Austin Public Health
PREVENT. PROMOTE. PROTECT.

MEMORANDUM

TO: Mayor and Council Members

FROM: Stephanie Hayden, Director, Austin Public Health

DATE: July 27, 2020

SUBJECT: **Staff Response to Resolution No. 20200507-059 – Design Institute for Health Report**

On May 7, 2020, Council passed Resolution No. **20200507-059** directing the City Manager to plan and collaborate with the Design Institute for Health, Dell Medical School to analyze, evaluate, and identify approaches for system improvements to protect residents and reduce the risks of the spread of COVID-19 in nursing homes, assisted living centers, and other long term care facilities.

Over the past months, Austin Public Health and the Long-term Care (LTC) Incident Management Team (IMT) have been working closley with the Dell Medical School Design Institute for Health to identify approaches for system improvements to protect residents and reduce the risks of the spread of COVID-19 in LTC facilities. The purpose of this memorandum is to provide Council the first report. On July 28, 2020, the Design Institute for Health with Dell Medical School will present to Mayor and Council.

If you have any questions or require additional information, please contact me at (512) 972-5010 or via email at Stephanie.Hayden@austintexas.gov

CC: Spencer Cronk, City Manager
Nuria Rivera-Rivera-Vandermyde, Deputy City Manager
Christopher Shorter, Assistant City Manager
Dr. Mark Escott, Interim Health Authority

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DESIGN INstitute for HEALTH

Nursing Home System Study

Focused Investigation (Phase 1) Synthesis

July 27, 2020

Deliverable 04
Agreement No. MA 4700 20052800052

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Executive Summary

Nursing homes remain a central concern in the response the COVID-19 crisis because of the intersection of multiple risk factors. The close living quarters, shared staff and services, and medical frailty of the residents result in a triple threat to the health of those in need of these facilities.

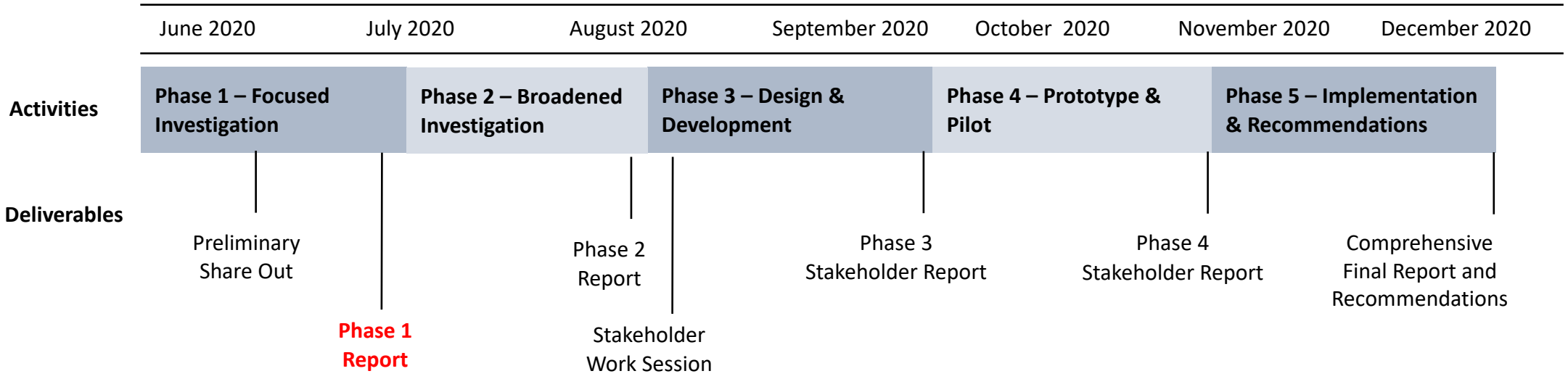
Low wages, long hours, and the physical nature of the work have always been part of the reality of nursing home staff, but COVID-19 has amplified the burden as they contend with a lack of family and volunteer support, changes to routines and protocols, increased emotional needs of the residents, the stress of potential exposure to the virus, and the resultant effect on their own personal lives outside of work. In spite of consistently heroic efforts by staff, the circumstances seem unsustainable.

The first phase of this study has identified initial opportunities to develop long-term solutions to: simplify workflows and reduce staff burden, keep residents connected to their loved ones, ensure sustained financial viability for operators, and address employee retention. In subsequent phases, we will expand the focus of our research and diversify our visits beyond nursing homes.

Study Objective

The Design Institute for Health will build on the immediate emergency COVID-19 response efforts of the City of Austin by analyzing, evaluating, and identifying approaches for broader-scale system improvements to protect residents and reduce the risks of the spread of COVID-19 in nursing homes, assisted living centers, and other long-term care facilities.

Project Timeline



The full Statement of Work with phase descriptions can be found at the end of this document.

Part 1

Team

Steering Committee

This is a collaborative partnership of numerous entities.

AUSTIN PUBLIC HEALTH, CITY OF AUSTIN

Anjum Hanafi, Long Term Care Incident Command Team

TEXAS HEALTH AND HUMAN SERVICES COMMISSION

Michelle Dionne-Vahalik, Associate Commissioner, Long Term Care Regulation

Michael Gayle, Deputy Associate Commissioner, Policy, Rules, and Training in Long Term Care Regulatory

THE UNIVERSITY OF TEXAS AT AUSTIN

SCHOOL OF NURSING

Tracie Harrison, Director, Center for Excellence in Aging Services and Long Term Care

STEVE HICKS SCHOOL OF SOCIAL WORK

Sarah Swords, Clinical Associate Professor, Assistant Dean for Master's Programs

DELL MEDICAL SCHOOL

Stacey Chang, Executive Director, Design Institute for Health

Liam Fry, M.D., CMD, Chief of Division of Geriatrics and Palliative Care, Department of Internal Medicine

Core Team

DELL MEDICAL SCHOOL

Clay Johnston, M.D., Ph.D., Dean, Dell Medical School

Stacey Chang, Executive Director, Design Institute for Health

Liam Fry, M.D., CMD, Chief of Division of Geriatrics and Palliative Care, Department of Internal Medicine

Diana Siebenaler, Director of Partnerships & Network Strategy, Design Institute for Health

Jeff Steinberg, Director of Operations, Design Institute for Health

Stephanie Anderson, Senior Administrative Program Coordinator, Design Institute for Health

Stephanie Morgan, Design Researcher, Design Institute for Health

Eric Boggs, Design Researcher, Design Institute for Health

Rose Lewis, Social Service Designer and Design Researcher, Design Institute for Health

Natalie Campbell, Visual Designer and Design Researcher, Design Institute for Health

Matthew Love, Project Manager, Design Institute for Health

Aashnika Sujit, Student Intern, College of Natural Sciences

Ian Chiu, Student Intern, College of Natural Sciences

Part 2

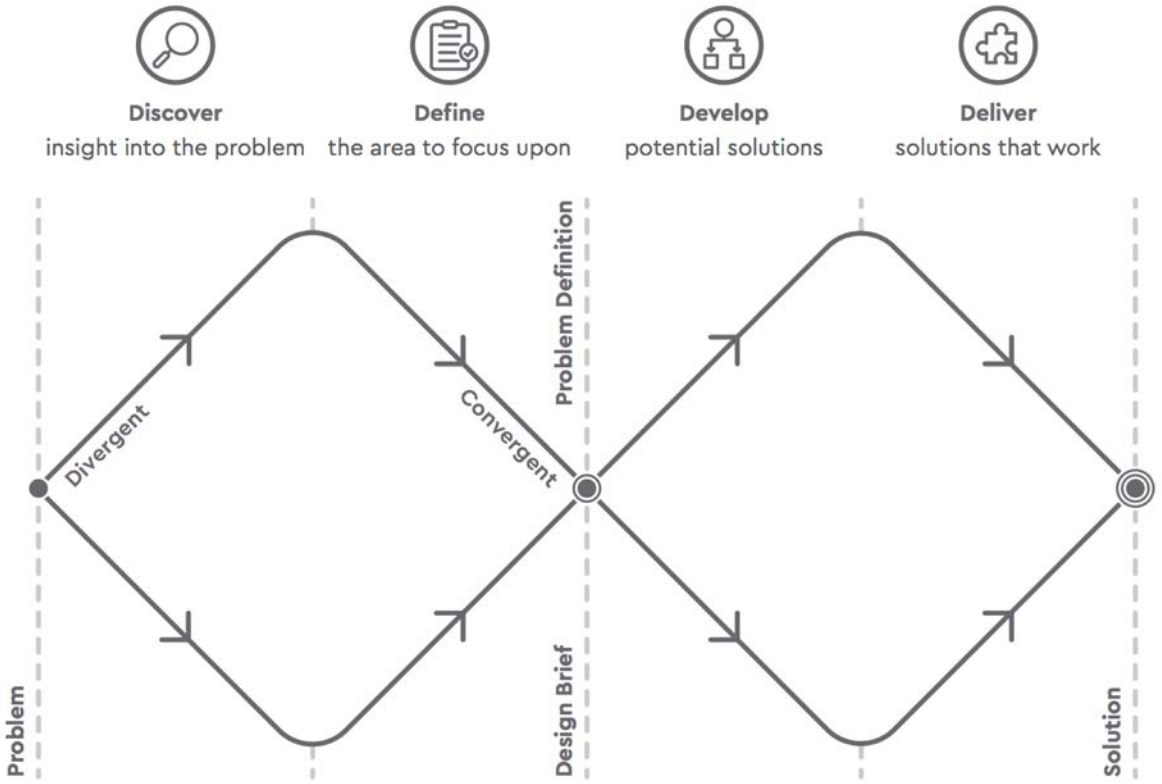
Methodology

Human-Centered Design Approach

Human-Centered Design (also referred to as Design Thinking) begins with **research that reveals the deeper needs of humans in the system, needs that they are either unaware of or unable to describe**. The research, qualitative in nature, is a savvy combination of psychology, sociology, and anthropology.

