Implementing Temporal and Event-Based Individualized Music Interventions

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Simple C Cognitive Health

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GSA 2018 ANNUAL SCIENTIFIC MEETING The Purposes of Longer Lives

What We Learned

Personalized interventions contribute to meaningful interaction with others, including care providers and roommates.

Providing individualized music interventions based on care recipient's personal preference and life story contributes to memory recall and elevated mood.

Scheduling music interventions when care recipients need them most lowers agitation and increases recipient energy levels and alertness.

Background

The benefit of individualized treatment plans developed by a licensed music therapist for persons living with dementia (PwD) is well established in the field of music therapy.

However, due to limited time and finances, music therapists may be unable to provide the personalized music interventions when PwD are in need.
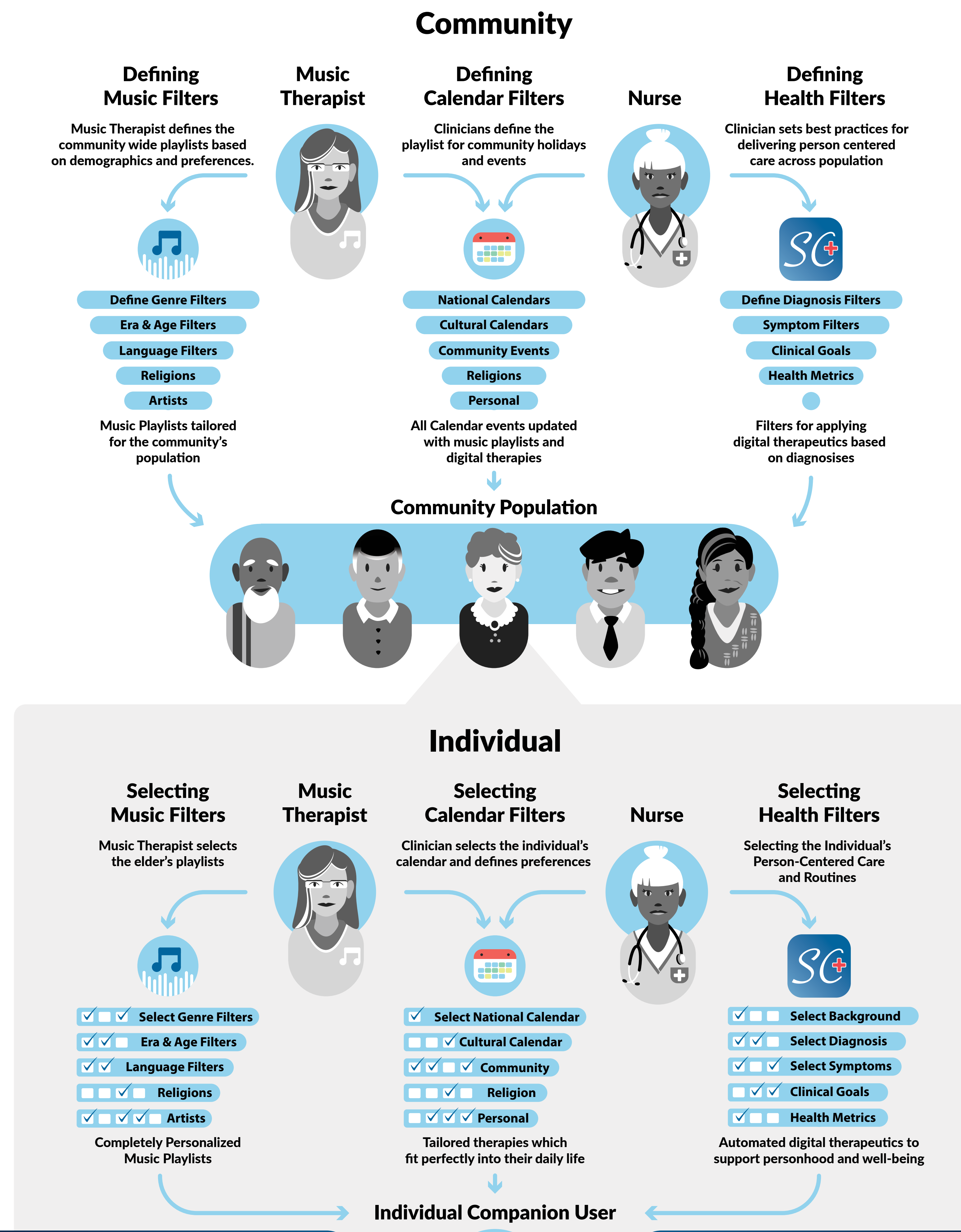
Individualized music interventions delivered through technology are able to provide similar value. Using technology to deliver music therapy can improve the reach of licensed music therapists.

Case Studies

Case studies were collected over a two-month period in a 130-bed senior rehab and long-term care provider by a licensed music therapist and a specialist with the Music & Memory program.

The goal of the case studies was to explore the effectiveness of scheduling individualized music interventions to align with PwD's care needs throughout the day (e.g. wandering, agitation, resistance to care).

