concerns," which included everything that could be or is a priority to the individual or to the care team members. Domains included: medical/surgical issues; mood/cognition/behavior issues; physical function issues; individual priorities and preferences; and environmental issues such as transportation, home supports, insurance, and social determinants of health. This list is the "index" for the output of the planning process, which identifies goals, interventions, and responsible team members as well as outcome measures. The *HL7 2015CDA R2 2013 Update*, published in March 2015 after 18 months of ballot reconciliation made this the LCC standard. What was approved was the goals of a plan rather than the process of creating a plan.

Currently there is work within the 2014 CMS TEFT Grant S&I Framework Longitudinal of Care Workgroup to develop the Long Term Services and Support (eLTSS) plan. Although it is not in the TEFT Grant S&I Framework

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<sup>16</sup> HL7 Implementation Guide for CDA® Release 2: Consolidated CDA Templates for Clinical Notes, [http://www.hl7.org/implement/standards/product\\_brief.cfm?product\\_id=379](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=379), accessed April 22, 2015.

workgroup charter, it is possible that the eLTSS workgroup deliverables will be very valuable in the development of the dynamic person centric longitudinal care record.

The current LTPAC EMR applications on the market today are robust enterprise systems but as yet do not have clinical decision support (CDS) software. CDS software will be required for the comprehensive electronic dynamic longitudinal care plan. As APIs become more prevalent in health IT the development of a dynamic longitudinal care plan with trending, aggregated information, and push alerts is within the near future. This is not a technology issue but financial.

**Person-Centric Electronic Longitudinal Care:** This is defined as total dynamic care of a person over a long duration of time that:

- Aggregates all germane chronic care: clinical, demographic, and social data points;
- Uses analytics, alerts, and decision support software;
- Develops a comprehensive person centric electronic dynamic longitudinal care plan;
- Will engage the person in his or her own care;
- Ultimately result in a cure or maintenance of the person's health condition;
- Achieves a desired quality of life; and
- Has a focus on preventative care and wellness.

The top 50 Nursing Center providers can be found on the Footnote link.<sup>17</sup> This table provides a profile of each of the top 50 Nursing Center corporations.

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<sup>17</sup> *Provider's* 2014 list of the Top 50 Largest Nursing Facility Companies is ranked by bed count as of Dec. 31, 2013 June Issue of AHCA's Provider Magazine. ([http://www.providermagazine.com/reports/Documents/2014/Top50\\_2014.pdf](http://www.providermagazine.com/reports/Documents/2014/Top50_2014.pdf))

## APPENDIX D: HOSPICE CARE AGENCIES

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End of Life, Palliative Care, Hospice, the Advance Directive, and Quality of Life are receiving more attention in the new spectrum of care as the healthcare system moves to person-centric longitudinal care. There are two main reasons: First, the last few months of life are one of the major costs of healthcare, which is basically a social issue and second, as the individual person becomes more involved in their own health care, they have more to say about their “quality of life” at the end of life. States like Oregon and Washington have legal person requested end of life programs that meet specific criteria.

According to a new report from the Institute of Medicine (IOM), healthcare leaders and providers must become comfortable talking about “end-of-life care” and “death” with patients. As the discussion is more important now than ever before, the report, “Dying in America,” found that the demand for family caregivers is on the rise, especially because end-of-life care is fragmented and can lead to preventable hospitalizations. Research also found that although palliative care is associated with higher quality of life, widespread referral to palliative care is slow.

“The bottom line is the healthcare system is poorly designed to meet the needs of patients near the end of life,” David M. Walker, a former United States comptroller general and chairman of the 21-person panel that released the report, told the New York Times. “The current system is geared towards doing more, and that system by definition is not necessarily consistent with what patients want, and is also more costly.” Most people nearing end-of-life care aren't capable of making the decision on their own, thus advance planning is essential, and hospitals must honor those wishes, the report states. Young, poor, minority and less-educated patients are less likely to have these kinds of conversations with their clinicians, so doctors must take the initiative to begin these discussions. Incentivizing such dialogue would encourage doctors to broach the subject, the report said.<sup>18</sup>

“Despite repeated calls for improvement in end-of-life care and planning, pain and suffering has actually increased for dying patients, and significant barriers still stand in the way of effective discussions about patients' care options, according to recent research. In one study published in the Annals of Internal Medicine, researchers measured pain intensity and the prevalence of other symptoms in more than 7,000 participants in the national Health and Retirement study of U.S. resident's age 51 and older. It found that between 1998 and 2010, rates of pain increased by almost 12 percent for patients in their last year of life, while rates of depression increased 26.6 percent and periodic confusion went up by 31.3 percent. “We've put a lot of work into [improving end-of-life care] and it's not yielding what we thought it should be yielding. So what do we do now?” asked Joanne Lynn, M.D., one of the study's authors, according to NPR.<sup>19</sup>

“It seems that hospice is stuck in a rut. Healthcare Market Resources recently took an 11-year snapshot of hospice utilization, only to find that while hospice utilization was growing at the beginning of the period, that utilization seems to have plateaued. Apparently, doing things the ways that they have historically been done has only gotten hospices so much growth. Add to that increased regulatory scrutiny and pressure, and hospices are finding growth harder to come by as they become even more conservative about whom they accept and keep on service. And, yet the data shows that the opportunity for growth is there. Across the 11-year period, there is a wide variation in average hospice utilization growth rates among states.

“Generally speaking, while the first 6 years were characterized by robust growth and increased utilization, in year seven that growth plateaued, then picked up modestly in 2009 only to plateau again in 2013. The 2013 national average hospice utilization rate is 2.46%.

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<sup>18</sup> Dying in America: Healthcare leaders must bolster end-of-life care discussions, efforts September 18, 2014 | By Katie Sullivan; Published on FierceHealthcare (<http://persons.fiercehealthcare.com>)

<sup>19</sup> End-of-life care, planning fails patients; February 5, 2015 | By Leslie Small Published on FierceHealthcare (<http://persons.fiercehealthcare.com>)

“What does the future hold for hospice utilization nationally? Hospice utilization gains are becoming more difficult and securing hospice growth significantly more complicated. Once upon a time, geographic expansion held the key to solid growth. Not so, today when some markets are over-saturated and others are leveling off on their utilization rates.

“And, yet the opportunity is there. Research has shown that that 7% of the Medicare patients who are discharged alive from a hospital die within 30 days. Too many patients, who die in LTAC’s or Nursing Center’s, are hospice candidates. This is compounded by the fact that hospice median length-of-stay has barely budged in the past several years.”<sup>20</sup>

“Although hospice was a Medicare benefit that was conceived primarily for cancer patients, the rates of hospice usage among non-cancer patients continue to grow. In 2000, approximately 70% of all hospice patients had a cancer diagnosis. By 2008, that number had declined to 40%. Today, cancer patients represent just 30% of hospice patients.”<sup>21</sup>

The person-centric electronic longitudinal care will be very valuable for managing hospice care and for end of life decisions as it will provide more quantifiable information and not emotion.

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<sup>20</sup> Rich Chesney BLOG; Healthcare Market Resources | 1133 Dundee Drive | Suite 100 | Dresher, PA 19025 | 215.657.7373 | info@healthmr.com

<sup>21</sup> Healthcare Market Resources | 1133 Dundee Drive | Suite 100 | Dresher, PA 19025 | 215.657.7373 | info@healthmr.com

## APPENDIX E: ASSISTED LIVING FACILITIES (ALF)

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ALF's are going through a care role change between independent living units and ALF's on hotel or on a Medical model. In the first decade of the 21<sup>st</sup> Century the ALF sector of LTPAC became overbuilt and there was an excess of Units. The owners of ALFs also used strategy of promoting "Aging In Place." Under Aging in Place the ALF fee for service pricing was based on the number of Activities of Daily Living (ADL) requiring staff assistance. This strategy was a short term success but was not as successful long term as planned because some ALF's had installed a social IT application and not a health IT application. As the persons time living in the ALF increased the ALF hotel software could not document changes in the level of need for ADL assistance. The costs of providing assistance increased but not the revenues and financial problems emerged.

As the market moved into the second decade of the 21<sup>st</sup> Century and the Baby Boomers started entering the LTPAC market, the demand for senior living increased and ALFs began to grow again. New EMR software applications specifically for ALFs were developed that were more clinical and could measure the requirements for increased ADLs and the fee for ALF service increased. These ALF EMRs were interoperable with the Nursing Center EMRs. Also, persons living in a Nursing Center with a chronic disease state that did not require 24x7 skilled nursing began to be transitioned to an ALF. The new ALF sector then began to divide into the social and medical models of care. In the medical model, the ancillaries are being expanded in the areas of medication management and therapy/fitness. Some states now require a separate licensure for ALF Dementia care facilities.

The following is a summary of ALFs provided by the National Center for Assisted Living (NCAL):

"The philosophy of assisted living is to provide supervision, assistance and personal care services to senior citizens and individuals with disabilities as needed. The goal is to maintain maximum independence in a home-like setting, while providing individualized care and assistance. Assisted living offers a unique mix of security and independence, privacy and companionship, and physician and social well-being.

'In most states, assisted living residences are registered, licensed or certified by an appropriate department or agency of the state that has a process for issuance or initial licenses and for renewing existing licenses.

"Each resident receives individualized services to help him/her function within the residence and within the community. Upon admission, a service plan is usually developed to coordinate the delivery of services to each resident. The agreement, which includes an assessment or evaluation of the residents physical and psychosocial needs, is reviewed and updated regularly by the staff, and as the residents condition indicates. The resident and family, or responsible party, are encouraged to play an active role in the development of the service plan.

