

Chapter 4

Suspending Hierarchy, Liberating Innovation: Personal Reflections on the Triple Chronotherapy Journey



Diane Hurd, Nicholas Coombs, Cara Fairbanks, Heather Landon, Andrea Macdonald, Kyle Luraas, and Keri Cross

4.1 Introduction

At the 2016 Conference, *Putting Systems and Complexity into Practice*, Dr. Eric Arzubi and I presented a 5- min mini-talk on the role that collaborative inquiry and team dynamics played in our current research on the use of triple chronotherapy (Box 1) in the treatment of depression here at Billings Clinic. We presented the intersecting journeys of the first adolescent treated with triple chronotherapy, a severely depressed 17-year-old boy with extreme self-harm behaviors who refused all medications, and a loosely organized team of caregivers who were willing to try something new. These interactions created an unprecedented momentum which ultimately resulted in the formation of an interdisciplinary team of caregivers, further trials, formal research, and a dynamic culture of inquiry, learning, and innovation.

We asserted that the informal co-learning structure of our team and its inclusion of the patient as both catalyst and a central member of the research team were essential to the successful journey from the treatment of a single patient to innovative research in the treatment of adolescent depression. During the breakout sessions, one of our nurse colleagues, Rebecca Kitzmiller, approached us with a wonderful article entitled *Learning from Samples of One or Fewer* [1]. I believe March et al. very aptly describe so much of what has gone right with the triple chronotherapy team's approach to frontline research.

Very simply, one patient, one anomaly, and one variation can profoundly affect the journey of individual caregivers, departments, organizations, and even what we define as evidence-based practice. Identifying opportunities to learn from

D. Hurd (✉) · N. Coombs · C. Fairbanks · H. Landon · A. Macdonald · K. Luraas · K. Cross
Billings Clinic, Psychiatric Center, 2800 Tenth Avenue North, Billings, MT 59101, USA
e-mail: dhurd@billingsclinic.org

hypothetical and single occurrences is such an integral idea to patient safety and healthcare improvement. Yet in research, we look instead to large samples to define phenomena and to establish evidence-based practices. However, viewed through the lens of complexity science, both the micro and macro views are essential, and the significant relationships between cause and effect are nonlinear. Our ability as caregivers to capitalize on and learn from clinical occurrences, whether accidental, intentional, or spontaneous, is at the heart of putting complexity science into practice. I believe good organizations find ways to learn from samples of one or fewer.

4.2 Reflections

What follows are the personal reflections of several members of the triple chronotherapy team at Billings Clinic, each sharing how the journey of this one patient has influenced their own journey.

Summary of Triple Chronotherapy

The triple chronotherapy procedure is a structured manipulation of sleep-wake cycles and exposure to bright light. Nurses partner with patients to complete the 5-day intervention. The first 24 h are spent with 1:1 nursing care for provision of comfort measures, to stimulate wakefulness and to encourage successful completion of the intervention.

- Day 0: One night of total sleep deprivation
- Day 1–3: Sleep phase advancement
 - Day 1: Sleep occurs from 6 PM to 1 AM
 - Day 2: Sleep occurs from 8 PM to 3 AM
 - Day 3: Sleep occurs from 10 PM and 5AM
- After Day 3 sleep occurs from 10 PM to 6 AM and continues on this schedule.
- Every morning from 0700 to 0730, patients receive bright light therapy using a 10,000 lux light box which should be continued at home on a daily basis (Fig. 4.1).

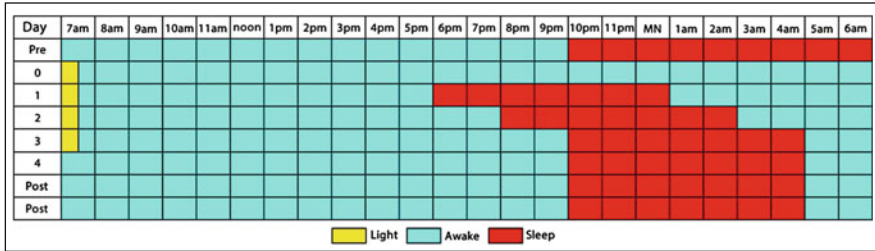


Fig. 4.1 Triple chronotherapy protocol

4.2.1 Diane Hurd, Co-principal Investigator - Triple Chronotherapy Research, Charge Nurse, Billings Clinic

I still find it extraordinary that one patient, a brave and vulnerable teenage boy, could be such a powerful agent of change in the lives of so many caregivers and in the culture of an organization. This patient did a very bold and simple thing. He challenged our assumptions about the necessity of delivering the standard of care as usual. His refusal was absolute—*I’ve already had seen what you’re offering. I’ve tried it. And I don’t want any more of it.*