Research leads to insights that are the inspirational spark necessary to develop completely new solutions (not just incremental revisions to existing tools or constructs).

Those solutions are then built and tested, but in quick, low-resolution iterations called prototypes. The resulting failures are of low consequence, but rich with learning, and the rapid-cycle revision leads to large-scale interventions that have already had the major risks resolved.



Courtesy Design Council

Methodology

In order to form a baseline understanding of the nursing home landscape, we utilized both secondary and primary research methodologies to gain a holistic perspective of the internal and external challenges that nursing homes face.

In our secondary research, we reviewed recent news articles and publications directly related to and adjacent to the topic of COVID-19 infection within nursing homes. We examined trends, studied current protocols, reviewed system and policy interactions, and identified pressures related to economic, environmental and operational stressors in this highly-regulated space. Additionally, we explored the cultural norms, hierarchies and common staff and resident behaviors and routines. The purpose of our secondary research was to form hypotheses and gather preliminary learnings around potential gaps, collisions and tradeoffs that occur in nursing homes both pre- and post-COVID-19.

During primary research, we conducted interviews with 7 subject matter experts and participated in on-site tours, observations and staff interviews at 4 different nursing home sites. We chose a variety of facilities that allowed us to see differing organizational structures, physical layouts, workflows, and operational models that would reveal a range of approaches to day-to-day operations as well as current measures around curtailing COVID-19. At each site we spoke to the: Administrator, Director of Nursing, Certified Nurse Aide, Activity Coordinator, Social Worker, MDS Nurse, Food Services Manager, Housekeeping, and Nurse Practitioner in order to compare viewpoints related to the pandemic response (specifically as it pertains to organizational effectiveness, and resident experience).

Research Progress

100+

Secondary research articles and resources reviewed and synthesized into a baseline understanding

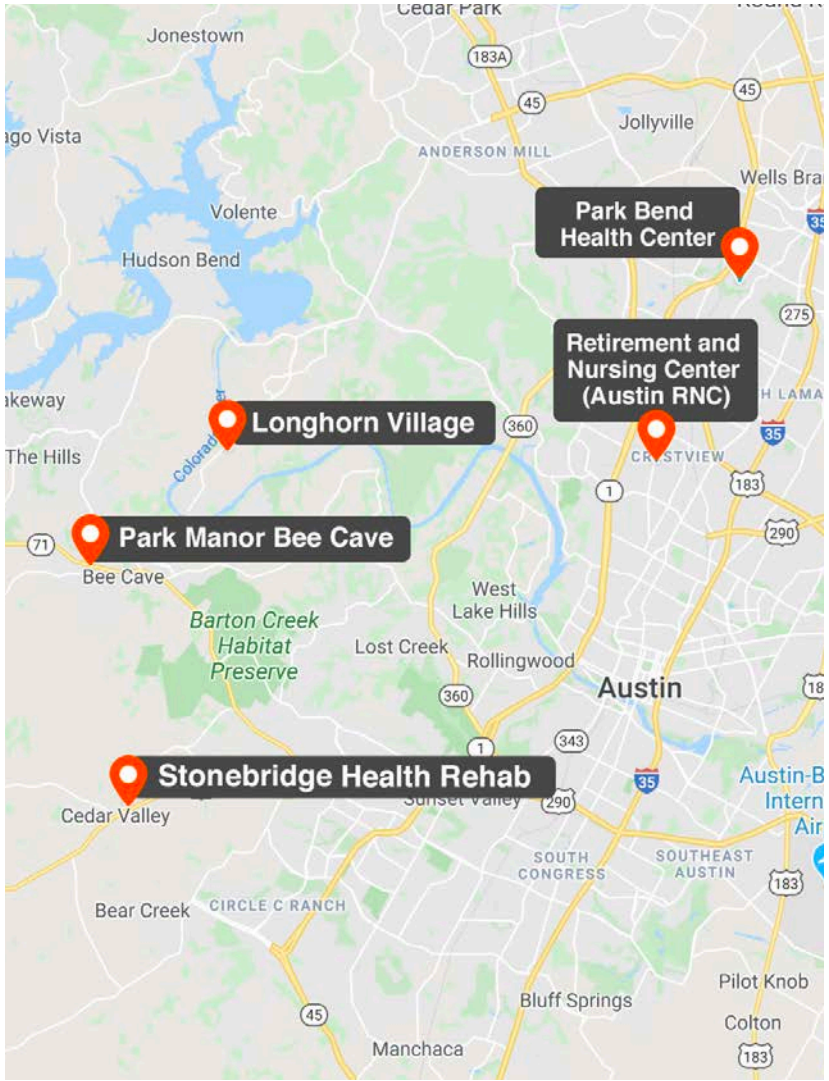
49

Interviews and workflow observations including administrators, nursing directors, infection control nurses, food services managers, certified nursing assistants, MDS nurses, social workers, and activity coordinators as well as deep dive interviews with subject matter experts

4 of 5

Full-day facility onsite visits (interviews and observations) completed

Phase 1 Facilities



5 Facilities of Phase 1: all institutional model nursing homes

Size: 39,635 SQFT, 1 story, built in 2000
Total beds: 124; Occupied beds: 95

Size: 47,834 SQFT, 2 buildings, built in 1971
Total beds: 150; Occupied beds: 73

Size: 68,000 SQFT, 2 story, built in 2009
Total beds: 60; Occupied beds: 34

Size: 39,650 SQFT, 1 story, built in 1997
Total beds: 116; Occupied beds: 63

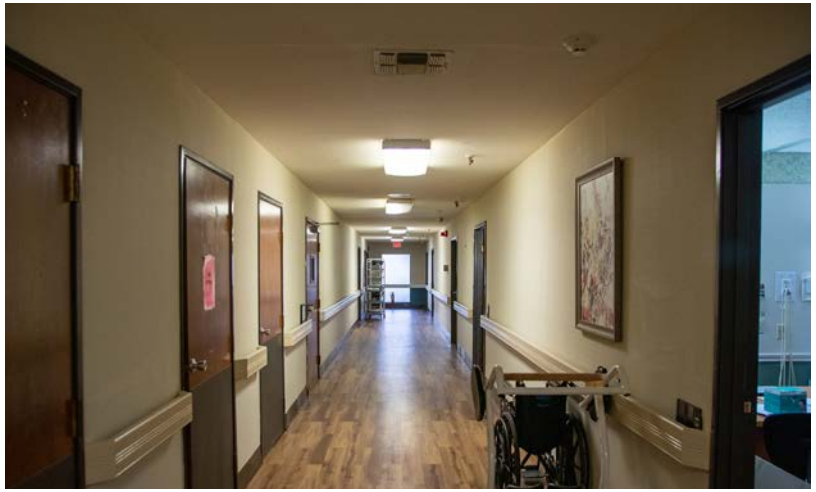
Size: 53,724 SQFT, 1 story, built in 2013
Total beds: 140; Occupied beds: 82

