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ENVIRONMENTAL SCAN OF THE ELISABETH BRUYÈRE GERIATRIC REHABILITATION SERVICE: LESSONS LEARNED FROM THE COVID-19 PANDEMIC

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Abstract

Background: In response to COVID-19 pandemic implications, the Elisabeth Bruyère Hospital (EBH) Geriatric Rehabilitation Service (GRS) implemented several key modifications to ensure continued provision of services. An environmental scan was undertaken to assess the impact of these changes and to prepare for long-term pandemic planning.
Methods: In this qualitative study, current literature regarding COVID-19 and service availability was reviewed. Semi-structured interviews with key stakeholders were held. Interview responses were reviewed and analyzed to identify recurring themes related to issues with program delivery.

Results: Bed utilization fluctuated due to various factors and improved with closure of the COVID-19 intake unit. Initiatives to maximize therapy for patients on isolation (e.g. Hall Walking Program) ensured rehabilitation performance targets continued to be met. Creation of the Unit Support Worker role improved the patient isolation experience. Staff workload fluctuated but improved with closure of the intake unit. Although discharge planning was more challenging, the percent of discharges to community remained unchanged.
Conclusion: Continuous reassessment of GRS program delivery allowed us to quickly address barriers to flow and issues with patient experience. We continued to achieve our key performance targets including percent discharged to community and maintained the average length of stay (LOS).

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Key words:
coronavirus disease of 2019 (COVID-19), geriatric rehabilitation, elderly care, environmental scan

Introduction

The Elisabeth Bruyère Hospital (EBH) Geriatric Rehabilitation Service (GRS) allocates 50 inpatient beds to older adults who have experienced physical and functional impairment due to a recent medical illness or surgery. As part of our pandemic planning, we anticipated the subacute sector would be key to assisting acute care with occupancy issues. Significant changes were instituted in our setting, as we sought to keep beds open and available to the system. We undertook an environmental scan to assess the impact of these changes. Our experience has emphasized the need for subacute programs to rapidly adapt to the acute implications of the pandemic and to prepare for an expected significant role in the long-term pandemic response.

GRS is situated in a stand-alone subacute facility and is divided between two hospital floors, each equivalently resourced with medical and allied staff (Table 1). Greater than 90% of patients admitted to the GRS are transferred from acute care medical and surgical units. During the 2019-2020 fiscal year, there were close to 700 admissions, with an average LOS of 26 days. The average patient age was 82, and 83% of geriatric rehabilitation patients were successfully discharged back to the community (Table 3).

Given the vulnerable patient populations served by EBH, with the onset of the COVID-19 pandemic in March 2020, the following hospital-wide key infection control procedures were implemented: closure of outpatient services with mobilization of staff to inpatient programs, restricted entry with daily symptom screening for all staff, universal masking of clinical staff, restriction of visitors, and closure of patient dining rooms and group activities. On GRS, one floor was converted into an intake unit for all newly admitted patients. For 14 days, patients were monitored for symptoms of COVID-19 and were isolated to their rooms on full contact/droplet precautions. These beds were coded under MDS (Minimum Data Set), which corresponds to a lower level of rehabilitation contact hours provided in their rooms. Once the 14-day isolation period ended, patients were transferred to another floor to begin their intensive rehabilitation stay in an NRS (National Registry System) bed. On this floor, the routine precautions were followed (staff universal masking, no visitors). Patients were permitted to leave their rooms to attend therapy in the gyms. Though initially increasing total LOS, overall capacity was maintained. Patients were allotted, on average, 27 days of intensive rehabilitation time.

In June 2020, the intake unit was discontinued. Patients were admitted directly to an active rehabilitation (NRS) bed and began intensive rehabilitation in their room during an initial 14 days of isolation. All patients required a negative COVID-19 test prior to admission. In July, limited visitation was permitted with screening for COVID-19 symptoms upon entry.

Methods

The GRS environmental scan data was gathered from March 2020 to September 2020. The scan unfolded as below:

Review of current literature and policy regarding COVID-19, geriatric care, and regional service availability (Health Canada, the Ontario Ministry of Health, Ottawa Public Health publications).
An ethics review exemption was granted by the Bruyère Research Ethics Board given the quality improvement nature of this initiative.
Semi-structured interviews in person/by phone with key stakeholders (Table 2).
Thematic analysis of interview responses.

Results

Of the 51 people invited, 33 consented to participate in the interviews. Participants included patients and their caregivers, frontline clinicians, management, referral partners, representatives from community healthcare services, and other regional and provincial specialized geriatric services (Table 2).

Thematically recurring points are collated under the headings below and were frequently mentioned across all participants groups.