Herb* was highly agitated, delusional, and attempting elopement stating that his family had stolen his truck. After listening to a personalized music intervention of gospel music from his youth, he reoriented to surroundings and became overcome with positive reminiscence and relaxed.

John* has poor hearing and displayed little response to communication. He was given bone conductive head phones. Upon hearing personalized music intervention, the care recipient became alert, started moving hands with the music, and reminisced about his family, and stated his full and preferred names.

Esther* was combative during morning Activities of Daily Living (ADLs). Appropriately scheduled music interventions lead to improved cooperation in morning ADLs and more alertness during music therapy group session.

Vivian's* roommate, Lory*, received a Companion due to her dementia diagnosis. After the Companion was placed in the room, Vivian noticed how Lory's mood improved. Vivian likes to use the Companion to engage with Lory in meaningful social interaction.

Robert* was wandering the floor with confusion and verbal agitation. An on-demand music intervention transitioned the elder from a distressed state to a calm quiet one.

*Names were changed for confidentiality

Community

Defining Music Filters
Music Therapist defines the community wide playlists based on demographics and preferences.

Music Therapist

Defining Calendar Filters
Clinicians define the playlist for community holidays and events

Nurse

Defining Health Filters
Clinician sets best practices for delivering person centered care across population

- Define Genre Filters
- Era & Age Filters
- Language Filters
- Religions
- Artists

Music Playlists tailored for the community's population

- National Calendars
- Cultural Calendars
- Community Events
- Religions
- Personal

All Calendar events updated with music playlists and digital therapies

- Define Diagnosis Filters
- Symptom Filters
- Clinical Goals
- Health Metrics

Filters for applying digital therapeutics based on diagnosises

Community Population

Individual

Selecting Music Filters
Music Therapist selects the elder's playlists

Music Therapist

Selecting Calendar Filters
Clinician selects the individual's calendar and defines preferences

Nurse

Selecting Health Filters
Selecting the Individual's Person-Centered Care and Routines

- ☑ Select Genre Filters
- ☑ Era & Age Filters
- ☑ Language Filters
- ☐ Religions
- ☑ Artists

Completely Personalized Music Playlists

- ☑ Select National Calendar
- ☑ Cultural Calendar
- ☑ Community
- ☐ Religion
- ☑ Personal

Tailored therapies which fit perfectly into their daily life

- ☑ Select Background
- ☑ Select Diagnosis
- ☑ Select Symptoms
- ☑ Clinical Goals
- ☑ Health Metrics

Automated digital therapeutics to support personhood and well-being

Individual Companion User

On-demand personalized music interventions contribute to reminiscence and re-orienting to surroundings.

On-demand personalized music interventions transition the elder's mental state from distressed to calm.

Methodology of Individualization

Musical Genre - Identifies pieces of music as belonging to a shared tradition or set of conventions. For example, vocal jazz as opposed to instrumental jazz.

Era - Represents a distinct period of history wherein music shares particular features or characteristics. Classical music eras may span centuries, while 20th century popular music can often be categorized by decade.

Age - Represents the age of the individual intervention recipient or the average age of the population.

Language - Filters music by language in order to match the listening preference of the intervention recipient.