Glimpses inside Nursing Homes in the COVID-19 era

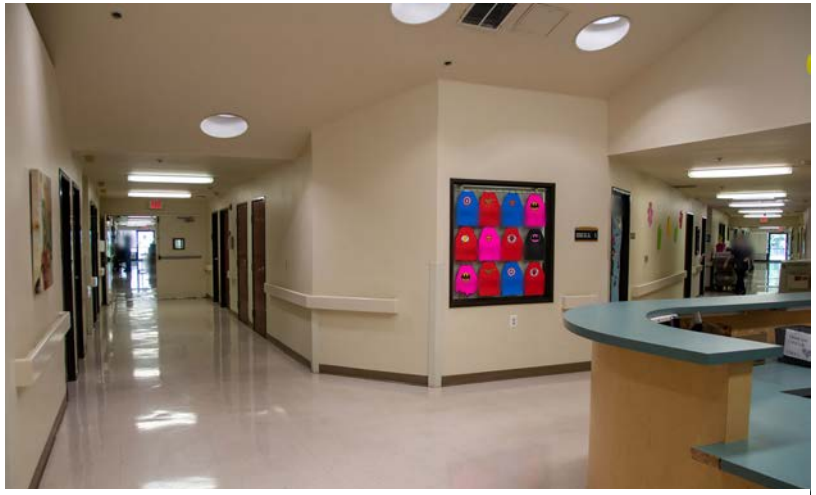
Laundry room protocols have had to evolve in response to COVID-19

Staff personal protective equipment placed in bags at entry

Carts are being used to deliver meals directly to rooms



Resident hallways, subject to social distancing protocols



The same hallways, viewed from the nurse's station

Resident room, in preparation for isolation protocols

Glimpses inside Nursing Homes in the COVID-19 era

Nurse's station in hallway, still a place for staff overlap

Dining room being used as a gym for physical therapy

Face shields hung up in a room with staff names labeled

Kitchen / dining menu placed outside dining hall

PPE and disposal bins in resident room

Kitchen prep has had to make adjustments to protocols

Timeline of Activities (Phase 1 of 5)

June 1, 2020

Interlocal Cooperation Agreement finalized – the City of Austin and the Design Institute for Health at UT's Dell Medical complete agreement and project work begins

June 4, 2020

Steering Committee established

Inaugural meeting held on June 11

June 8, 2020

Discussions commence with facilities

Coordinate participation in the research study--scheduled on-site visits at the 5 facilities for Phase 1:

1. Caraday Park Bend
2. Longhorn Village
3. Austin Retirement & Nursing
4. Park Manor Bee Cave
5. Caraday Stonebridge *(visit rescheduled)*

June 10, 2020

Subject Matter Expert (SME) interviews begin

As part of a comprehensive secondary research effort

June 12, 2020

Virtual interviews with facility stakeholders begin

The team completes eight virtual interviews before site visits begin

June 17, 2020

Site visit prep finalized

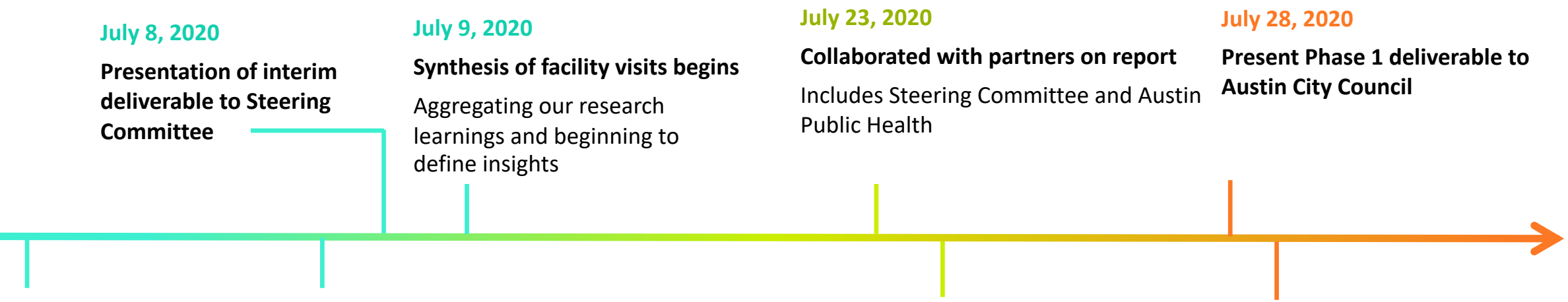
Protocols, interview guides, and synthesis plans for onsite visits are completed

ONGOING

Secondary Research

Continuous research on news articles, background information, etc.

Timeline of Activities (Phase 1 of 5)



June 25, 2020

On-site facility visits begin

Day-long research efforts commence at identified facilities

July 7, 2020

Completed final on-site facility visit for Phase 1

July 8, 2020

Presentation of interim deliverable to Steering Committee

July 9, 2020

Synthesis of facility visits begins

Aggregating our research learnings and beginning to define insights

July 23, 2020

Collaborated with partners on report

Includes Steering Committee and Austin Public Health

July 24, 2020

Reviewed report with facility administrators

Facilities listed on June 8 *(except Stonebridge, which has been rescheduled)*

July 28, 2020

Present Phase 1 deliverable to Austin City Council

July 29, 2020

Phase 2 begins

Focused research to better understand challenges and insights that arose in Phase 1

ONGOING

Secondary Research

Continuous research on news articles, background information, etc.

Part 3

Establishing Context

Types of Long-term Care Services
Spectrum of need and level of care

Continuing Care Retirement Community (CCRC)
A long-term care option for older adults who want to stay in the same place through different phases of the aging process.[8]

Independent Living
Congregate living for older adults or people with disabilities. Residents are independent, but have access to assistance when desired.

Assisted Living
Includes assistance with activities of daily living (ADLs) and medication management when necessary.[4]

FOCUS OF PHASE 1 RESEARCH
Skilled Nursing Facility (SNF)
- Short-term rehab
- Long-term care
(*commonly known as a* Nursing Home)
Nursing homes are the highest level of care someone will receive outside of a hospital[3], other than at-home care. Includes assistance with activities of daily living (ADLs) and a high level of medical care.[4]

Low need/ Low level of care

High need / High level of care

2

Patient acuity in nursing homes today is similar to what you would find in hospital recovery a decade ago. Nursing homes are medical facilities, not retirement homes.

Nursing homes offer medical services similar to those offered in hospitals after surgery, illness, or other sudden medical problems. Some older adults need a higher level of care, and hospital stays are shorter than they used to be. Services can include[10]:

- skilled nursing care
- orthopedic care (care for muscle, joint, and bone problems)
- breathing treatments
- support after surgery
- physical, occupational, and speech therapy
- intravenous therapy and antibiotics
- wound care
- nutritional counseling
- social work services
- respite care, hospice care, and end-of-life care

"We are dealing with long term residents who qualify for skilled services but are not reimbursed at that level. We have residents with multiple co-morbidities that require constant intervention from nursing staff. 10 years ago these residents would be in a hospital to manage these conditions but now they are being managed by our staff."

- Facility Administrator

An inability to perform the activities of daily living (ADLs) is the most common reason for residence in a nursing home.[10]

- Over 80% of nursing home residents need help with 3 or more ADLs (such as dressing and bathing)
- About 90% of residents who are able to walk need assistance or supervision
- More than half of residents have incontinence (the inability to control bowels or the bladder)
- More than a third have difficulty with hearing or seeing
- More than three-fourths of nursing-home residents have problems making daily decisions, and two-thirds have problems with memory or knowing where they are from time to time
- At least one-third of nursing home residents have problematic behaviors, including being verbally/physically abusive, acting inappropriately in public, resisting necessary care, and wandering
- Almost half of nursing home residents have difficulty both being understood and understanding others

80 – 85% of Texas nursing home residents depend on Medicare or Medicaid funding for their care.[1]

Medicare will pay for the cost of skilled nursing, including the custodial care (for ADLs) provided in the skilled nursing home for a limited time, provided 1) the care is for recovery from illness or injury – not for a chronic condition and 2) it is preceded by a hospital stay of at least three days.

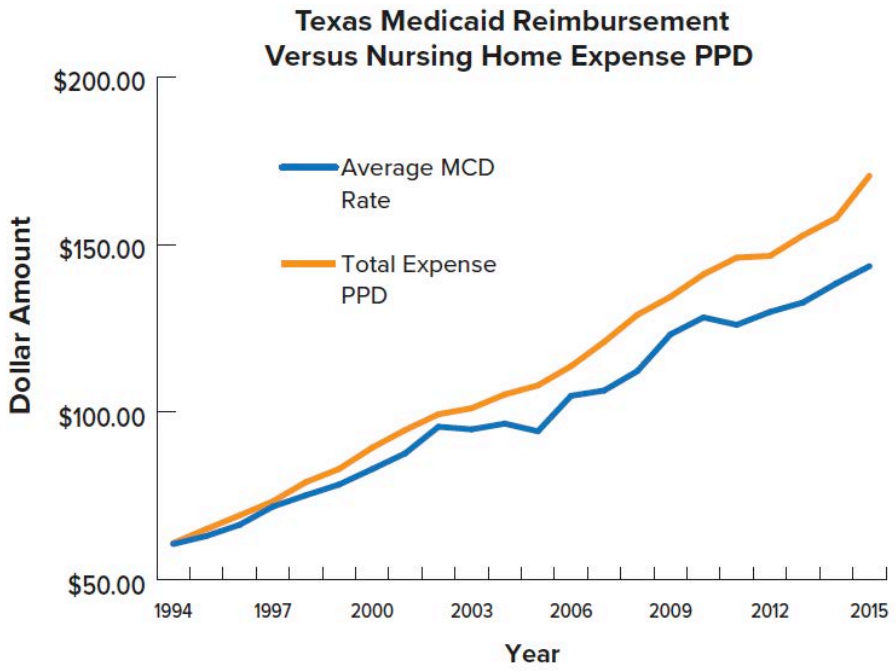
For the first 20 days, Medicare will pay for 100 percent of the cost. For the next 80 days, Medicare pays 80 percent of the cost. Skilled nursing beyond 100 days is not covered. Medicare will not provide custodial care if is the only type of care needed.