It might have ended there. A defiant and “noncompliant” teenager, discharged to a higher level of care. Yet that is not what happened. His caregivers rose to his challenge. The physician went to the literature and found an innovative evidence-based treatment. Frontline staff weary of the heartbreaking landscape of less than happy endings rallied around the chance to try something new. Members of leadership who might have blocked this treatment for a number of administrative reasons took a leap of faith to pursue something that might make a difference. This is where I always ask myself—*what if this treatment had failed?* We were very fortunate. The results of the treatment were astounding, and success has been duplicated with many other patients since.

Our story has a journey of its own. Like the treatment itself, the reception it receives among caregivers both within and outside our organization is always exceptional. Psychiatry has no corner on disappointing patient outcomes, broken systems, and the frustration of individual caregivers. Our story speaks to an untapped potential that resides in individuals (both caregivers and patients). It describes the homegrown impetus which can create dynamic evidence-based practice and real changes in patient care.

4.2.2 Nicholas Coombs, Data Analyst, Center for Clinical Translational Research, Billings Clinic

My work relationship with Billings Clinic began in 2015 almost a year after the original case report. I was immediately pulled into a work group to discuss something called “Triple Chronotherapy,” a treatment of which I was not familiar, and it was there where I met the champions who were just beginning to pioneer this new innovative research into healthcare.

The passion that resonated off each of them was incredible; it still is to that effect. What this 17-year-old boy did for this department and this organization is beyond noteworthy. My original presence was the product of a group of clinical professionals who wanted to make a difference but did not have all the tools to do so on their own. Once brought up to speed, I engaged the group on the research methodology, data analysis, and statistical considerations for the pilot study we were designing.

From a statistician’s lens, clinical professionals are generally either extremely pro-research or extremely anti-research due to something decided well before I meet them, and their minds do not seem to change unless they possess a dog in the fight. Implementing triple chronotherapy treatment on a whim and having it continue into one of Billings Clinic’s most successful case reports led the Psychiatry team to develop that unconditional appreciation and desire to seek new knowledge, and I was fortunate enough to experience the result of that first hand.

4.2.3 Cara Fairbanks, Registered Nurse, Psychiatric Center, Billings Clinic

I am extremely lucky to be involved in triple chronotherapy at Billings Clinic. At the time of our first patient’s treatment, I was a very new nurse and believe that this experience helped shape who I am today as a psychiatric nurse, as well as the quality of care that I provide to my patients. This patient’s acuity level was like none that I had seen before. He presented with an unimaginable number of severe, self-inflicted cuts and a level of hopelessness that I have not seen again in the 4 years that I have worked in the inpatient psychiatric setting. This patient was truly ready to give up on life. He refused to take further medications as he had been on a myriad throughout his life, all of which he reported made him feel “numb.” As a unique, multidisciplinary team was formed based on clinical research, this patient began to express a new found hope. Triple chronotherapy was extremely successful in treating this patient’s distress, and he has, since, gone on to live a productive life in the community. Previously, it appeared that the only option was a high acuity residential facility.

We as a team are extremely fortunate and thankful to have widespread support for our efforts to continue the implementation of this protocol. Numerous adolescents in our youth psychiatric unit have undergone this procedure, often with extremely successful outcomes. Our physicians, nursing staff, management, and hospital-wide personnel have been enormously supportive and instrumental in our work. Triple chronotherapy is a truly unique and successful nonpharmacological approach to adolescent depression, and we are excited to see many more positive results.

4.2.4 Heather Landon, Nurse Clinician, Psychiatric Center, Billings Clinic

At first, watching this young man's struggle was very discouraging. I wondered if there was any treatment which could help him. After the triple chronotherapy protocol was initiated, we witnessed something which dramatically restored our hope. As a team, we celebrated his first smiles, renewed energy, and even the day the patient played a prank on one of the staff. It was a remarkable feeling, to be boldly hopeful again, and to be part of a team with a common goal.