A resident care or wellness coordinator is usually designated to oversee the process of developing, implementing, and evaluating the progress of the service plan. A copy of the service plan is provided to the resident, family, or responsible party upon request."<sup>22</sup>

The top 40 ALF provider table that gives a complete profile of each corporation can be found on the Footnote link.<sup>23</sup>

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<sup>22</sup> <http://www.ahcancal.org/ncal/Pages/index.aspx>

<sup>23</sup> *Provider's* 2014 list of the Top 40 Largest Assisted Living Facility Companies is ranked by bed count as of Dec. 31, 2013 June Issue of AHCA's Provider Magazine.

## APPENDIX F: INPATIENT REHABILITATION FACILITY (IRF) ALSO CALLED INPATIENT REHABILITATION HOSPITALS/UNITS (IRH/Us)

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Inpatient medical rehabilitation is a critical component of the health care delivery system. Medical rehabilitation refers to evaluation, diagnosis, treatment, and procedures, which seek to minimize physical and cognitive impairments, prevent institutionalization and re-hospitalization, and optimize functional ability, thereby reducing the impact of a disabling condition on the quality and productivity of a patient's life.<sup>24</sup>

The goals and purpose of inpatient medical rehabilitation have been described in various ways with the primary emphasis on restoring a person's ability to function in a normal manner. Medical rehabilitation may begin during a patient's stay in an acute care hospital, as effort is undertaken to help the patient move, walk, talk, dress, and/or eat by him or herself independently without assistance.

For the majority of clinicians and advocates in the medical rehabilitation field, the preferred term for patients is "persons with disabling conditions" (PWD). The emphasis is placed on an individual patient's ability to function and not on his/her disabling condition.

### Conditions Necessitating Inpatient Medical Rehabilitation

Unlike acute care hospitals, which focus on a patient's diagnosis in developing a care plan, inpatient rehabilitation hospitals and units (IRH/Us), which are referred to by CMS as inpatient rehabilitation facilities or "IRFs" consider an individual's function, other patient characteristics, and environmental factors in determining the appropriate care for an individual. Conditions commonly treated in medical rehabilitation hospitals include stroke, brain and spinal cord injuries, neurological diseases, major musculoskeletal disorders, cardiopulmonary disorders, and transplantation.

Medicare's coverage rules for an inpatient rehabilitation facility (IRF). Restrict admissions to patients who are able to tolerate three (3) hours of therapy up to five (5) days a week. This intensive level of physical medicine distinguishes this patient from one admitted to an LTCH or Nursing Center where they may also receive therapy; but both would provide more intensive nursing than physical therapy until the patient's strength grew to a level where they can tolerate 3 hours of therapy per day (Medicare Benefit Policy Manual, Chapter 1, Section 110). The IRF certification rules further require that 50 to 75 percent of all admissions in a facility or unit must be within 13 rehabilitation-related diagnoses (section 412.23 (b)(2)). Although this rule is criticized as not recognizing IRF case mix changes that occur as medical technology and other practice patterns evolve, the rule identifies a clear set of patients for whom IRFs are considered specialized providers. The rule is also broad enough to allow IRFs to treat a smaller number of other patients with potentially less intensive acute inpatient rehabilitation needs.

"Medicare's payment rules for IRF admissions also recognize the differences between these patients and other hospital admissions. IRF payment rates adjust for the severity of medical *and* rehabilitation impairments

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<sup>24</sup> There are varying definitions of rehabilitation. The World Health Organization describes rehabilitation as "instrumental in enabling people with limitations in functioning to remain in or return to their home or community, live independently, and participate in education, the labour market and civic life." See <http://www.who.int/disabilities/care/en/>. The National Association of Insurance Commissioners defines rehabilitation as "health care services that help a person keep, get back or improve skills and functioning for daily living that have been lost or impaired because a person was sick, hurt or disabled." The Department of Health and Human Services mandates that all state health exchange insurance plans include within their essential health benefits rehabilitative and habilitative services. HHS defines rehabilitative and habilitative services as "services and devices to help people with injuries, disabilities, or chronic conditions gain or recover mental and physical skills." See <https://www.healthcare.gov/blog/10-health-care-benefits-covered-in-the-health-insurance-marketplace/>.



treated in these hospitals. They are based on rehabilitation impairment categories that group patients by type of illness or injury. These rates are adjusted for the costliness of having certain co-morbid complications and for differences in functional impairment levels. IRF staff generally have greater training in physical medicine and rehabilitation than those in acute hospitals, including the physiatrists, rehabilitation nurses, higher ratios of physical, occupational, and speech therapists to nursing staff, and the higher proportion of therapy aides who are not typically employed in acute hospitals.<sup>25</sup>

Each patient treated in an IRU/U must meet strict medical necessity coverage criteria. To be able to receive care at an IRH/U, a patient must reasonably be expected to actively participate in and benefit from intensive rehabilitation therapy; this is defined as three hours of therapy five days a week or 15 hours a week. Additionally, the patient must be sufficiently stable to be able to “actively participate,” and a rehabilitation physician must supervise him or her. IRH/Us are required to provide: close medical supervision by a physician with specialized training; 24- hour rehabilitation nursing; a multidisciplinary team approach; and the aforementioned three hours of intensive therapy daily.<sup>26</sup>

Medicare’s coverage rules for an inpatient rehabilitation facility (IRF), include restricting admission to patients who are able to tolerate three (3) hours of therapy up to five (5) days a week. This intensive level of physical medicine distinguishes the IRF patient from a patient admitted to an LTCH or Nursing Center where he or she may also receive therapy; but both LTCHs and Nursing Centers would provide more intensive nursing than physical therapy until the patient’s strength grew to a level at which he or she can tolerate 3 hours of therapy per day (Medicare Benefit Policy Manual, Chapter 1, Section 110).

### **IRF Classification Criteria**

Additionally, to be classified as an IRH/U, the hospital must have a medical director and nurses who specialize in physical medicine and rehabilitation, a medical director who is a physician with special training in rehabilitation medicine, and an interdisciplinary treatment team. The treatment team, which is comprised of a rehabilitation medicine physician, rehabilitation nurse, and physical, occupational, and speech language therapists, holds interdisciplinary conferences once a week. IRH/U patients receive social services, psychological services, and close medical supervision at least three times a week from a physician trained in rehabilitation medicine.

The IRH/Us or “IRFs” classification criteria further require that 60 percent of all admissions to an IRF, Medicare and not, come from 13 rehabilitation-related diagnoses (section 412.23 (b)(2))<sup>27</sup>. This rule was originally implemented in 1984 when 75 percent of the patient had to represent 10 conditions. It was

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<sup>25</sup> Long-Term Care Hospital (LTCH) Payment System Monitoring and Evaluation Phase II Final Report ; RTI International Health, Social, and Economics Research; RTI Project Number 07964.020 January 2007

<sup>26</sup> See 42 C.F.R. §412.622.

<sup>27</sup> The thirteen medical conditions that qualify for the 60 percent rule, as specified in the May 7, 2004, IRF Prospective Payment System (PPS) Final Rule, are: Stroke; Spinal cord injury; Congenital deformity; Amputation; Major multiple trauma; Fracture of femur (hip fracture); Brain injury; Neurological disorders, including: Multiple sclerosis; Motor neuron diseases; Polyneuropathy; Muscular dystrophy; and Parkinson’s disease; Burns; Active polyarticular rheumatoid arthritis, psoriatic arthritis, and seronegative arthropathies resulting in significant functional impairment of ambulation and other activities of daily living; Systemic vasculidities with joint inflammation resulting in significant functional impairment of ambulation and other activities of daily living; Severe or advanced osteoarthritis (osteoarthritis or degenerative joint disease) involving two or more weight bearing joints (elbow, shoulders, hips, or knees but not counting a joint with a prosthesis) with joint deformity and substantial loss of range of motion, atrophy of muscles surrounding the joint, and significant functional impairment of ambulation and other activities of daily living; and For the final qualifying condition, the following patient characteristics were identified, which add complexity in a way that is likely to require an inpatient rehabilitation hospital/unit “IRF” level of care: Knee or hip joint replacement, or both, during an acute care hospitalization immediately preceding the inpatient rehabilitation stay and also meets one or more of the following specific criteria: The patient underwent bilateral knee or bilateral hip joint replacement surgery during the acute care hospital admission immediately preceding the inpatient rehabilitation hospital admission; The patient is extremely obese with a Body Mass Index of at least 50 at the time of admission; or the patient is age 85 or older at the time of admission to the IRH/U.

changed in 2007, thereby requiring 60 percent of IRH/U patients to represent 13 conditions.<sup>28</sup> Although the 60 percent rule is criticized as not recognizing IRF case mix changes that occur as medical technology and other practice patterns evolve, the 60 percent rule identifies a clear set of patients for whom IRFs are considered specialized providers. The 60 percent rule is also broad enough to allow IRFs to treat a smaller number of other patients with potentially less intensive acute inpatient rehabilitation needs.

“Medicare’s payment rules for IRF admissions also recognize the differences between these patients and other hospital admissions. IRF payment rates adjust for the severity of medical *and* rehabilitation impairments treated in these hospitals. They are based on rehabilitation impairment categories that group patients by type of illness or injury. These rates are adjusted for the costliness of having certain co-morbid complications and for differences in functional impairment levels. IRF staff generally have greater training in physical medicine and rehabilitation than those in acute hospitals, including the physiatrists, rehabilitation nurses, higher ratios of physical, occupational, and speech therapists to nursing staff, and the higher proportion of therapy aides who are not typically employed in acute hospitals.<sup>29</sup>”

Since implementation of the IRF prospective payment system in 2002, IRH/Us have been required to complete the Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI). The IRF-PAI is an assessment tool that collects highly detailed information about a patient’s diagnosis, co-morbidities and complexities, length of stay, motor and cognitive functioning, as well as discharge destination and initial referring site. It provides additional patient data that would be helpful in characterizing and understanding IRH/Us’ readmissions patterns, patient characteristics, and developing risk adjustment analyses. IRH/Us report their patient data to the Centers for Medicare and Medicaid Services (CMS).