Bed utilization

Occupancy within the rehabilitation service was impacted by several factors. With the declaration of the pandemic in March 2020, there was an abrupt drop in number of admissions that then gradually increased over the summer, mirroring acute care occupancy (Tables 3, 5). Occupancy was initially low, likely due to pandemic directives and reluctance of the general public to present to acute care, fearing outbreaks. Moreover, elective procedures were initially cancelled. Wait time from acceptance in acute care to admission to the GRS was observed to be lengthened by both internal members and external partners. This is supported by our internal wait time data of 12.8 days on average in 2020-2021 vs. 2.98 days in 2019-2020, pre-pandemic (Table 3). The new intake unit created a bottleneck to internal flow within GRS, with turnover on the intake unit not matching the outflow and LOS of the rehabilitation beds (2 weeks vs. >4 weeks). Following closure of the intake unit in mid-June, there was a distinct fall in average referral wait times, from 14-16 days in May-June, to 4-5 days after June. The additional requirement of a negative COVID-19 test result prior to transfer to rehabilitation also introduced delays with transfers and led to lower bed occupancy particularly prior to weekends.

Delivery of rehabilitation program

The primary concern identified with the 14-day isolation period and shared among all providers and patients was that it would lessen the intensity of rehabilitation and slow patients' recovery trajectory. Creative initiatives to maximize in-room rehabilitation and capitalize on team member flexibility were implemented. The Hall Walking Program allowed patients on isolation to walk in the hallway supervised by a therapist adhering to infection control practices. Therapists used portable exercise equipment in the rooms of patients, disinfecting them in between sessions. Rehabilitation assistants provided sessions that complemented those of Occupational Therapists and Physiotherapists, increasing the frequency of in-room therapy. Some patients were permitted individual access to the gym at the end of the day to mitigate infection risk, with a pre- and post-disinfection routine. Providers were confident that the above strategies were successful in ensuring readiness for the full rehabilitation program after the 14-day isolation period.

Patient perspectives

Patients, caregivers, and staff members consistently reported social isolation as a significant concern for our elderly patients. The loneliness and isolation resulting from community pandemic experiences were further amplified in hospital while patients were initially confined to their rooms. Some patients even expressed preference to leave the program early. Patients were more content once able to exit their rooms, attend physiotherapy sessions in the gym, and have visitors once restrictions were relaxed. Previous users of GRS services reported missing the communal dining and social activities that are typically offered. In fact, patient satisfaction was considerably lower during the pandemic period compared to previous years. Most patients commented on their appreciation of the Unit Support Worker role that was created to assist clinical staff and support social stimulation.

Regarding patient profile, by mid-summer months, GRS staff noted increasingly medically complex patients. As well, they noted more cases of prolonged delirium that were more difficult to manage because typically effective non-pharmacological strategies (e.g. more frequent staff contact and reorientation, caregiver presence, day/night orientation with time spent outside room, dining hall routine, recognizing familiar staff without PPE) were no longer feasible under strict infection control practices. Average LOS increased in August and September, reflecting the increased medical complexity, deconditioning, and heavier care needs of patients seen at this time (Table 4).

Staff concerns

Several challenges were reported by staff throughout the pandemic period. Due to the closure of outpatient programs, and pressing staffing needs at another site, there was a large redeployment of staff to inpatient programs, creating a lack of consistency in team makeup. Staff were retrained for new roles with enhanced infection control measures. Workload was increased due to time required to don and doff PPE, heavier care needs of patients, and increased time spent communicating with family members who were unable to visit. The intake unit led to frequent room changes and duplication of documentation during the transition from MDS to NRS-funded beds. Morale dropped due to loss of personal connection with patients resulting from PPE and infection control measures, and decreased continuity of care on the intake unit where patients moved to another unit after 14 days. Early on, fluctuating supplies of PPE, rapidly changing policies, and challenges with maintaining distance among colleagues created additional stressors.

Some of these issues improved with the dismantling of the intake unit, which created a more equitable workload between units, and decreased burnout among those who had staffed the intake unit. Creation of the Unit Support Worker role assisted with supporting clinical and administrative staff workload. This also improved patient experience and in turn, provider satisfaction. Closure of the intake unit led to staff quickly pivoting to provide more in-room therapy during the initial isolation period. Staffing fluctuated due to several reasons (self-isolation, burnout, vacation) while unpredictability in bed utilization exacerbated by delays in COVID-19 swab turnaround made it increasingly difficult to anticipate staffing requirements.

Discharge planning

Most team members reported additional hurdles and uncertainty with discharge planning during the pandemic period. Barriers to providing community services included priority access to services for acute care discharges, reluctance of patients and families to accept home services due to infection risk or finances, and real-time communication delays with services[1,2]. Gaps in securing services often led to delays in discharges. This translated to increases in LOS (Table 4). Uncertainty with outpatient medical service availability and limited access to in-person clinics led to challenges with arranging follow-up. The EBH Geriatric Day Hospital, which historically provides ongoing outpatient follow-up for select GRS patients, continued with this support once adapted to virtual care.