Medicaid will cover custodial care only if it is provided within a nursing facility. To be able to get Texas's Medicaid program to pay for long-term care in 2020, a single person's monthly income cannot be higher than $2,349.

"And so, where we run into problems is the majority of our funding comes either from the federal or state government, and up to this point, a lot of the design and innovation has had to come through just people like myself and my partners trying to innovate on our own… And you can't get Neiman Marcus care on Walmart prices. And so, even if I provide the best possible care in Texas, I get paid the exact same as the person that provides the worst possible care in Texas. And that makes it difficult to innovate..."

-CEO, Owner/Operator

86% of Texas nursing homes reported allowable costs that exceeded Medicaid reimbursement.[1]

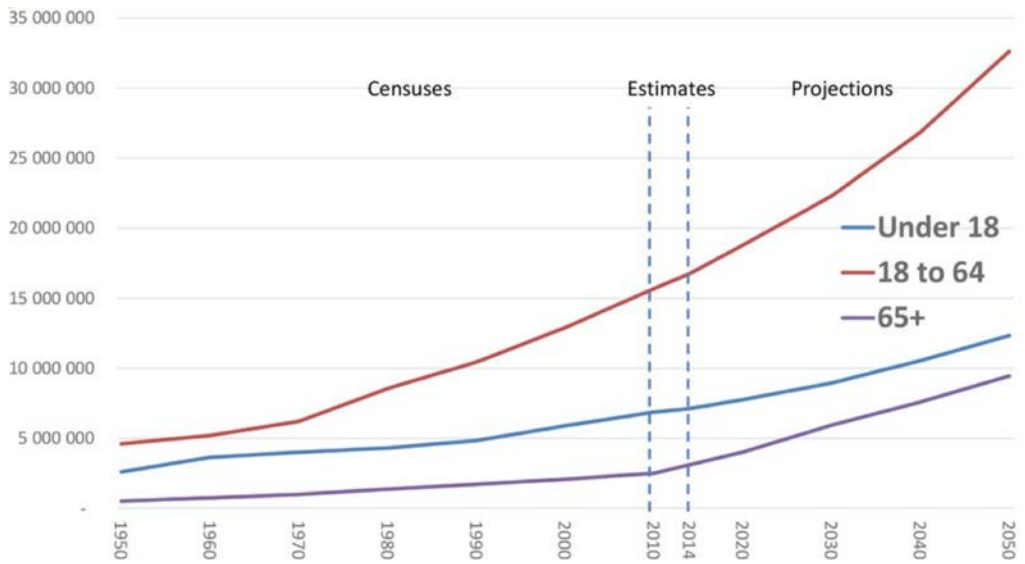


Source: THCA Crisis Report April 2018[6]

"I don't even want to tell you the financial side of what this has done to our business…we're paying time and a half on the unit, and I might have two patients down there [on isolation unit], but I'm staffed 24 hours a day with an RN and a CNA, we're paying those people time and a half...The reimbursement has to change… we haven't had a Medicaid rate increase in God knows how long, 20 years, it's pathetic. So I read an article yesterday, this whole pandemic has just blown the doors on the discrepancy between reimbursement and what the actual costs of taking care of these patients is…we just weren't prepared as an industry, a lot of the reason behind it is the funding, without the funding you can't have the staff."

- Facility Admin

In 30 years, the population in Texas over the age of 65 will triple. Those over 85 will quadruple by 2050.[11]



Source: US Census Bureau

"…as many as 70 percent of people turning 65 can expect to use some form of long-term care during their lives."[3]

- Texas Health and Human Services

"Over the next several decades, the 65+ population is expected to continue to grow rapidly both in number and as a share of the population - by 2040 more than half a million (517,772) older adults 65+ will live in the 5-county Austin-Round Rock MSA and comprise nearly one-fifth (18%) of the Central Texas population."[7]

- Aging Services Council of Central Texas

55% of residents in Texas nursing homes have been medically diagnosed with dementia.[1]

More than three fourths of nursing-home residents have problems making daily decisions, and two-thirds have problems with memory or knowing where they are from time to time.[11]

"The whole profession has seen an increased acuity. So if you go back 20, 25 years, when I first started, when you would go into a nursing home, it was really more like an assisted living. Everyone was ambulatory. They were either walking, using walkers…That's what nursing homes were. It was much more of a convalescent home…"

CEO & Owner/Operator

"And then you start moving people with dementia and it's more work on our staff because they're always trying to go back to where they came from. It takes weeks before they get into the routine of going from where you moved them too. So then you have staff chasing people down all the time and redirecting them."

- Facility Administrator

Nursing homes are highly regulated.

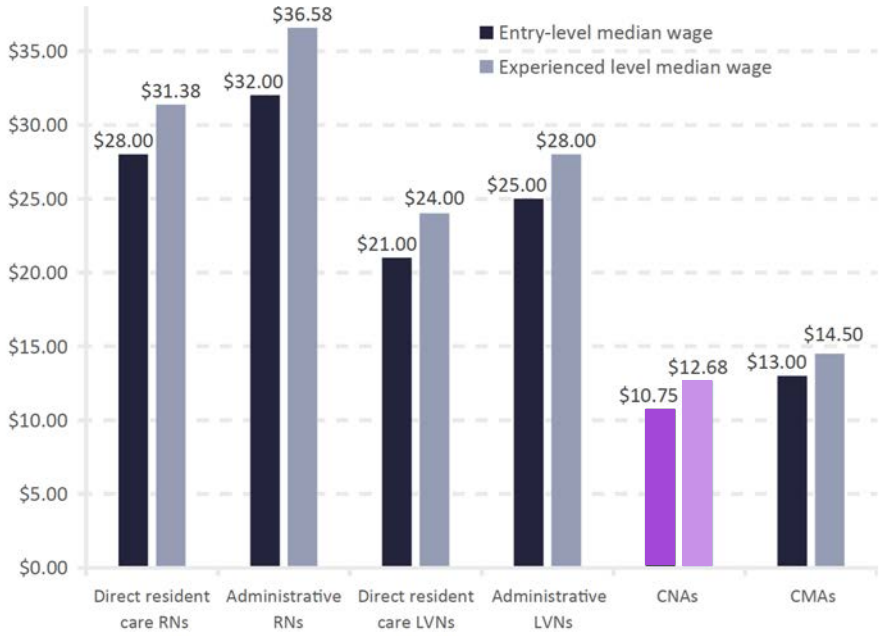
Few industries are as heavily regulated as long-term care facilities. The Nursing Home Reform Act of 1987 is the main federal statute that all operators must follow, but there are thousands of other codes at the federal, state and local level that must be adhered to so that care facilities can maintain their accreditation, avoid costly penalties, and remain eligible for Medicare payments. While most minor infractions can be easily addressed, larger problems can have a catastrophic effect on a facility's ability to stay in business.[12]

"The only thing, I think, that's more regulated than this industry would be aerospace. Perhaps NASA."

- Maintenance and Life Safety Manager

Staff workload (physically and mentally) is disproportionate to hourly wage.

Median hourly wage, experience level by staff type in Texas[3]



From the *Texas Center for Nursing Workforce Studies: Long Term Care Nurse Staffing Study 2019*[3]

*Note: Austin passed a $15 minimum wage in 2018.[5]

"They can make more at Buc-ee's over the weekend then they can here in a week."

- Facility Staff

"Why would you do this job for 13 dollars an hour? All that manual labor, and then you're exposing yourself to COVID, when you could be working at HEB. Then I remember somebody pointed out Target, and Rudy's is right up the road, and they were plastering how much Rudy's was making, and they were like, "We could make more money doing that."

- Director of Nursing

Competition for staff is fierce when the same skillsets are in demand elsewhere.

Skilled nursing facilities are the second largest health care employer in the nation.[1] In an industry where supply of skilled labor is insufficient to meet demand, the employees hold the advantage over the employers, and will depart for another job for minimal benefit.