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<sup>28</sup> See *Medicare Program; Inpatient Rehabilitation Facility Prospective Payment System for Federal Fiscal Year 2008*, Final Rule, Vol. 72, No. 151 of the *Federal Register*, published on Tuesday, August 7, 2007, p. 44286 at <http://www.regulations.gov/#!documentDetail;D=CMS-2007-0140-0001>.

<sup>29</sup> Long-Term Care Hospital (LTCH) Payment System Monitoring and Evaluation Phase II Final Report ; RTI International Health, Social, and Economics Research; RTI Project Number 07964.020 January 2007

## APPENDIX G: LONG TERM ACUTE CARE HOSPITALS (LTCH)

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Persons recovering from critical illness that experience persistent organ failures necessitating complex care for a prolonged period of time used to spend their entire acute care episode in a general medical-surgical hospital. However, in recent years long-term acute care hospitals have emerged as an alternative to persons recovering from severe acute illness.

“Long-term acute care hospitals are defined by CMS as acute care hospitals with a mean length of stay equal to or greater than 25 days. Typically these hospitals provide care for patients who do not require all of the services of a short-stay hospital but still have significant ongoing care needs. In the post-intensive care unit (ICU) setting, these hospitals act as specialized hospitals for patients requiring prolonged mechanical ventilation and those with other types of chronic critical illness.

“With the aging of the population and advances in critical care, the incidence of chronic critical illness is expected to increase in the coming years. Long-term acute care hospitals could play a particularly important role in caring for these patients. Yet despite their increasing role, few population-based data exist on overall patterns of long-term acute care use, and little is known about how the characteristics of patients transferred into long-term acute care have evolved over time.”<sup>30</sup>

“Originally, LTCHs were intended for patients in need of prolonged weaning off mechanical ventilator use; however, present admission diagnoses encompass a wide range of diseases. Patients who are admitted to LTCHs have complex situations, multiple co-morbidities, and acute medical needs; co-morbidities include respiratory failure that requires weaning of mechanical ventilator, recent surgeries, presence of gastrostomy tubes, diabetes, receipt of total parenteral nutrition, presence of bladder catheters or central vascular catheters, decubitus ulcers, and malnutrition. It is important to note that a large number of LTCH patients have had long-length stays at their acute care hospitals of origin, including stays at intensive care units (ICUs). All of these characteristics place patients who are transferred to LTCHs at high risk of colonization with multi-drug resistant bacteria.”<sup>31</sup>

“The LTCH patient population is more severely ill than patients treated in general acute care hospitals. Data from general acute hospitals show that patients discharged to LTACHs have the highest medical severity when compared to patients in other settings. For example, 47 percent of inpatient PPS patients discharged to an LTCH have a severity of illness (SOI) level 4 (extreme severity) compared to only 22 percent of patients in intensive care units (ICUs). Since LTCH patients are typically far sicker, their average length of stay is much longer: 26.8 days for LTCHs, 5.1 days for general acute hospitals, and 6.8 days for ICUs in general acute hospitals. The transformation of LTCH operations beginning in fiscal year 2016 will result in two patient populations being served in LTCHs: the traditional LTCH population and a short-stay, site-neutral population.”<sup>32</sup>

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<sup>30</sup> Caring for the Critically Ill Patient | June 9, 2010; Long-term Acute Care Hospital Utilization After Critical Illness Jeremy M. Kahn, MD, MSc; Nicole M. Benson, BS; Dina Appleby, MS; Shannon S. Carson, MD; Theodore J. Iwashyna, MD, PhD JAMA June 9, 2010, Vol 303, No. 22

<sup>31</sup> Long-Term Acute Care Hospitals; L. Silvia Munoz-Pricea; Medical Specialists, Munster, Indiana: CID 2009:49 (1 August); HEALTHCARE EPIDEMIOLOGY

<sup>32</sup> AHA 2015 Fact Sheet

## APPENDIX H: LTPAC VQCC DIFFERENTIAL - DURATION OF CARE

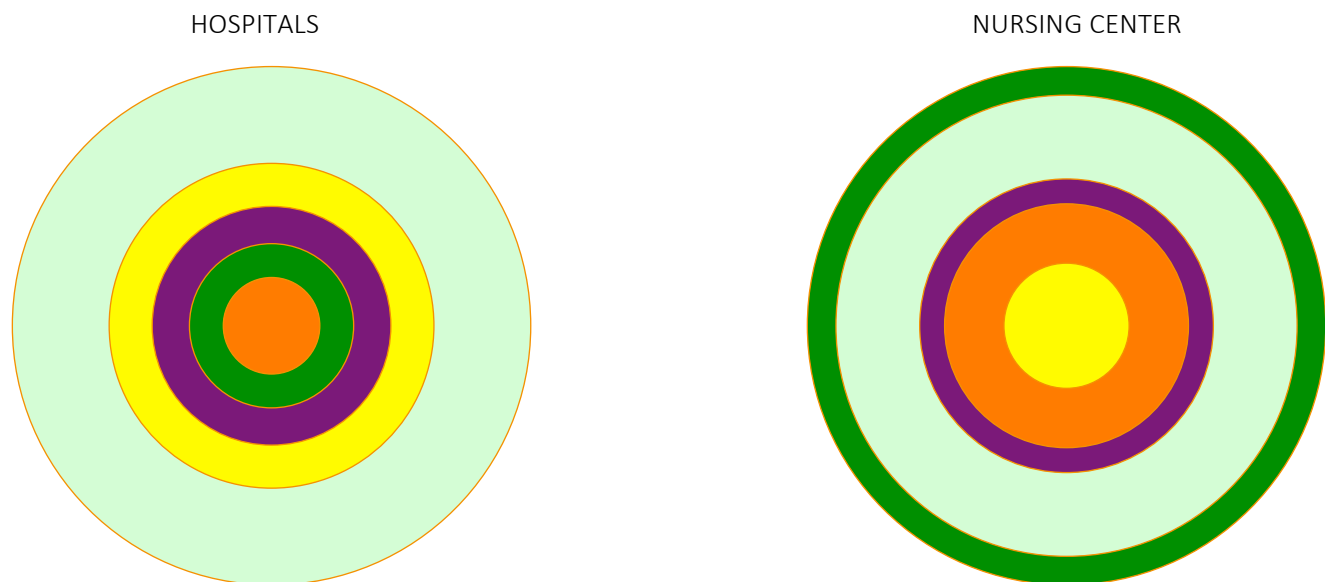
Duration of Care or length of stay (LOS) between Acute Care and LTPAC is the major VQCC Differential. The time a Provider has to provide care empowers the Provider to accomplish many objectives towards the Triple Aim.

### VQCC #1 LTPAC Duration of Care Differential allows for:

- Prolonged care duration over a hospital LOS for continued diagnosis, care, and clinical outcomes;
- Person clinical, activities of daily living, and social observations over a long course of care;
- The development of a person-centric electronic Longitudinal Care Plan; and
- The trending of clinical information to establish alerts, early potential intervention and prevention care as well as a beginning of care maintenance and wellness goals.

In comparison with a hospital where the average LOS is in days, a person under a LTPAC Provider care the LOS or Duration of Stay is in weeks, months, and years.

Below are two circle charts illustrating the relative usage of the duration of time within Hospitals on the left and in Nursing Centers and most other LTPAC facility care settings on the right.



**Duration is Dark Green; eAssessments is Orange; Medication Management is Purple; Technology is Yellow; and, In Hospitals Light Green is Incident Fix and in LTPAC Light Green is Chronic Care**

As can be seen hospitals spend most of their time fixing the incident that caused the hospitalization where a Nursing Center spends most of its time providing chronic care to persons with co-morbidities. The Technology circle in Hospitals is large because of the valuable Diagnostic, Treatment, and Monitoring Instrumentation as well as the software technology. In the Nursing Center, Technology it is mostly in the: Supportive Services, Therapy Equipment, Medication Dispensing, Point of Care, and Software.

Time is invaluable to developing, implementing, and maintaining the person's longitudinal care plan as well as the preparation of the transition of the plan to the next care provider and/or to their home of choice. In most hospital

acute care cases extra LOS is not available to prepare a dynamic holistic longitudinal care plan. Hospital Disease Related Groupings (DRG) is dependent upon the duration of the LOS. If the DRG LOS is exceeded, the hospital is required to cover 20% the cost of the extra acute hospital stay. Nursing Centers do not use DRGs for Medicare reimbursements they use RUGs (Resource Utilization Groups IV). RUGs are based on data from resident assessments (MDS 3.0) and relative weights developed from staff time data.<sup>33</sup>

Today's LTPAC clinical capability allows comprehensive longitudinal care due to the time of observation and collection of clinical and social data from many sources. Data is collected by observation; point of care; and other devices over a long period of time and is entered into the EMR. The data points are aggregated and Clinical Decision Support software is applied to produce trending and alerts aligned to a person's chronic care. A comprehensive person-centric longitudinal care plan is the best way the healthcare system can achieve the final paradigm shift to the preventative stage.