With this patient in the forefront of our minds, we led with our hearts. The desire to help others continues to inspire this team to develop protocols and guidelines so that triple chronotherapy can be used to treat other patients with depression in the inpatient youth psychiatric setting. A team so united in its purpose is unstoppable. We have shared our story throughout our organization and at several national conferences. With current research being conducted on the youth inpatient unit, the team continues to thrive and is able to tell many other stories, stories with positive and powerful endings.

4.2.5 Andrea Macdonald, Charge Nurse, Psychiatric Center, Billings Clinic

The work we do as a healthcare team can be mentally and physically draining. It can leave us weary and discouraged. No one knew when we walked into work that day that it would be the day that changed everything. Once Tim, a depressed and helpless youth, was placed in our care, we knew that we had to do something. Due to past failed attempts on medications, his physician was willing to try something new. Without hesitation, the staff followed eagerly and would do anything to help save the life of a teen who had essentially reached his rock bottom. Over the next week, the triple chronotherapy protocol was started, and Tim changed. He learned to appreciate himself, look around at what the world had to offer, and have the ability to smile again. Watching his transformation was amazing and profound to all of us who witnessed it.

This one patient, this one deviation in our everyday work week, and this chance to do something different helped change me too. It made us all realize that there is value in each encounter that we have every day with our patients. It made us more open-minded to try new things in order to help others. It also gave us hope—that no matter how depressed or hopeless a patient is, they still have a chance to get better, and they still deserve our help to put the pieces back together and create a life worth living. This patient has helped the development of a protocol that could potentially help hundreds, if not thousands of adolescents across the country. This hope is why we as healthcare providers continue to come to work, in the hope that we can change just one life.

4.2.6 Kyle Luraas, Mental Health Worker, Psychiatric Center, Billings Clinic

When I first started working with this patient, I had never seen anyone more motivated to end his own life. There were cuts all over his arms and his body. I worried that being on one-to-one staffing with this patient would be extremely difficult. What was I to do? What was I to say? How was I going to keep this patient safe from himself? As I came on shift, I asked myself all of these questions, but forgot to ask myself one very important question—*If I were him, what would I need to hear?*

Working with this patient taught me that it is not always hearing what we want to hear, but instead hearing what we need to hear that can make a difference. As I worked with him during the triple chronotherapy process, I saw an incredibly sad and flat young man become brighter and brighter. His response at first was “Well, I really have nothing left to lose.” During the protocol, I saw that his determination and drive to succeed gave him what he needed to get better and return home. This patient showed me on both a personal and professional level that I can make a difference no matter how small by simply saying what needs to be said. He is one patient that I will never forget. He showed me what my career path really is, and let me see the difference that I can make in the lives of others along the way.

4.2.7 Keri Cross, Nurse Manager, Psychiatric Services, Billings Clinic

I have never been as proud of our psychiatric team as I was when I saw how our first patient responded to the treatment. It was miraculous. To know that our team adapted an adult treatment to be effective for adolescents is astonishing.

I played a very small part in the triple chronotherapy process. I was presented with a challenge, to make a new process in our environment accessible for a patient when all others had failed or to say no. Many questions ran through my mind that

day, but the main concern was for our patient. If everything else we had access to had been tried and failed, what can we do to help? Other immediate questions were: What is in the patient's best interest? What are the risks and expected outcomes? Is it safe? Once these questions were answered according to the information we had, how could I say no?

We had key staff who led the initiative in developing our processes. This was the best way to get buy-in from other staff to make this process successful. They assisted me in showing our team members the changes that were occurring with the patient and how much better the patient was as his live and suicidal symptoms diminished. I recall the first time I saw the patient smile. It made me remember why I became a nurse, why I became a psychiatric nurse, and why I went into a leadership role.

Take-Home Message

- Evidence-based practice is a process of collaborative inquiry.
- Collaborative inquiry employs an informal co-learning style and includes the patient as catalyst and central member of the research team.
- The complexity lens allows us to capitalize on occurrences of one or fewer, learning from unique and hypothetical occurrences.
- One patient, one anomaly, or one variation can profoundly affect the journey of individual caregivers, departments, organizations, and even what is defined as evidence-based practice.

Reference

1. March JG, Sproull, LS, Tamuz M. Learning from samples of one or fewer. *Organ Sci.* 1991;2(1):1-13.