"Staffing is always an issue in nursing homes. Think about it. Think of all the different businesses that are competing for the same pool of people. You have your Home Health. You have your hospitals, your doctor's offices, your nursing homes...There's so many businesses that require the same staffing, and it's a game to me is what it is. A lot of it is how much you can pay them, because they'll go down the street for a quarter more an hour."

Facility Administrator

Staff retention is a constant challenge for facilities and administrators.

Facility turnover rate statistics for Texas[2]

Staff Role	Median Turnover Rate (2019)
Direct Resident Care RN	*75%*
Administrative RN	*55%*
Direct Resident Care LVN	*61%*
Administrative LVN	*34%*
Certified Nursing Aide (CNA)	*85%*
Certified Medication Aide (CMA)	*40%*

From the *Texas Center for Nursing Workforce Studies: Long Term Care Nurse Staffing Study 2019*

"CNAs leave for a dollar, but they come back for the culture."

- Human Resources

"Staffing is always a challenge. So that's one thing we could change…we do pay our aides here, pretty good, I have to say. I think we could pay our nurses better, if we can do anything, I'd say that we need to pay all of our staff more. Not just to be able to attract people to come in but to be fair for the work that they do."

- Facility Administrator

Austin Area Nursing Homes (currently)

31

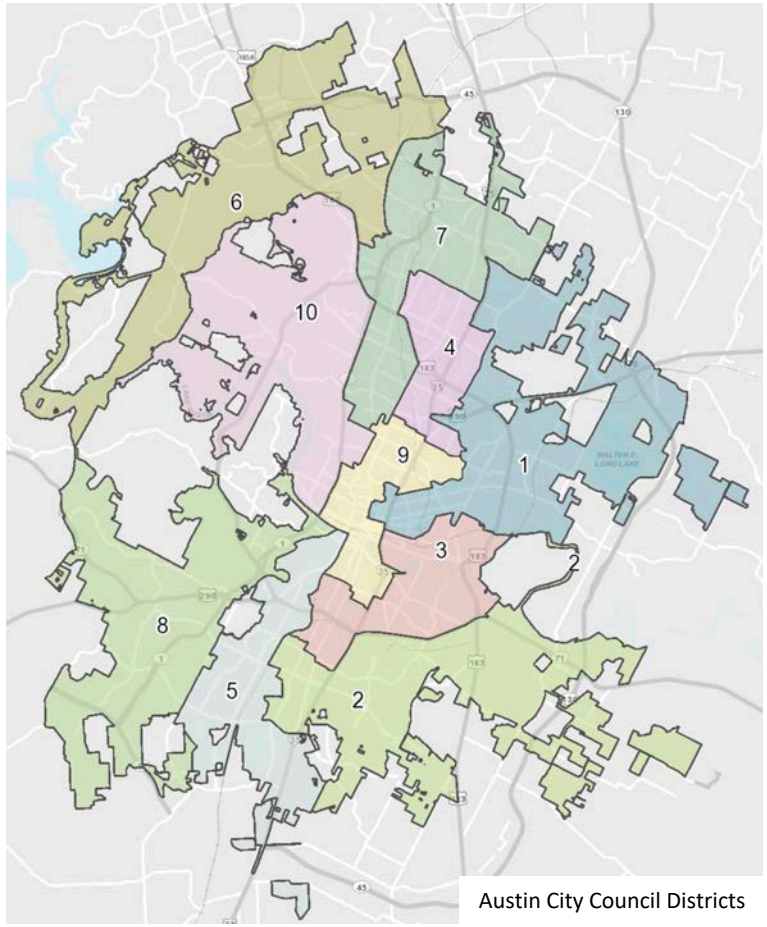
Skilled Nursing Facilities in Travis County

~4000-5000

Staff working in Skilled Nursing Facilities

~3000

Nursing Home Residents



Austin City Council Districts

DISTRICT 1
4 Nursing Homes

DISTRICT 2
None

DISTRICT 3
1 Nursing Home

DISTRICT 4
1 Nursing Home

DISTRICT 5
5 Nursing Homes

DISTRICT 6
2 Nursing Homes

DISTRICT 7
4 Nursing Homes

DISTRICT 8
2 Nursing Homes

DISTRICT 9
1 Nursing Home

DISTRICT 10
1 Nursing Home

Part 4

Insights

This is a complex system of people.

It includes people who need care, and people who provide care. Each of them has stories of…

Heroes
Caregivers
Relationships

"We're here for the same reason, just as any other nurse, any nurse practitioner, any doctor. I can't stress that enough, because it's not... Like I said, we're just overlooked as aides. I want people to know that we're here, and we're doing our best, just like they are, to make sure we're keeping ourselves together and we're keeping the lives that are in our hands together, because I feel like we go very unappreciated."

- Certified Nursing Aide

INSIGHT 1

Theory vs. Reality in Nursing Homes

Many COVID-19 infection control protocols are fundamentally misaligned with the realities of both living and working inside a nursing home. This results in significant effort to comply with recommendations that are logistically and operationally challenging, clinically misaligned, and at times behaviorally infeasible.

INSIGHT 1 Theory vs. Reality in Nursing Homes

Financial Impact of Isolation Unit: Recommending facilities hold a specific number of beds for their isolation unit is not financially sustainable for facilities as it requires utilizing some double occupancy rooms as single occupancy or cordoning off rooms for a “just in case” scenario

Financial Impact of Limiting Elective Surgeries: Facilities are still holding beds for skilled nursing care post-elective surgery as they are a significant source of revenue, however, in the “new normal” of COVID, it is both challenging to project when, if at all, elective surgeries will be consistent once more

Increased Scrutiny of Potential Resident Admissions: Due to infection control concerns, facilities are needing to be more selective about who they can admit into their facility given the increased liabilities of residents who, for example, are “wanderers” and might be unable to abide by social distancing practices

Increased Burden of Telehealth: As primary and specialty care has transitioned from in-person to remote delivery due to COVID-19, a new task and burden has been placed on staff to manage, conduct, troubleshoot, and sanitize all that is required for telehealth visits to operate safely and effectively

Entrance to isolation unit that currently has no COVID-19 positive cases

INSIGHT 1 Theory vs. Reality in Nursing Homes – *continued*

Isolation Unit Design Requirements Conflict with Life Safety Code: Design guidance for isolation units include the need to prevent circulation between isolated and non-isolated parts of the facility with plastic sheeting or new dry wall; however, in doing this, it blocks egress and creates a new set of safety challenges.

Isolation Units Displace Existing Residents: To create isolation units in some facilities, residents living in the targeted units must be moved out of their room, which is considered their home, thereby displacing these residents, disrupting their routine, and causing confusion.

Bedside Care: CNAs cannot perform a majority of their care for residents from 6 feet away, such as changing resident catheters. At times, staff use workarounds (i.e., clean gloves in pocket) to increase efficiency, but knowingly risking a regulatory violation.

Staffing Restrictions: By limiting which staff works in which units to eliminate crossover, some residents experience an abrupt break in their relationship with staff members who they've come to know and trust well, thereby resulting in an added emotional strain for the resident.

Resident Appetite: Some residents are eating less because they are unable to socially dine with others due to social distancing protocols.

Rolling barrier for isolation unit, created by facility to use for isolation unit, but unutilized due to concerns about ease of displacement

INSIGHT 1 Theory vs. Reality in Nursing Homes – *continued*

Decreased Socialization with Other Residents: Families often place residents in nursing homes to increase their opportunities for social interaction, and therefore, overall wellness; however, due to social distancing protocols, many of these interactions have been limited or eliminated

Lack of Visitation: Since outside visitors have been restricted, a significant cognitive and emotional decline has been observed in residents who were accustomed to having visitors

Lack of Field Trips: Since field trips have been eliminated, a significant cognitive and emotional decline has been observed in residents who were accustomed to leaving the facility for outings

PPE & Resident Fear: Some residents have strong, negative responses to seeing staff in PPE as it is unfamiliar and/or they might not fully understand the rationale or recognize staff with whom they previously had relationships

Face Coverings & Social Distancing: Dementia residents struggle with wearing face coverings and can't socially distance due to their cognitive ailment

Face Coverings & Hearing Impairments: Residents who are hearing impaired can't read lips and understand verbal communication if staff members are wearing face coverings

Residents gathered for hallway popcorn with activity coordinator (illustrated to protect privacy of individuals)

INSIGHT 1 Theory vs. Reality in Nursing Homes – *continued*

"[Social distancing] is not a thing. I mean, you can try as much as you can, but it's not possible in this environment to socially distance all the time. Even me sometimes when I'm going around and staff asks me, 'Hey, can you do this for me?' I have to come within six feet of them and assist with whatever. It's not possible in this environment."

- Assistant Director of Nursing

"Some residents are unquarantinable. It's their right to leave their room."