In many cases, a LTPAC Provider will be the one of the first care provider settings that can develop a comprehensive holistic chronic care longitudinal plan of care that takes into consideration all aspects of care.

Why would the Nursing Center/HHA be one of the first care setting to develop the longitudinal care plan?

Answer: They care for the person long enough to do eAssessments of the whole person and evaluate possible chronic care requirements. It is the combination of all of the clinical factors of care that make the longitudinal plan dynamic. These are the factors that require a longer duration of care than what is provided in the hospital LOS includes:

- eAssessment of the person's total health condition;
- Evaluate the persons health leading up to the hospital incident;
- Necessary Long-term rehabilitation therapy;
- Chronic care conditions and possible co-morbidities;
- Behavioral Health;
- Medication Management including Polypharmacy;
- Person Social Observations;
- Family Observations;
- Conditions of Daily Living; and
- Education on the adjustment the person will have to make on their new quality of life situation when they return home.

The above clinical factor requirements cannot be achieved in days but only over a period of time with a coordination team of multiple clinical and social specialists. A hospital has a full team of episodic trained professionals. But, in chronic care there has to be a coordinated team of longitudinal care professionals, which are found in a Nursing Center and other LTPAC Provider settings to develop the electronic longitudinal plan. It also helps that the professional coordination team is within a facility with a controlled environment.

The summary of the person's LTPAC longitudinal care plan will be included in the ToC to the next care provider whether it be another LTPAC provider, the person themselves or their home caregiver therefore maintaining the person-centric longitudinal plan throughout the spectrum of care.

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<sup>33</sup> (<http://persons.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/SNFPPS/index.html>)

## APPENDIX I: TWO: LTPAC VQCC DIFFERENTIAL – eASSESSMENTS

“The MDS is a Minimum Data Set and not a full comprehensive assessment. In long term care there are a variety of assessments that are completed to give a comprehensive view of the resident – examples include Nursing, Activities, Social Services, Dietary, and Rehab. Many of these assessments have sub-assessments that are specific to certain things, i.e. – smoking, falls, skin, etc. As stated in the document, the MDS has been utilized by CMS and some state agency for reimbursement but it is not the sole reason for a comprehensive assessment. In LTPAC we have to plan the residents care in accordance with the residents’ wishes even through a transition period to another level of care or home. We have to focus on all areas (community, spiritual, family, etc.) and not just disease state management.”<sup>34</sup>

A Comprehensive eAssessment is conducted by each LTPAC Provider upon receiving the person from the hospital via the electronic Transitions of Care (ToC).

PROVIDER	eASSESSMENT
NURSING CENTER	MDS 3
HHA	OASIS
IRF	IRF-PAL
LTCH	LTCH QRP

In accordance to CMS regulations, eAssessments are conducted routinely throughout the persons length of stay in LTPAC care as well as when there is a change in a person’s clinical state. In the Nursing Center, the Minimum Data Set (MDS) electronic assessment has been submitted electronically to CMS for over 10 years. The MDS was required to be electronic in order to be reimbursed by CMS for the Medicare that was provided in accordance with the RUG.

LTPAC Providers have been using digital technology long before the HITECH Act was passed in the 2009 ARRA legislation. Hospital patient assessments are typically not as comprehensive as LTPAC Provider admission eAssessments as the hospitals’ primary focus is on the episodic incident that caused the hospital admission. Hospitals also do history and physicals, social support and environmental factor assessment. They are less standardized and don’t have to be submitted to CMS.

eAssessments are not a stand-alone documents but part of the person’s longitudinal care plan developed by the caregiver and entered into the EMR. eAssessments are static and can be retrospective but they are not as timely as a robust EMR application incorporating continuous clinical information. Incorporated into an EMR the eAssessment provides a valuable input into the longitudinal care plan.

### VQCC #2 LTPAC eAssessments Differential establishes:

- A comprehensive clinical and functional total patient electronic assessment;
- An eAssessment under CMS regulations and approved standards that is updated to a schedule and as necessary;
- An eAssessment conducted by a coordinated team of licensed personnel in accordance with CMS regulations; and
- Clinical knowledge over a long duration of time therefore allowing an Electronic Medical Record (EMR) software application to develop trending and alerts to potential incidents and prevent possible rehospitalizations, regardless of the site of care.

<sup>34</sup> Consulate Health Care

**Hospital Person Assessment:** The hospital assessment while varying in the specific content is not submitted to CMS or other outside entity as a formal eAssessment of the total person.

### **Skilled Nursing Home eAssessment MDS:**

“This brief discusses the value of the MDS as an assessment, however does not address that the admission assessment done by nursing, social services, dietary, and activities. This is an additional comprehensive assessment that drives the care plan from the moment the person enters the door. In addition, interdisciplinary teams are involved in every aspect of the patient care and coordinate all care with the aim of transitioning the resident to the “home of their choice.” In hospitals, patient care is less patient driven and more disease or episode driven as John has mentioned. I don’t think that we can emphasize enough that we are caring not only for the person’s disease but the many other cultural, economic, psychosocial, and spiritual factors that determine the patient’s attitude toward care, participation in care, and outcome. In addition, we are more intimately involved in the patient’s other relationships. Families, friends, neighbors, and significant others play a much bigger role in post-acute care. Another large part of what we do is educate not only the resident, but also those involved in their care about all aspects of their care, not just their primary disease.”<sup>35</sup>

Each LTPAC Provider has a person designated to be the eAssessment Coordinator. In most cases it is a licensed nurse. Originally this person just filled in the electronic form from the paper clinical record. Today the position is a very important quality assurance (ensuring accuracy) and clinical (identifying clinical inconsistencies and trends) team member. As an example, in the Nursing Center the person is the Nurse Assessment Coordination or NAC.

“The complexity of the NAC’s role has clearly increased and developed since the implementation of the first MDS in 1988. Initially, NACs were often employed at a facility in an alternate role (e.g., quality assurance); the collection of data for the MDS was an added responsibility. Many of the early MDS-related responsibilities revolved around proper collection, documentation, and transmission of required data. While the MDS assessment and care planning process was recognized as a function of the Resident Assessment Instrument (RAI) process, the primary focus of completing the MDS has been on regulatory adherence for purposes of reimbursement. The MDS was designed to improve resident care, and the tool has moved in that direction steadily. The need for regulatory adherence continues to exist within the MDS data-collection role, but with a high level of clinical complexity and need for critical thinking. The early vision of the MDS as a tool that would lead resident care to a much higher level is now being realized. It is incumbent upon the NAC to fulfill that promise.

“One study completed at the Duke University School of Nursing demonstrated how NACs, when performing at a high level, improve resident care measurably. The study examined role management and communication at several long-term care facilities and found that when MDS coordinators foster new information flow and good connections among staff, the resident care improves.

“The NAC requires nursing assessment skills and the ability to conceive and create care plans based on a comprehensive resident assessment that is accomplished through resident and family interviews, physical assessment, observation, and input from the care team.

“More in-depth assessments are guided by the newly added Care Area Assessments (CAAs). The deeper focus on assessments is aimed at decreasing complications in long term care residents and providing an improved quality of life. The NAC provides careful and thorough physical and psychological nursing assessments on each resident identified as at risk. The NAC is responsible for communicating with the entire health care team to ensure provision of a cohesive and effective care plan. The NAC must also properly record the data in the database and transmit it to the appropriate location for payment and quality.”<sup>36</sup>

With robust LTPAC EMRs and built-in integrated clinical decision support (CDS) software, preventive alerts to incidents, and prevention of unnecessary rehospitalizations, the NAC plays a very important longitudinal team coordinator.

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<sup>35</sup> Consulate Health Care

<sup>36</sup> Defining the Role of Nurse Assessment Coordinators: Beyond Paperwork and Reimbursement; ANNAC 2011

Home Healthcare Agency eAssessment OASIS-C1: The HHA eAssessment is the Outcome and Assessment Information Set (OASIS). The current version is the OASIS-C1.

“Since 1999, CMS has required Medicare-certified home health agencies to collect and transmit OASIS data for all adult patients whose care is reimbursed by Medicare and Medicaid with the exception of patients receiving pre- or postnatal services only. The Home Health conditions of participation require that the comprehensive OASIS assessment must be updated and revised no less frequently than: (1) The last 5 days of every 60 days beginning with the start of care date, unless there is a beneficiary elected transfer, significant change in condition, or discharge and return to the same HHA during the 60-day episode; (2) within 48 hours of the patient’s return to the home from a hospital admission of 24 hours or more for any reason other than diagnostic tests; and (3) at discharge. It is important to note that to calculate quality measures from OASIS data, there must be a complete quality episode, which requires both a Start of Care (initial assessment) or Resumption of Care OASIS assessment and a Transfer or Discharge OASIS assessment.

“Because most OASIS items describe patient health and functional status, they are useful in assessing the care needs of adult patients. HHAs will find it necessary to supplement the OASIS items in order to comprehensively assess the health status and care needs of their patients (for example, the OASIS does not include vital signs which are typically included in patient assessments).

“OASIS data items encompass socio-demographic, environmental, support system, health status, and functional status attributes of adult (non-maternity) patients. In addition, selected attributes of health service utilization are included. These several different types of attributes should be part of a comprehensive patient assessment, but we emphasize that the OASIS was not developed as a comprehensive assessment tool.

“In addition to measuring patient outcomes, OASIS data have three important uses in the areas of:

- Patient assessment and care planning for individual adult patients;
- Agency-level case mix reports that contain aggregate statistics on various patient characteristics such as demographic, health, or functional status at start of care; and
- Internal HHA performance improvement.