Religion - Filters music by religious affiliation in order to match the religious affiliation of the intervention recipient.
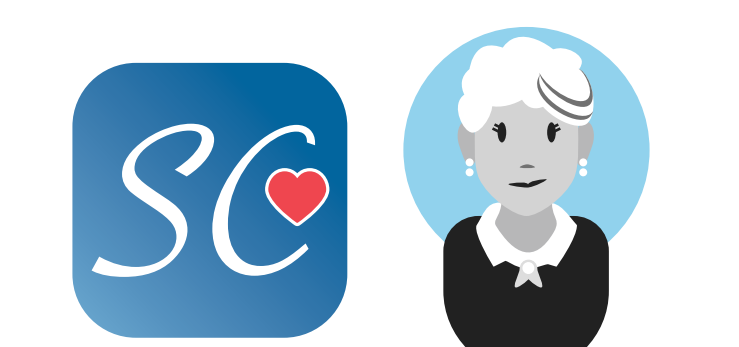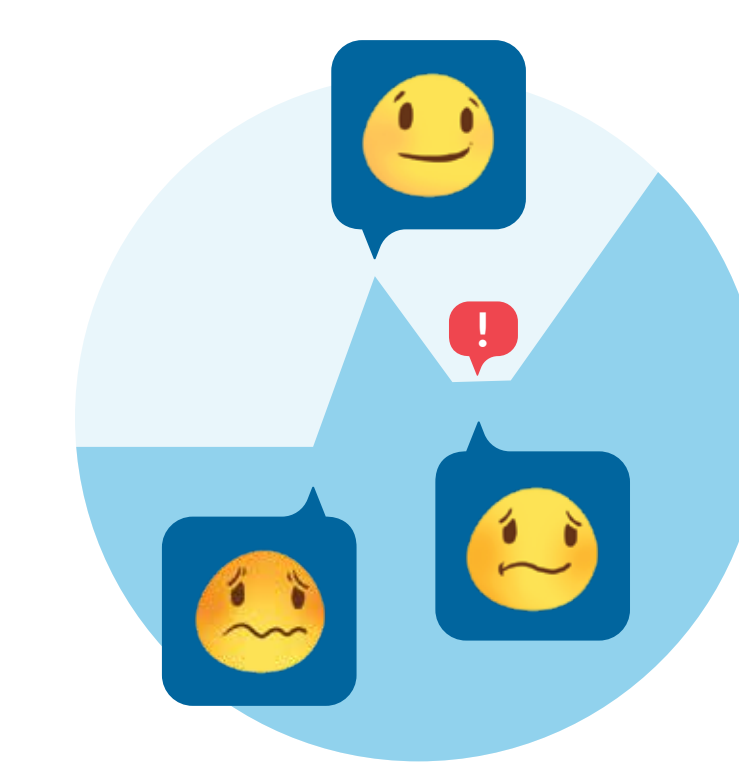
Artists - Identifies specific performers preferred by the intervention recipient or population.
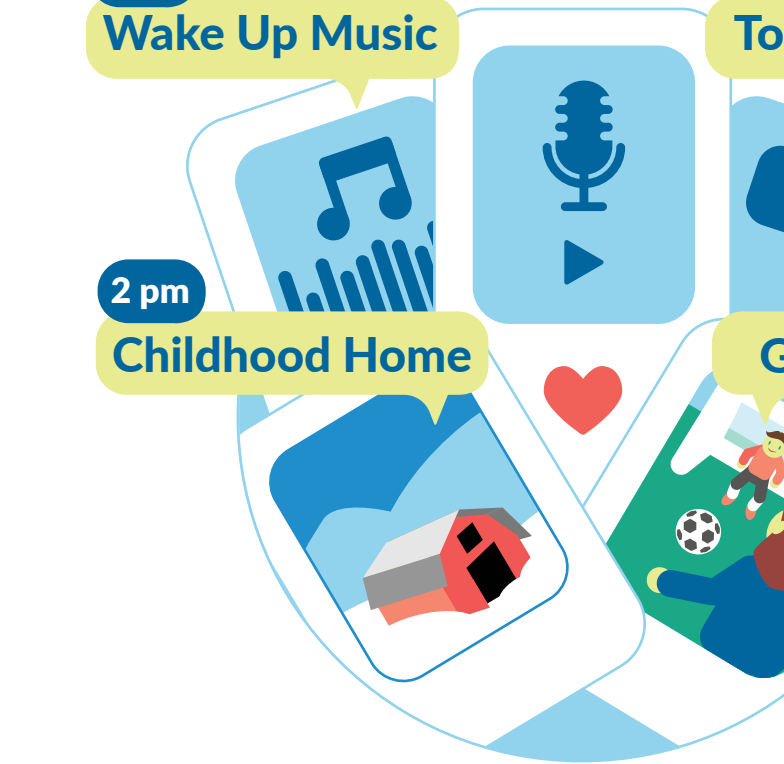
SimpleC Care 360 Platform of Care

Care 360 platform captures all health information to notify and alert the recipient, clinicians, and family of change in health status and suggest improvements.
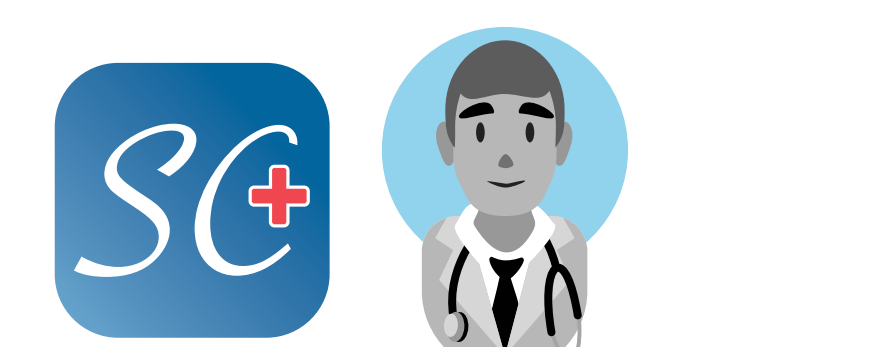
Assign Therapies | Assign Domain | Care 360 | Assign Care Goals | Identify Symptoms

Progress.

Motivate.
- 8 am Wake Up Music
- 12 pm Today's Game
- 2 pm Childhood Home
- 6 pm Grandkids

Prioritize.

SimpleC Companion™
The Companion communicates, using mobile technology, the right message at the right time. Stimulating digital therapeutics present and automate the family and care giver hands-on knowledge. It is a complete non-drug approach.

Family Connect
A mobile application that engages all active family members, in the platform, so everyone works together to communicate and support the care recipient at any time of day. Input to Care 360 is captured and used to improve care.

Clinical Connect
Clinicians are constantly tracking health status across multiple care recipients. Clinical Connect creates an easy way to capture health measures for immediate use on the platform to identify, and head off, health care events for each individual recipient.

Acknowledgements

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