- Director of Nursing

"Right now, I feel sorry for Memory Care [units] that have COVID because those patients wander. I don't know…Unless you personally hire one assistant per patient. I mean, I don't know how they're [Memory Care Units] doing it…I've halted all wandering admissions, I will not take a wanderer. I see that it's just a risk for me."

- Director of Nursing

INSIGHT 1 Theory vs. Reality in Nursing Homes

In spite of the challenges, some early responses illustrate workarounds:

1. Standing outside the room to conserve PPE (i.e., gown) and talking to the resident from 6 feet away with a mask on
2. Putting fresh gloves in scrub pockets to limit movement across the room
3. Residents visiting world-wide locations through a virtual platform instead of taking field trips
4. Window visits as a way to maintain connections between family and residents

INSIGHT 2

Evolving Guidance and Recommendations

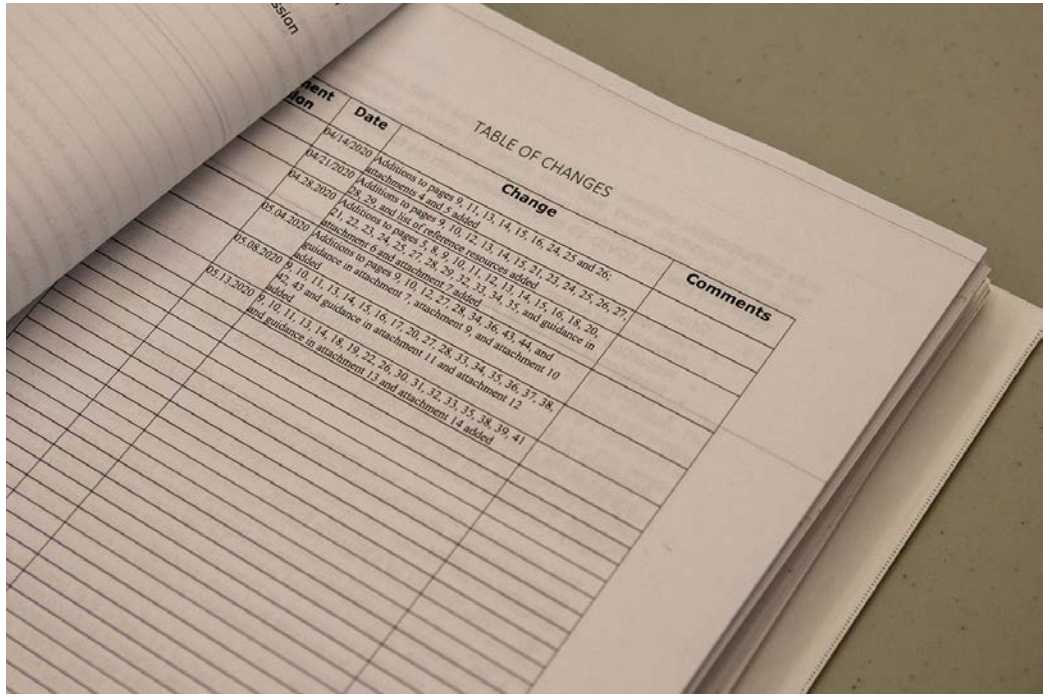
Nursing homes receive conflicting or hard-to-interpret guidance for COVID-19 infection control – recommendations are communicated frequently, often from different sources, and lack clear, actionable directives for implementation, resulting in Directors of Nursing (DONs) and Facility Administrators absorbing the responsibility of clinically interpreting and operationally translating these evolving guidelines into action. Given the complexity and possible enforcement, DONs and Administrators are forced to deprioritize their other critical duties, as this sensemaking process necessitates tremendous time, collaboration, and decision-making.

INSIGHT 2 Evolving Guidance and Recommendations

Unclear Infection Control Guidance: Because COVID-19 infection control guidance lacks clarity for how it needs to be implemented, every iteration triggers the following decision-making process for nursing home administrators:

- What did the previous existing published guidance state?
- How is this new guidance different?
- How does this guidance specifically affect my facility?
- What potential challenges might this guidance cause for me and my team?
- How might we tactically and/or operationally implement these changes?
- How do we prioritize these changes against our other existing duties and obligations?
- Who do we go to if we have questions or need clarification on these changes?

Penalties and Incentives: While numerous penalties exist for not following COVID-19 infection control guidance, facilities receive no incentives for maintaining a COVID-19 negative facility.



Director of Nursing COVID-19 Protocol binder: Page indicating regulation changes from previous versions

INSIGHT 2 Evolving Guidance and Recommendations – continued

Impact on Facility Operators: A facility's ability to interpret COVID-19 infection control guidance and translate them into implementation strategies is partly contingent upon the quality and competency of different nursing home operators. Our research found that individually operated facilities tend to follow the guidance they most strongly agree with that protects the safety of their staff and residents; facilities with strong corporate operators benefit from clear direction and support; and facilities with weak corporate operators often have to manage this as an additional source of confusion and conflicting information.

Lack of Support for Staff: Staff noted that sources for clarification or support were frequently limited by barriers to access or were unaccommodating of staff needs (e.g. webinars stating they won't address any questions previously answered in prior webinars)

Housekeeping binder for facility

COVID-19 binder for facility

INSIGHT 2 Evolving Guidance and Recommendations

"There are lots of mixed messages with COVID information…we don't know if what we are doing is right."
- Infection Control Nurse

"We listen to whoever can get us in the most trouble."
- Director of Nursing

"Every day it's webinars and training that's all every day. So today from 2-3:30 PM is our HHSC call where they give weekly updates. And so, every Thursday, I'm in that meeting. And then every Tuesday, we have Austin Public Health call at 1:00 PM. So that's an additional webinar. And then every Friday at 8:30 AM, we have infection control with HHSC call. So those are three every week calls plus the additional calls from our company about infection control…But it's just frustrating because it's so…from Austin Public Health, from HHSC, you never know what's the new rule each week."
- Director of Nursing

INSIGHT 2 Evolving Guidance and Recommendations

In spite of the challenges, some early responses illustrate workarounds:

1. Competitive in-services for staff: how to don and doff PPE using competition as a motivation

2. Connecting with peers on Facebook groups to brainstorm ideas around activities for residents as local social distancing guidelines shift

INSIGHT 3

Staff Behaviors, Sacrifices, and Risks

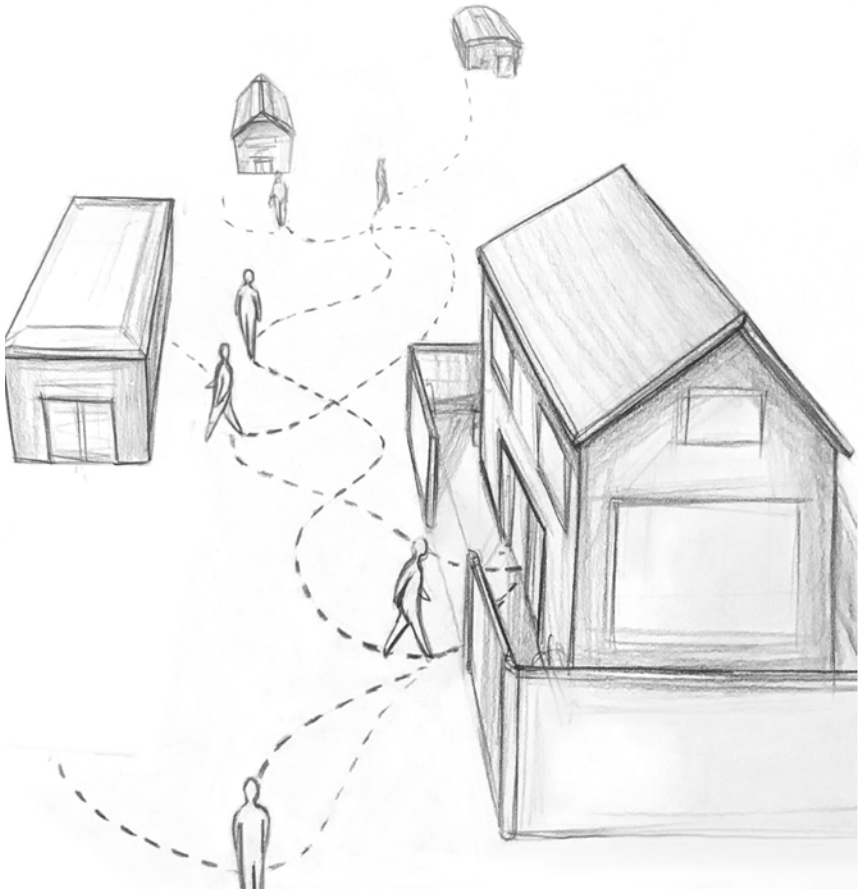
The novelty and unknown characteristics of this virus have presented a new challenge to nursing homes as significant risks for COVID-19 transmission do not solely exist within the facility but can be introduced through those who traverse external facility boundaries as well. While it is understood that staff choices in their personal lives, such as social distancing, are a key component of a facility's ability to control infection, facilities likewise acknowledge that they can neither monitor nor control staff behaviors off the clock.