All applications build on and are implemented most efficiently and effectively when OASIS data items are thoroughly integrated into HHA clinical documentation. <sup>37</sup>

**C.A.R.E. Assessment:** CMS is currently working with RTI to update the LTPAC Provider eAssessments. The goal is to have reliable, standardized items across settings that can be used to monitor quality and access, and set payments. The research was done with a person centric standard eAssessment labeled the C.A.R.E. Assessment (Continuity Assessment Record and Evaluation). The CARE items have been tested in acute hospitals, IRFs, LTCHs, Nursing Centers, HHAs, outpatient therapy providers, and nursing facilities. CMS has been replacing items in the various assessment tools with the standardized versions tested in the CARE item set. This allows each LTPAC provider to maintain the assessment items they use for planning purposes while standardizing the items needed to measure relative differences in health status. Work is being researched to use the C.A.R.E. Item Set to use in the electronic health record used in the ToC.<sup>38</sup> C.A.R.E. items are being evaluated to be used as the person eAssessment for HCBS and in the CMS TEFT Grant for State Medicaid programs.

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<sup>37</sup> <http://persons.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/OASIS/index.html?redirect=/oasis/>

<sup>38</sup> (<http://persons.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Post-Acute-Care-Quality-Initiatives/CARE-Item-Set-and-B-CARE.html>)



## APPENDIX J: THREE: LTPAC VQCC DIFFERENTIAL – CHRONIC CARE AND CO-MORBIDITIES

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“Through better management of patients with chronic disease, health care providers not only can improve health outcomes but they can control the high cost of treating illnesses like diabetes, asthma, congestive heart failure, and depression. To encourage better care management, there are a number of incentives for physician practices to form patient-centered medical homes, which use electronic health records, patient registries, care teams, and other processes that have been shown to improve care for chronically ill patients while helping to control costs.”<sup>39</sup>

### VQCC #3 LTPAC Chronic Care – Co-Morbidity Care Differential establishes:

- LTPAC Providers as one of the first providers after hospital discharge to coordinate care, have coordinated staff, and use health IT capability to conduct Chronic Care co-morbidity eAssessments;
- A complete clinical profile of the patient identifying the diagnostic; care; treatment; and/or maintenance plan; and observation requirements for chronic care and co-morbidities;
- A person-centric longitudinal care record based on coordinated team care in a controlled environment; and
- A plan that prepares the person (and their family) for the next level of care or the home of their choice.

Upon receiving a patient from the hospital during the transition of care (ToC) a total eAssessment is conducted upon admittance to a LTPAC Provider. Many times upon admission and conducting an eAssessment a person’s chronic care condition and possible co-morbidities are identified that are in addition to what might have been diagnosed in the hospital stay. Hospitals base their treatment on the episodic disease state that brought the person into the hospital.

“A major factor in poor outcomes for hospitalized older adults is the health care delivery system. If acute care is not designed to address their altered response to illness and treatments, functional needs, and psychosocial issues, they are at significant risk for hospital-acquired complications and loss of functionality. Each health system should develop its own acute geriatric care program based on its resources and a plan for geriatric competency for all its health care workers.”<sup>40</sup>

This is what the hospital was designed to perform. Fix and stabilize the inpatient as soon as possible with quality care. Set up the person for transmission of care to their home or a LTPAC facility for continued care and maintenance as well as prepare the person for their quality of life after their clinical incident.

Within the hospital LOS there is not enough time to accomplish what is necessary to move a person from episodic to predictive to a preventative stage of care. Nor, should the hospital be responsible for post-acute care. The cost in a hospital is too high in comparison to other less costly care facilities in LTPAC. Why? The main reason is that the hospital has high capital costs to achieve their episodic fix objective.

One of the major LTPAC Differentials is the ability, experience, staff, and health IT to conduct comprehensive person-centric eAssessments leading to what is usually the persons first longitudinal care plan. Acute care is very aware of a person’s possible chronic care conditions but their focus is mainly on keeping the person alive where as the post-acute care focus of giving the person a life worth living. Acute outcomes are often related to mortality and readmissions when LTPAC outcomes are related to functional mobility and ADLs. In a LTPAC facility the

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<sup>39</sup> Managing Chronic Illness: Physician Practices Increased the Use of Care Management and Medical Home Processes; The Commonwealth Fund; 2015

<sup>40</sup> Redesigning Hospital Care for Older Adults; Dee Tucker, MS, RN, CS, Gail Bechtel, LCSW, C-ASWCM, Carol Quartana, RD, LD, Naadede Badger, PharmD, BCPS, Donna Werner, MPT, ATC, Ilisher Ford, LMSW, Larry Connelly, M-Div, BCC); (March–April, 2006 Volume 27, Issue 2, Pages 112–117; <http://dx.doi.org/10.1016/j.gerinurse.2006.02.013>

eAssessment focus is continuously conducted on a person to establish their chronic conditions and their possible co-morbidities. The VQCC is the establishment of what could be the person's first electronic longitudinal care plan. A longitudinal care plan that will be: used; monitored; adjusted; measured for clinical outcomes; and ultimately the basis for the transition of care to the next level of care or hopefully to their home of choice.

One of the most important member partners of the Staff is the Medical Director.

"Currently, all long-term care facilities are required to have a physician identified as medical director. The data now reported suggests that there is a clear and measurable positive effect on quality if that medical director is a "certified" medical director CMD. This may have policy implications in all of long-term care. Because the CMD designation indicates a minimum level of experience and education in medical director management and clinical geriatric medicine, it suggests that every long-term facility and program should have a CMD or the equivalent. An alternate explanation is that CMDs are a self-identified group of dedicated, experienced individuals who are willing to be held accountable as long-term care providers and leaders, and that they would be so whether or not they had attained recognition as a CMD. Whatever the reason, our patients deserve the best of all of us.

"Results: The presence of a CMD accounted for up to 15% improvement in quality. Conclusions: The presence of CMDs is an independent predictor of quality in US nursing homes. This research demonstrates that the presence of a CMD in a facility makes an appreciable positive difference in the quality of care provided in that facility."<sup>41</sup>

"Nursing homes (NHs) are increasingly recognized as critical components of the long-term care (LTC) continuum. Acute care systems have come to recognize the need for high-quality and easily accessible post-acute care venues, a niche that NHs have embraced over the past several years. In fact, post-acute patients receiving skilled nursing facility rehabilitation now account for almost 20% of total NH days. However, this patient population has, in recent years increasingly presented with illnesses of greater intensity and complexity, and with greater frailty, than in previous years. This trend presents a challenge for the healthcare professionals who provide care at the bedside. Whereas alternatives to NH care clearly exists (i.e., home care, assisted living), the capacity to accommodate a burgeoning, frailer, older population will likely strain the system even as it ensures an important role for NHs well into the foreseeable future.

"While the evidence linking nursing care to clinical quality is well accepted, an analogous link between physician care and quality is just now being defined. Notably, new evidence suggests that physician commitment (defined as the percentage of total practice devoted to NH care), nurse-to-physician communication, and medical staff organization are all correlated with important clinical outcomes.

"Predicated on the need for a skilled provider workforce, as well as additional rationale set forth in a 2010 white paper commissioned by AMDA – The Society for Post-Acute and Long-Term Care Medicine (formerly the American Medical Directors Association), a competency work group was convened in 2011. This work group was charged with developing a framework for a set of competencies (i.e., measurable or observable knowledge, skills, abilities, and behaviors that are critical to successful job performance) geared specifically toward the NH attending physician. What follows is a review of these competencies and the rationale and processes behind their development.

"The rationale for a framework upon which to build NH competencies consisted of the following key points or observations: (1) NH practice demands a unique skill set; (2) competencies should be linked to relevant clinical outcomes/quality; (3) the credibility of physicians should be predicated, in large part, on specialization; (4) there is an impetus to set the bar for standards independently or allow government to determine performance metrics; and (5) competencies should inform new curriculum development, which aligns with the educational mission of AMDA. The framework that resulted was based upon the Accreditation.

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<sup>41</sup> Impact of Medical Director Certification on Nursing Home Quality of Care Frederick N. Rowland, PhD, MD, CMD, Mick Cowles, BA, MS, Craig Dickstein, BA, MS, and Paul R. Katz, MD, CMD JAMDA – July 2009 Pages 431-435

“Three major concepts guided the work group as they developed the core competencies. The first was the acknowledgment that the practice of post-acute and LTC medicine requires a knowledge base and skill set that can be defined within a specific set of competencies and which reflect expertise found in a number of other specialties, including family medicine, internal medicine, hospital medicine, palliative care, rehabilitation, geriatric medicine, and psychiatry. Second, although none of these discipline specific competencies are individually sufficient to describe the full range of post-acute and LTC medicine competencies, each one is necessary for effective practice. Third, that competency must reflect a mix of the many skills unique to each of these disciplines, which must then be operationalized within a unique care setting with its unique regulatory requirements while incorporating the full skill set of the entire interdisciplinary team (IDT).”<sup>42</sup>

Some Nursing Centers have hired a physician to be on an individual Nursing Center Staff. Others have hired Physician Assistants. Many times the person going through a ToC from a hospital does not get transitioned until Friday afternoon. Clinically the first 48 hours of Nursing Center care are the most important to the discharge care plan, eAssessments, Chronic Care, Medication Management, and Therapy. If the person is ToC on Friday afternoon the weekend falls under the first 48 hours of care. A physician’s input is very valuable during this critical time. If a physician is not on site, they are on call over the weekend.

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<sup>42</sup> Examining the Rationale and Processes Behind the Development of AMDA’s Competencies for Post-Acute and Long-Term Care; (<http://persons.annalsoflongtermcare.com/print/2727>) Friday, November 7, 2014 - 09:24; Author(s): Paul R. Katz, MD, CMD • Matthew Wayne, MD, CMD • Jonathan Evans, MD, CMD • Leonard Gelman, MD, CMD • Sheena L. Majette, BS; Issue Number: Volume 22 - Issue 11 - November 2014 (/issue/2726) The Society for Post-Acute and Long-Term Care Medicine

## APPENDIX K: FOUR: LTPAC VQCC DIFFERENTIAL – MEDICATION MANAGEMENT

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“In 1997 a landmark publication changed medication management throughout the spectrum of care but mainly in SNFs as it established the consultant pharmacist review of medications in a SNF.

“Drug-related morbidity and mortality in nursing facilities represent a serious economic problem. For every dollar spent on drugs in nursing facilities, \$1.33 in health care resources is consumed in the treatment of drug-related problems. With the current federally mandated drug regimen review, it is estimated that consultant pharmacists help to reduce health care resources attributed to drug-related problems in nursing facilities by \$3.6 billion.”<sup>43</sup>

“Historically, pharmacists’ role in healthcare centered around dispensing medications in accordance with a prescription, and providing a final check to ensure accurate delivery of medications to patients. Although they receive training in preventive care, health and wellness, and patient education, pharmacists have traditionally leveraged their clinical knowledge to review prescribed drug regimens to prevent inappropriate dosing and minimize drug interactions. Pharmacists’ roles have expanded over time to include more direct patient care, such as primary care and disease management services, and their roles continue to evolve today.

“Now more than ever, team-based healthcare is gaining traction in the United States. As pharmacists continue to collaborate as part of a patient’s team of providers, it is important to understand the types of services they provide, their capacity to meaningfully improve care and, ultimately, how these services can align with the changing healthcare environment.

“The evidence base on pharmacist services is growing and spans multiple therapeutic areas and settings including community pharmacies, physician offices, ambulatory/outpatient clinics, inpatient settings, and long-term care (LTC) settings. Many of the pharmacist services explored in this paper have been shown to improve therapeutic outcomes, adherence to medications, or reduced downstream healthcare costs.

- Medication management conducted by pharmacists has been shown to improve medication adherence and clinical outcomes for patients with chronic diseases such as diabetes, hypertension, cardiovascular disease, and hyperlipidemia, among others.
- Some recent research also has indicated that pharmacist-provided medication management can be cost saving and more contemporary evidence on these services within evolving delivery systems will further inform stakeholders.”<sup>44</sup>

### VQCC #4 LTPAC Medication Management Differential:

- Provides a comprehensive review of the whole person’s medication management and reconciliation by a Licensed Consultant Pharmacist<sup>45</sup> as it relates to all factors that affect the clinical outcomes of medications including laboratory, diet, and therapy. Clinical information reconciliation (CIR) which include medication reconciliation, medication indication for use, allergies, allergy intolerance or reactions;
- Reviews the hospital ToC reconciled medication results as it pertains to medications taken before hospitalization, the potential drug interactions, and manages polypharmacy. It ensures that each medication has an indication;
- A Nursing Center has a medication team of the nurse, Medical Director, PCP, Institutional Pharmacy, and Consultant Pharmacist to conduct a comprehensive integrated person-centric management of

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<sup>43</sup> The Health Care Cost of Drug-Related Morbidity and Mortality in Nursing Facilities; Lyle Bootman, PhD; LTC Donald L. Harrison, PhD; Emily Cox, PhD; Arch Intern Med. 1997;157:2089-2096

<sup>44</sup> Exploring Pharmacist’s Role in a Changing Healthcare Environment; Avalere Health LLC; May 2014

<sup>45</sup> What is a Consultant Pharmacists, American Society of Consultant Pharmacist (ASCP), [https://www.ascp.com/sites/default/files/WhatisaCP\\_Final.pdf](https://www.ascp.com/sites/default/files/WhatisaCP_Final.pdf), accessed April 22, 2015.

medications the, EMR, eMAR, and in some Nursing Centers an automated medication dispensing instrument; and

- Provides medication counseling when ToC to another provider or their home

Having a documented indication for each of the person's medications is important in order to assure the person-centric longitudinal care plan so each care provider, patient and family member knows why each medication (prescription and non-prescription) is active. The indication needs to be in a form that the person or family member understands (e.g. instead of hypertension, high blood pressure).

In today's healthcare system the medications a person takes are usually prescribed and monitored within the care setting the person is currently involved. The drug interaction review is usually done at the retail pharmacy where the prescription is filled. But, as studies have shown, a person might have a number of pharmacies where they have their prescriptions filled: 1) In the hospital and LTCH the Clinical Pharmacy conducts the drug utilization review (DUR) for incompatibilities 2) in a Nursing Center it is the Institutional Pharmacy 3) in a HHA it is usually the individual person's retail pharmacy. There can be numerous Pharmacists and Pharmacies involved in the review of a person's medications.

The Drug Utilization Review (DUR) is very important in Polypharmacy. A software DUR cannot replace the Pharmacist as it does not look at a person's complete health and total medication list of prescription and non-prescription medications as well as what is called over the counter medications and alternative care products. The new field of Pharmacogenomics is emerging in preventing drug interactions. Pharmacogenomics is the study of genetic variations that influence individual response to medications. Enzymes responsible for drug metabolism and proteins that determine the cellular response to medications are encoded by genes, and can therefore be variable in expression, activity level, and function when genetic variations are present. This pharmacogenomics DNA review is emerging as an expansion of the DUR especially in the solution to Polypharmacy.

In the ToC and Electronic Health Record model a person's medication management has to be across the person's full spectrum of care in order to prevent fragmentation of drug utilization review and management. It is in the ToC that errors of omission, dosage and other discrepancies occur that have to be resolved in the new care settings.

In a Nursing Center a Consultant Pharmacist reviews the person's medications that were taken prior to hospitalization, during hospitalization and required for post acute.

Nursing Center regulations call for a licensed Consultant Pharmacist to do a monthly review of each Medicare patient resident. There are an estimated 10,000 Consultant Pharmacists in the US that review medications and provide medication management within Nursing Centers. Within the Consultant Pharmacist classification there are 2,740 Certified Geriatric Pharmacists. The Consultant Pharmacist's role in LTPAC is expanding as the importance of medication management across LTPAC and care at home become more understood by the care coordination team. The Consultant Pharmacist and Geriatric Certified Pharmacist are now playing a role in ALF's, PACE, HHA, and HCBS.

The process of medication management in LTPAC is not fully understood by the other providers in the Spectrum of Care. There is a great deal of talk about medication list reconciliation. In some cases, the interpretation of Medication Reconciliation is to ensure that the list of medications a person is taking is accurate; it is much more than the accuracy of a list.

"In early 2007, the American Pharmacists Association and the American Society of Health-System Pharmacists convened an expert panel to establish a shared vision of medication reconciliation. The goal was to develop a

definition that the two organizations could use in discussions with both peers and interdisciplinary groups. The shared definition developed by the expert panel is:

“Medication reconciliation is the comprehensive evaluation of a patient’s medication regimen any time there is a change in therapy in an effort to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions, as well as to observe compliance and adherence patterns. This process should include a comparison of the existing and previous medication regimens and should occur at every transition of care in which new medications are ordered, existing orders are rewritten or adjusted, or if the patient has added nonprescription medications to [his or her] self-care.

“Recent studies have demonstrated that the pharmacist’s involvement in medication reconciliation during transitions of care results in improved patient outcomes and an overall reduction in health care costs. The following evidence supports pharmacist involvements in care transitions:

- Results of the largest medication reconciliation study to date indicate that 36% of patients had medication errors at admission, of which 85% originated from the patient’s medication history.
- Strategies shown to reduce medication errors at transitions include pharmacist medication review at discharge.
- Pharmacist-provided medication therapy review and consultation in various settings resulted in reductions in physician visits, emergency department visits, hospital days, and overall health care costs.
- Medication reconciliation reduced discharge medication errors from 90% to 47% on a surgical unit and from 57% to 33% on a medical unit of a large academic medical center.”<sup>46</sup>

The Nursing Center Consultant Pharmacist fulfills the Nursing Center Medication Reconciliation and more especially in the management of polypharmacy. The Consultant Pharmacist works with the Nursing Center Director of Nursing, Medical Director, and the person’s PCP to ensure that all the medications and dosages are appropriate and do not have any potential drug interactions. This is where; in the Nursing Center care setting there is a coordinated care function as the therapist, dietitian, and laboratory results play a role. This is important in areas like pain management and falls. When a person falls, it is important to determine if the cause of the fall was skeletal, muscular, or a medication side effect.

“Polypharmacy is a common problem encountered by clinicians caring for elderly.

1. It is encountered in all care settings ranging from outpatient to long-term care (LTC), where it is particularly linked with falls and other associated problems,
2. Polypharmacy refers to the use of multiple medications by a patient. The term is used when too many forms of medication are used by a patient, more drugs are prescribed than clinically warranted,
3. Or even when all prescribed medications are clinically indicated, but there are too many to take (“pill burden”). This has a potential to cause higher adverse drug reactions (ADRs) and drug-drug interactions (DDIs).