INSIGHT 3 Staff Behaviors, Sacrifices, and Risks

Staff Fear and Guilt: Due to fear and the potential guilt of being “that person” who brings COVID-19 into a facility, many staff are choosing to make sacrifices in their personal lives, such as not seeing their own families, in service of prioritizing the health and safety of their residents and colleagues.

Concerns for the Future: Yet, some staff also expressed concern over how sustainable and effective these self-elected behaviors would be given the State’s phased reopening, coupled with the waning compliance of some citizens as they become increasingly restless due to stay-at-home orders.

Staff Risk: Hourly staff who previously worked at multiple facilities, are now confined to working in a single facility, are at risk of losing income if that facility encounters problems.



Staff movement in and out of facilities carries unseen consequences

INSIGHT 3 Staff Behaviors, Sacrifices, and Risks

"I don't go anywhere. I tell my family because of the fact that I want to stay COVID free …I always tell them I don't want to be the one that brings it to work…I try not to go out very often [to the grocery store] if I don't have to. No one's allowed at my house. It's just affected me personally just completely. I completely social distance myself from people."
- Assistant Director of Nursing

"When staff leaves, we pray and hope they're social distancing."
- Human Resources Manager

"I'm not saying that our employees are being careless necessarily, but because economies are opening, there's just more chance for contact outside of our four walls. No matter what we put in place at the facility, once our employees leave and do things outside, even if they have the best intentions, given everything that's going on now, and especially in Texas, and even more specifically, in urban areas, I get anxious."
- Facility Owner/Operator

INSIGHT 3 Staff Behaviors, Sacrifices, and Risks

In spite of the challenges, some early responses illustrate workarounds:

1. “Commitment” pay for staff for choosing to stay at one facility: an additional $2/hour for day shift and $4/hour for night shift

2. Free employee meals during shifts

INSIGHT 4

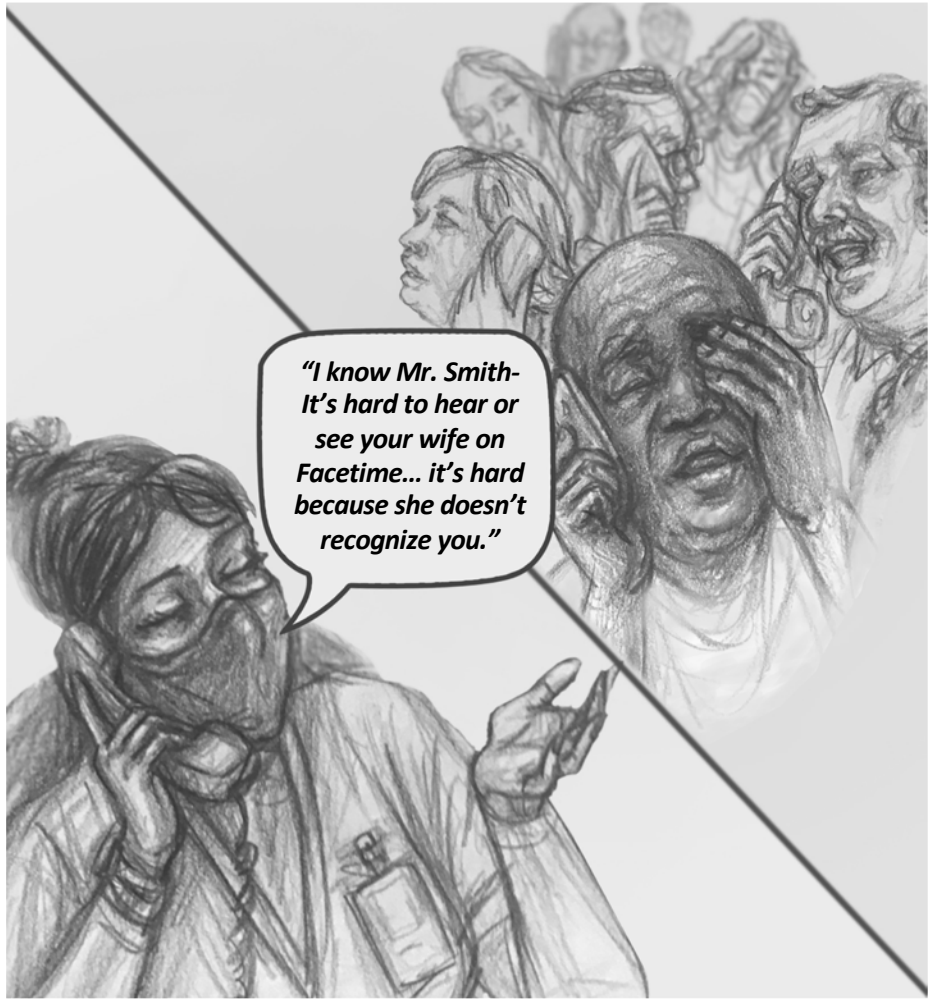
Psychosocial Consequences of COVID-19

Resident isolation from family, friends, and other residents has resulted in a cascade of resident psychosocial consequences, such as depression and loneliness. With families currently unable to provide support to residents, staff choose to absorb this emotional burden themselves – a response that is not sustainable long-term. However, with no end in sight to visitation restrictions, the potential for resident decline and staff burnout in the near-term seems inevitable.

INSIGHT 4 Psychosocial Consequences of COVID-19

Increased Family Requests: Because family and other external visitors are currently not able to visit residents, they are now calling an already overworked staff for any and all needs (including requests such as finding a resident's missing sock).

Staff Processing Needs: Staff are more than their role in the nursing home. They, too, are people experiencing and living in a pandemic, hoping for an eventual return to pre-COVID "normalcy", who likewise have emotions, thoughts, and other needs to process above and beyond their professional duties.

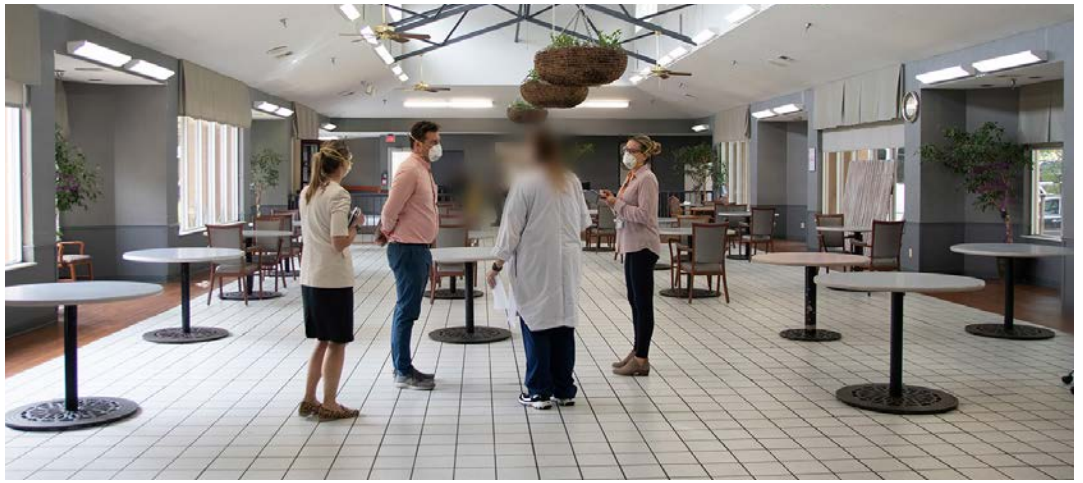


Increased family requests place additional burden on staff and communications

INSIGHT 4 Psychosocial Consequences of COVID-19 – *continued*

Staff Retention: Nursing home staff acquisition, and retention, are two long-standing challenges in the industry due to the hard labor required for low pay; however, offering hazard pay is facility-dependent, which means staff in some facilities are being asked to absorb numerous other duties out of the goodness of their hearts or other intrinsic motivation.

Impact of Staff Burnout:
Increasingly overburdened staff are ill-equipped to properly care for ailing residents.