“The financial impact of polypharmacy-related problems translates into a significant cost to the health system, and it has a financial bearing on patients as well as institutions. Redundancy and duplication of medications are common. Regulatory issues, particularly in LTC settings, also can influence prescribing patterns. Lack of proper indications, inappropriate dosage, and subclinical toxicities of medications are common observations. “Prescribing cascade” is a known problem, where a medication results in an adverse drug event (ADE) that is mistaken as a separate diagnosis and treated with more medications, which puts the patient at risk for additional ADEs. Polypharmacy takes its own toll on limited physiological and financial reserves. It is common to see nine or more medications prescribed to elderly patients transferred for sub acute rehabilitation from hospitals to nursing homes. Multiple providers prescribe these medications at different times for different reasons. One such common example is medications started for a patient during a hospital stay by consultants and hospitalists that are not reevaluated for appropriateness after discharge from the hospital by the physician in charge of care of that

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<sup>46</sup> Improving Care Transitions: Optimizing Medication Reconciliation; 2012 American Pharmacists Association and American Society of Health-System Pharmacists.

patient.”<sup>47</sup>

In 2000 the American Society of Consultant Pharmacists (ASCP) began a landmarked study on the value of the Consultant Pharmacist conducted and evaluated over the next twelve years. The most important operational findings from the Fleetwood Model are described as:

- “The consultant pharmacist, internal (i.e., dispensing) pharmacist, and even the pharmacy technicians shifted their focus from the drug to the patient. This greater sense of connection to patients led to enhanced job satisfaction.
- The internal pharmacists became more confident in their clinical skills and knowledge and more involved with clinical decision-making. The internal pharmacist prior to dispensing medications handled actual and potential medication-related problems prospectively.
- The consultant pharmacist (i.e., external pharmacist) spent less time on traditional retrospective drug regimen review and more time on patient assessment, clinical interventions, pharmaceutical care planning, involvement with residents and their families, and interaction with the interdisciplinary team.
- Physicians and nursing staff viewed the consultant pharmacist as a more integral member of the interdisciplinary care team and recognized the valuable contributions of the consultant pharmacist regarding medication information, clinical expertise, and positive impact on drug therapy. The consultant pharmacist was called on to assist in clinical decision-making for high risk residents, including selection of appropriate therapies and participation in care planning. Over time the consultant pharmacist was increasingly consulted about drug therapy for all residents, not just those identified as high risk.
- The consultant pharmacist spent more time in direct contact with the residents and their families, which involved patient interviews and assessments, education on medication therapy, and discussion of alternatives to optimize drug therapy and improve patient outcomes. This interaction was often the most significant factor in successfully making changes in drug therapy.
- Communication among the pharmacy staff, and between the pharmacy and physicians and the nursing facilities improved greatly.
- Procedures allowing nurses to take orders from the pharmacist were implemented to support direct communication between the prescriber and the pharmacist.
- All pharmacists documented patient care recommendations, which were accessible to all staff.
- Pharmacy workflow was studied and many processes were streamlined for efficiency and duplicate steps eliminated. The workflow changes needed to implement the Fleetwood Model did not require additional personnel in the long-term care pharmacy.”<sup>48</sup>

In most discussions of medication management the topics are focused on drug list reconciliation, dispensing, drug interactions, polypharmacy, side effects, and the person’s adherence to their medication regimen. There is new software technology related to pharmacists providing patient care services. This technology is to ensure the pharmacist’s role of providing patient-care services are integrated into the spectrum of care. In the Nursing Center the pharmacist plays an important role in patient care services.<sup>49</sup>

There is also a growing interest in automated medication dispensing in Nursing Center and other controlled environments. This technology replaces the 30-day bingo card as it only dispenses a single medication dose. There is more control over medications and a reduction in unused medications.

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<sup>47</sup> ARMOR: A Tool to Evaluate Polypharmacy in Elderly Persons Author(s): Raza Haque, MD; *Annals of Long Term Care*; Issue Number: Volume 17 - Issue 6 - June, 2009 (/issue/636)

<sup>48</sup> Fleetwood Phase II: Tests a New Model of Long Term Care Pharmacy; Mary Daschner, RPH, is Senior Director, Marketing and Product Development, Merck-Medco Managed Care, LLC, Edina, Minnesota. Sandra Brownstein, PHARM.D, FASCP, CGP, is President, SeniorCare Strategies, Tucson, Arizona. Kathleen A. Cameron, RPH, MPH, is Executive Director-designate, and Janice L. Feinberg, PHARM.D, JD, is Executive Director, ASCP Research and Education Foundation, Alexandria, Virginia; 2000, American Society of Consultant Pharmacists, Inc. VOL. 15, NO. 10 October 2000 The Consultant Pharmacist

<sup>49</sup> Pharmacy Health Information Technology Collaborative; <http://www.pharmacyhit.org>; Shelly Spiro RPH, FASCP Executive Director Pharmacy HIT Collaborative

## APPENDIX L: FIVE: LTPAC VQCC DIFFERENTIAL – TECHNOLOGY

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The 2009 ARRA HITECH Act had a focus on health information technology in response to President Bush's 2004 Executive Order to digitize the US Healthcare System and establishing the Sub-Cabinet Level Office of the National Coordinator of Health Information Technology (ONC). The objective of both the Executive Order and the HITECH Act was to upgrade the US healthcare system infrastructure in preparation to necessary healthcare policy and care process changes from a fee for service model to a person-centric longitudinal care model.

### VQCC #5 LTPAC Technology Differential:

- Provides a person-centric electronic longitudinal care EMRs that covers a long duration of care;
- Aggregates all person medical data functions over a long duration of care allowing trending and alerts to prevent incidents;
- Uses devices to track Activities of Daily Life; and
- Provides a controlled clinical environment where advanced clinical technology can be tested and utilized by hundreds of persons to assist in public health technology.

Due to the way the ARRA Legislative was written, the LTPAC sector of healthcare was left out of the HITECH Act and the financial incentives provided in the Act. The major focus of ONC has been on hospitals (acute) and professional (ambulatory) providers during Stage One and Two of the incentive criteria of "Meaningful Use." As the implementation of HITECH Act has progressed it was obvious that one of the most important factors in person-centric electronic longitudinal care was the Transition's of Care (ToC) and the Electronic Health Record that follows the person throughout the person's spectrum of care. It was in the implementation of the HITECH Act that it became obvious that LTPAC providers and vendors played an important role in the spectrum of care. It was at this point that the technology of LTPAC came under review and scrutiny.

Since 2004, LTPAC has understood that eventually this sector would play a valuable role in the spectrum of care and the health IT vendors have therefore invested in the technology changes necessary to be a partner.

As previously stated, there are many VQCC Differentials between the care given in LTPAC and Acute Care. These VQCC differentials cannot be realized without state of art technology.

Various new technologies have been used in LTPAC and are being expanded by LTPAC providers as this healthcare segment invests millions of dollars in the future healthcare system. The LTPAC Provider has to aggregate clinical data from many sources of clinical services that are provided in longitudinal chronic care. These different clinical data sources are important over long periods of time, as they are interrelated to each other in longitudinal chronic care. Social and therapy care are interrelated to adjustments to daily living; comprehensive medication management are interrelated with diet and therapy; and the interrelationship between changes in condition, quality measures, and continuous eAssessments.

To ensure certified interoperability under meaningful use and to receive and transmit the certified C-CDA in the EHR Transitions of Care, the LTPAC has to be compatible with all LTPAC provider partners (Hospitals, Physicians, ACOs, and HIEs). In Stage one of Meaningful Use (MU) several Nursing Center and HHA health IT vendors received CCHIT certification and continue to get certified for ONC module certification. LTPAC providers and vendors encouraged ONC to include voluntary ToC and security certification to be included in Stage Three of MU. This is important to LTPAC for two major reasons: 1) so hospitals and physicians trust the data received from LTPAC Providers; and 2) so LTPAC is included as a valued member of the spectrum of care.

The following are short summaries of LTPAC Technologies:

**Health IT Technology:** The LTPAC adoption of Health IT was previously covered in this ONC Brief. In summary, robust enterprise SaaS EMRs are available by all major LTPAC software vendors. Many applications



are interoperable and exchange information with only one entry between Nursing Center, ALF, HHA, Therapists, and Consultant Pharmacists/Pharmacy. Some health IT vendors are working on incorporation of DMEs into the EMR to be able to obtain true cost of care by an individual. Almost all have Wi-Fi in the facilities as well as comprehensive security and privacy software. The major LTPAC health IT vendors have been recapitalized in the last two years and are investing millions of dollars in person-centric longitudinal interoperability software research, development, implementation, and updating Provider health IT.

**Therapy Technology:** The therapy departments in Nursing Center Therapy rehabilitation departments are of the highest technology standards in order to provide quality therapy planning, implementation, and monitoring to shorten LOS and to provide the highest quality at the best cost. They also have technology to teach the person what they will be required to know when they go home to care within their home. Most Nursing Centers have a home setting facility to teach home living. Assisted Living Facilities (ALF's) are expanding their therapy (fitness) capabilities as they expand care within an ALF. Future therapy technology involves sensors to longitudinally and quantifiably measure functional performance and integrate the results into the person's EMR. There are discussions on using mobile therapy vans to bring therapy to HHA care of the disabled, etc.

**Telehealth and Remote Patient Monitoring (RPM) Technology:** Many of the LTPAC facilities are located in rural communities. This is where Telehealth (monitoring) will provide needed clinical data on the patient 24/7 is scaled appropriately. As of 2013, 28.7% of HHAs used telehealth/remote patient monitoring systems. These systems also can be leveraged to improve patient engagement, self-care education and care coordination.

**Telemedicine:** Telemedicine and Physician Consultation Technology: Telemedicine is beginning to play a more important role in the spectrum of care. This is especially true in Nursing Centers, ALF's, LTCH, and HHA Providers.

"Telemedicine is also taking big steps into the long-term care arena. There are many organizations that are using it for a variety of reasons, including reducing unnecessary hospital readmissions, providing convenience to our practitioners for remote consults, and ensuring that as much care can be given in the comfort of our patients' beds as possible. Another common use case at this time is Tele-psychiatry due to a lack of providers in many areas of the country. We will begin to see this more and more across the industry in order to provide quality of care and reduce returns to hospital."<sup>50</sup>

**Medication Management Technology:** Within the major EMRs there is an eMAR (electronic Medication Administration Review) module to replace the paper MAR. There is new technology involving medication management and the dispensing of medications within a Nursing Center and possibility in the ALF Medial Model and PACE. Some Nursing Center providers are installing medication-dispensing instrumentation with sophisticated software. These instruments dispense a pouch with only the medications required for a single medication pass. This replaces the multidose bingo card and the resultant potential errors associated with bingo cards. It also prevents the necessary destruction of unused medications. This also has the potential to expand to other LTPAC providers like ALF's, Prisons, LTCH, and PACE.

**Social Technology:** The use of social technology is being implemented. In some cases the person in LTPAC facilities are using computer games for both entertainment and clinical evaluation.

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<sup>50</sup> Consulate Health Care: <http://persons.consulatehealthcare.com>

## Appendix M: Background for ONC Assisting LTPAC to be a Spectrum of Care Valued Partner

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The LTPAC providers and health IT vendors are very appreciative of the Office of the National Coordinator for the support this HHS department has given LTPAC over the ten years since the 2004 Presidential Order. LTPAC are appreciative of ONC's inclusion of LTPAC in the Strategic plan for the spectrum of care especially when LTPAC was not included in the ARRA HITECH Act. The ONC Staff has done as much as possible within the Legislative limits of the HITECH Act to include LTPAC.

One of the objectives of this brief is to provide some ideas on how the Office of the National Coordinator can assist LTPAC to be recognized as valued quality coordinator care provider within the spectrum of care. These suggestions were list in the Executive Summary and are not repeated in this Appendix.

**LTPAC ROLE IN THE PERSON-CENTRIC PERSON-CENTRIC LONGITUDINAL SPECTRUM OF CARE:** As has been pointed out throughout this ONC Brief, there are many Valued Quality Care Coordination (VQCC) Differentials that the LTPAC segment of healthcare has when compared to Acute Care (hospitals). These are supportive to the CMS Triple Aim and augment and support hospitals objectives.

“With the advent of the Medicare and Medicaid EHR Incentive Programs, EHR and HIE adoption by EPs and EHs has increased. However, incentive payments for adoption of certified EHR technology in ambulatory and acute care hospitals under ARRA HITECH do not currently extend to LTPAC settings. As a result, while the use of EHRs and HIE adoption is not widespread in LTPAC settings at present, almost all nursing home, home health, and inpatient rehab providers have the HIT capacity to capture and transmit standardized assessments for payment and quality reporting. That said, EPs and EHs who strive to meet Stage 2 Meaningful Use still may share patient information and coordinate care with LTPAC providers during transitions of care or referrals. In addition, emerging payment and delivery system changes driven by the Patient Protection and Affordable Care Act (ACA) will reward providers for demonstrating improved care coordination, quality, and reduced costs. LTPAC providers deliver care to the highly vulnerable including the elderly, frail, and disabled. LTPAC patients typically have a wider range of conditions and more complex, chronic care needs that result in frequent transitions between their homes, acute, post-acute, and long-term care settings. In 2008, almost 40 percent (38.7%) of all Medicare beneficiaries discharged from acute-care hospitals received post-acute care. Of these beneficiaries, 15.5 percent were readmitted to the acute care hospital within 30 days. The range of LTPAC providers and care settings, and the frequent movement of patients among them, necessitates the exchange of relevant, timely care data. Care coordination ensures continuity of care and services needed for the recovery, rehabilitation, and health maintenance of the patient, and helps to reduce duplication of care services, conflicting health plans and medical errors and re-hospitalizations that lead to cost savings. Coordination of care is essential, as is the need for systems to support information capture, use and exchange. As frequent providers of services for LTPAC patients, EPs and EH's need to work closely with LTPAC providers in coordinating care using the best practices from Meaningful Use Care Coordination specifications. When EPs/EH's support and customize care coordination, at the time of transition to LTPAC providers, patients receiving LTPAC services require fewer emergency room visits and readmissions resulting in lowered health care costs coordinating care using the best practices from Meaningful Use Care Coordination specifications. When EPs/EH's support and customize care coordination, at the time of transition to LTPAC providers, patients receiving LTPAC services require fewer emergency room visits and readmissions resulting in lowered health care costs.”<sup>51</sup>

There are four major roles of LTPAC in the Spectrum of Care:

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<sup>51</sup> Care Coordination Tool for Transition to Long-Term and Post Acute Care; The National Learning Consortium (NLC); Developed by the Health Information Technology Research Center (HITRC) 2014

1. The Diagnosis, Care Plan and Electronic Documentation of a persons possible Chronic Care and co-morbidities;
2. The comparatively long duration of person-centric care, observation, and documentation;
3. The development, implementation, and possible transition of the initial postop person-centric electronic longitudinal care plan; and
4. The Valued Quality of Coordinated Care (VQCC) provided by a highly qualified team of staff and professional partners utilizing state of the art technology throughout the duration of care.

If there was one primary advantage of LTPAC to all the partners in care models and to the cost of care; it is the participation of LTPAC in all of the various facets of chronic care and co-morbidities.

“Chronic Conditions are the major cause of illness, disability, and death in the United States, even though much is known about how to prevent chronic disease and how to delay or avoid many related complications. An estimated 81 million Americans will have multiple chronic conditions by 2020. One study found that 14 percent of diabetes patients had heart disease and that 77 percent had hypertension. To address such complex illnesses, at least one researcher has suggested that chronic disease care should focus on the patient and all of his or her diagnoses and symptoms, not on any single disease. This approach would include assessing patients and their care over time, and managing potential co-morbidities.

“Information systems generally offer a number of benefits in health care, including higher quality of care, better patient safety, more efficient information processing, and lower administrative costs. Among these computerized tools are chronic disease management systems (CDMS) and electronic medical records (EMRs). There has been little research on the comparative value of CDMS and EMRs in the realm of chronic-disease care. Is one system better than the other?”<sup>52</sup>

In today’s literature there is a great deal of discussion concerning how chronic care is diagnosed and incorporated into the person’s Longitudinal care plan. It is not the objective of this Appendix of the ONC Brief to repeat the VQCCs documented in the Executive Summary and Appendixes. It is the objective to take the VQCCs as a baseline on a program where ONC can assist LTPAC to be recognized as a major valued partner in the current and future care and payment models utilized in the person-centric longitudinal the spectrum of care.

As documented in almost every report on the new healthcare system, the focus has been on the hospital capabilities and their role in future care and payment models. This is a justified focus due to the fact that many persons start their spectrum of care journey with an acute incident and the hospital has the instrumentation and the best professional staff to handle acute incidents. It is also true that the hospital is not the best care setting for longitudinal post-acute care; aggregation of longitudinal clinical documentation and analytics; care therapy and maintenance; long duration observations of daily living and family interface; behavioral health; and preventative care.

LTPAC care with the aforementioned Four Major VQCC Roles, can, is willing, and capable to play a stronger future role in the healthcare system. LTPAC is not advocating a leading role but to have a voice and a partnership role in the new healthcare systems where the LTPAC VQCC can be beneficial to other partners and to be respected and compensated for the role that they play. As an example: It is a fact that LTPAC providers are part of the demonstrations being conducted by CMS in the three models of bundling of payments. But, it seems that the focus is again on the hospital to determine the rules of payment possibly without taking into full effect the

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<sup>52</sup> Participatory Health: Online and Mobile Tools Help Chronically Ill Manage Their Care; Jane Sarasohn-Kahn, M.A., M.PERSONS.S.A, THINK-Health; California HealthCare Foundation; September 2009

current and potential VQCCs of LTPAC providers and vendors. Most of the CMS regulations are based on penalties for non-performance and not rewards for high performance in clinical outcomes. It is realized that, today, it is difficult to measure higher clinical outcomes especially in cases of persons with chronic care and co-morbidities. But, LTPAC providers and vendors can be recognized as being a valued partner in the Four Major roles that it is capable of performing.

**ONC/CMS Support of LTPAC, Behavioral Health and other Non-Incentivized Providers:** As previously stated, ONC and CMS has and is currently assisting LTPAC in many ways. Examples are:

- Establishing the S&I Framework Longitudinal Care Committee;
- Organizing past roundtables and workgroups for LTPAC and non-incentivized partner input;
- Including LTPAC and Behavioral Health non-incentivized providers in the: ONC Vision; Strategic Plan, Interoperability Roadmap; Standards Guideline Manual;
- Having LTPAC thought leaders as Members on ONC Committees and Workgroups;
- Hiring staff members dedicated to LTPAC;
- Publishing reports and white papers on LTPAC;
- Providing grants to Not-for-profit LTPAC organizations;
- Providing speakers and being involved with LTPAC functions;
- Being an active participant in the informal LTPAC HIT Collaborative;
- Requesting and listening to LTPAC Associations and Organizations comments on policy matters;

**Person-Centric Electronic Longitudinal Care:** This is defined as total dynamic care of a person over a long duration of time that:

- Aggregates all germane chronic care: clinical, demographic, and social data points;
- Uses analytics, alerts, and decision support software;
- Develops a comprehensive person-centric longitudinal care plan;
- Will engage the person in his or her own care;
- Ultimately result in a cure or maintenance of the person's health condition;
- Achieves a desired quality of life; and
- Has a focus on preventative care and wellness.