Dining hall with increased table spacing to discourage congregating

Common area no longer in use due to infection control/social distancing precautions

INSIGHT 4 Psychosocial Consequences of COVID-19

"I don't know how the staff is coping. I don't know what happens when they get in their car after work."
- Social Worker

"How long can we sustain this before we see residents start to die from the depression and isolation? There has to be a middle ground between rules and regulations and what people need. It's awful watching them decline."
- Social Worker

"They are all dying from the isolation. The disease isn't killing them, it's the loneliness."
- Social Worker

INSIGHT 4 Psychosocial Consequences of COVID-19

In spite of the challenges, some early responses illustrate workarounds:

1. Lowe's built and donated a visiting booth for families to visit with relatives in an infection-controlled environment
2. Manicures every Saturday and haircuts (with permission from family and resident) to help preserve the dignity of residents
3. Inspiring quotes on whiteboards in the hallway that are continuously updated
4. For residents who don't have family connections, volunteers to fill the gap and provide virtual visits
5. Staff providing special meals or celebrations for residents as a way to improve morale
6. Resident families providing meals to residents

Emerging Insights

The four insights is not an exhaustive list. There are several emerging insights, including a few below, that merit further exploration in subsequent phases.

1. The successful utilization of technology for social support is heavily dependent on a resident's ability.

2. Texas only enforces federal minimum standards for staffing, which leads to staff taking on additional responsibilities to meet resident needs.

3. Routines are now constantly disrupted by infection control protocols, and this stability is essential to resident mental and emotional wellbeing.

4. There is an implementation gap between guidance provided to facilities and how those facilities operationalize the guidance. Some organizations are better equipped to address that gap than others.

5. Modern (or legacy) facility design has a significant influence on adaptability to COVID-19 protocols.

6. What is regulated are those things that can be measured, but those things than can be measured don't always have the most direct effect on the quality of care.

Part 6

Next Steps – Phase 2 and beyond

Next Steps

- Study additional nursing homes (i.e., other areas of Austin) where perspective would be informative
- Expand study to assisted living facilities and other models (i.e., aging in place)
- Interviews with residents and family, and staff that have departed the field
- Investigate role and utilization of technology
- Evaluate policies in place or being considered that may impact nursing homes and staffing
- Review value and cost from leveraging temporary staffing agencies
- Development of frameworks to understand landscape of challenges, and opportunities to respond

Gratitude

Our team is grateful for the City's commitment to a cross-collaborative initiative to improve the lives of nursing home staff and residents.

As one facility administrator told us, "So I think one of my godsends through this whole situation has been the Austin Public Health Department, I really don't know where we would have been without them…I don't know how people do it in other counties where they don't have Austin Public Health helping them and being that involved with the facility issues, but had we not had them, I truly believe that we would have been in a much worse situation."

We also want to thank all of the partners that continue to make this project possible.

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Thank you.

ADDITIONAL CONTEXT (OBSERVED IN FACILITIES)

- All facilities visited were variations on traditional nursing home environment/model. Key attributes include: centralized nursing stations and long hallways with semi-private and private rooms.
- Varied reduction in shared utilization of space: closure of dining halls, therapy rooms, and other activity areas in accordance with social distancing protocols, and heavily dependent on existing infrastructure.
- Material flows dictated by physical storage capacity - many buildings lack convenient storage options for food, PPE, etc. as buildings were not initially designed for longer quarantines and heavy PPE usage.
- COVID protocols: creation of “hot”, “warm”, and “cold” zones in accordance with HHSC guidelines with separate entrances for hot and cold zones for staff.
- All facilities currently in states of “lock down” where family visitation and external services are generally shut down or highly restricted and moved to telecommunication/remote visits. Any incoming resident (new admissions or residents returning from external appointments) are being placed in quarantine for 14 days (or following latest guidelines) prior to entering the general facility population.
- Group activities that cannot be completed per social distancing guidelines have been cancelled; facilities have moved towards smaller, rotational group activities, with notable variations.
- Staff are working tirelessly to maintain resident routines while abiding by infection control protocols.
- Staff are receiving in-services about donning and doffing PPE, but several facilities need direction on how to properly don and doff while conserving PPE.
- Staff shared that handouts are not the best way to share protocols or changing information, but rather interactive webinars in smaller groups. Staff also need materials translated into Spanish.

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Statement of Work

This effort will be subdivided into five phases of work:

PHASE 1 – FOCUSED INVESTIGATION (5-6 weeks)

Time is of the essence, and this first phase of work will begin where the most immediate impact is likely to be had, focusing on expected issues involving:

- Proximity and physical space layout - resident and caregiver density, shared utilization of space, flow of materials and people through the facilities
- Operational frameworks and processes – care protocols, group activities, caregiver handoffs, scheduling and timing of care
- Staffing – personnel roles and responsibilities, staff concerns and priorities

All of these will need to be considered in the context of resident and family needs. The investigation will utilize design research methods that focus on in-situ observation and in-person interviews of administrators, staff, and residents, as they are most often revealing of systemic gaps, conflicting priorities and collisions, and unrecognized or unexpressed behaviors that affect the care and safety of the residents and staff. Prior to any field research, the team will understand at depth the ongoing effort of the current emergency response spearheaded by the Health Authority, Austin Public Health, and the Nursing Home Task Force.

Activities and deliverables include:

- Background research and immersion into existing emergency response
- Coordination with care facilities and oversight agencies
- Research observations in nursing home facilities with variations in size and layout
- Interviews with stakeholders (administrators, staff, patients)
- Preliminary interim share out of initial insights from observed facilities
- Synthesis of research to detail initial findings, immediate possible responses, and areas for further study
- Report out to City Council and other stakeholders

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Statement of Work (continued)

PHASE 2 – BROADENED INVESTIGATION (5-6 weeks)

The first phase of work will undoubtedly reveal areas of investigation in the original scope of research that require more in-depth investigation, as well as new opportunities to have impact that merit exploration. The focus of this second phase of work is to explore more deeply and broadly, as informed by insights from the first phase of work, and from input from the Health Authority, Austin Public Health, the Nursing Home Task Force, and other stakeholders. While the focus of this phase of work will depend substantially on the output from previous phase, some of the expected effort can be described:

- In-depth interviews with varying staff roles, residents, and family
- Consideration of the role and utilization of technology
- Expansion of focus to assisted-living facilities, and other facilities of relevance (including representation from individual non-profit, corporate non-profit, and corporate for-profit operators, as willing and available)

Activities and deliverables include:

- Additional site observations and synthesis of findings
- Development of new strategies and options for care models and frameworks, and initial notional design concepts for space, protocols, workflow, staffing, use of technology and other relevant ideas
- Report out to City Council and other stakeholders

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Statement of Work (continued)

PHASE 3 – DESIGN & DEVELOPMENT (7-8 weeks)

The goal of this third phase of work is to design and develop real responses to the strategic opportunities from the previous phase. This phase of work will begin with a collaborative work session involving stakeholders from the Health Authority, Austin Public Health, and the Nursing Home Task Force, nursing homes and assisted-living facilities, and from the Texas Health and Human Services Commission. The insights and strategies from the previous phases of work will be reviewed, refined, and then responses developed to the most promising opportunities and challenges. The early concepts that arise from this work session will then be refined in more detail, as the first stage of developing prototypes that can be evaluated. The detailed designs will be illustrated at an appropriate level of resolution to convey future scenarios and a review session with stakeholders will be held to assess intent and viability. Based on the feedback, the concepts will be refined, and in coordination with cooperating facilities, early planning for prototypes and pilots will begin.

Activities and deliverables include:

- Work session with extended set of stakeholders to develop conceptual responses
- Design and development of concepts
- Interim concept review meeting
- Refinement of concepts and development of prototypes and pilots
- Report out to stakeholders

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Statement of Work (continued)

PHASE 4 – PROTOTYPE & PILOT (7-8 weeks)

In this phase of work, the refined concepts will be put into practice with cooperating facilities. Prototypes, which are intended as deployments meant to answer unanswered questions, are mechanisms for continued learning and refinement. Metrics will be established to define success before deployment of prototypes. Ongoing evaluation and nimble iteration will allow the prototypes to evolve quickly until they demonstrate effectiveness, or to be concluded if they prove ineffectual.

Prototypes then graduate to pilots, which are larger scale efforts just big enough to prove efficacy and viability.

Activities and deliverables include:

- Evaluation of cooperating facilities' capacity and capability for prototypes
- Co-development of prototypes and integration with facility operations
- Definition of metrics and protocols
- Deployment and iteration of prototypes
- Deployment and evaluation of pilots
- Report out to stakeholders

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Statement of Work (continued)

PHASE 5 – IMPLEMENTATION & RECOMMENDATIONS (4-6 weeks)

In this last phase of work, the focus of effort is on developing pathways to large-scale implementation, and associated recommendations that may be helpful to agencies with statutory oversight as they consider facilitating necessary change. As the nature of the new interventions is necessarily unknown at this point, the deliverables can take on a number of forms – from suggested layouts, to new operational models, to new staffing guidance.

Activities and deliverables include:

- Aggregation of prototype and pilot learnings
- Development of large-scale implementation guidance
- Development of recommendations
- Comprehensive report out to stakeholders