Pandemic directives and institutional outbreaks affected the availability of convalescence beds, retirement homes, long-term care, and other residential services[1]. Variability in turnaround of COVID-19 swabs and limited patient transport services caused additional strain and delays with planned discharges. Understandably, patients and their families reported apprehension around discharge. Team members often reported frustration with limited access to resources for discharge planning. Despite the above challenges, the percentage of discharges back to the community remained unchanged compared to the prior year (Table 3).

Social workers noted increasing psychosocial complexity and disparity among admitted patients. Our impression is that younger patients with more financial means were likely bypassing rehabilitation and electing to discharge home, perhaps secondary to fears of outbreaks in institutions. Meanwhile, frailer patients who lived alone with fewer supports remained in hospital. As a result, there was a greater proportion of patients accepted with uncertain discharge plans and financial barriers, affecting outflow from the service.

Discussion

The COVID-19 pandemic raised new issues and amplified existing challenges in all aspects of healthcare[3]. As regional directives continued to change in response to accumulating evidence and community disease transmission rates, GRS was compelled to quickly adapt to ensure uninterrupted and successful delivery of inpatient services. Continuous reassessment and feedback from the team and external partners made innovations possible, based on the following themes:

Balancing bed utilization with outbreak management

The separate intake unit was devised to cohort patients based on presumed infection risk. While there had not yet been an institutional outbreak, this unit led to unnecessary bottlenecks with patient flow. Moreover, staff workload increased, and an additional 14 days was added to patients' LOS. The intake unit was thus closed as it was realized that it was not required for COVID-19 outbreak management to protect our high-risk patients. Our team was able to pivot back to original processes with mixed isolated and non-isolated patients on each unit, while incorporating PPE and infection control measures.

Empowerment of rehabilitation team

Following closure of the intake unit, therapists devised innovative methods of delivering in-room rehabilitation while adhering to infection control principles. These strategies, along with the Hall Walking Program, ensured patients would continue to receive high-quality therapy that more closely resembled the original rehabilitation program. Patients continued to make the same gains while optimizing in-room exercises and transfer training. The team became adept at providing effective and safe rehabilitation while patients were on isolation. Our usual program performance measures such as average LOS and percent discharged back to the community remained the same, suggesting that patients were making rehabilitative gains throughout their stay (Table 4). Furthermore, staff noted that ambulation in the hallways and set in-room routines assisted with delirium prevention and improving mood, which were felt to be worsened by isolation.

Responding to patient needs

The Unit Support Worker role was created during a time of strict visitor limitations. Their role was to support nurses and patients, including assisting with tasks that are typically managed by patient caregivers or volunteers. Patients benefited from social and leisure time, connection with family, support with technology, and other basic needs all enhanced by Unit Support Workers. The Unit Support Workers supported our clinical staff by assisting with laundry and toileting, communicating with staff and family members, re-orienting delirious patients, tending to the high call bell volume, and administering patient satisfaction surveys. Unit Support Workers received consistent praise from both staff and patients, recognizing their invaluable role in patient-centered care and improving the isolation experience.

Ensuring community integration

The EBH outpatient Geriatric Day Hospital (GDH) historically supports a subset of complex GRS inpatients following discharge, those that require ongoing follow-up of their medical, cognitive, polypharmacy, and mobility issues. While shut down at the start of the pandemic, the GDH program transitioned to virtual-based care soon after. This allowed for an ability to arrange post-discharge follow-up of medical issues and support transition home, especially crucial while outpatient supports and medical follow-up were limited[2]. Initiatives for provision of GDH-supervised home-based physiotherapy are currently being explored. GDH physicians were able to conduct an in-person assessment of admitted patients prior to discharge to facilitate integration with the GDH program.

For patients that could not return to the community, expedited access to ALC beds was a priority in discharge planning, as ALC capacity had expanded within the hospital during the pandemic months.

Limitations

Limitations of this scan include the depth of review given timeline and participant availability. The data gathered is unique to EBH GRS patients, and as such, the admission criteria and institutional policies may differ from other regional rehabilitation units. Results from this scan may not be reflective of areas with a different network of referral partners and community supports. The duration of this initiative represents a six-month window of the pandemic period; further changes to regional policies and health directives are expected

in response to community disease transmission patterns. As such, GRS process changes are continuously in flux; however, the foundation built in the initial stages can serve as a framework to guide future changes.

Conclusion

The wide breadth of sources used in this environmental scan provided comprehensive insights and revealed barriers impacting patient care, bed utilization, and discharge planning, most of which previously existed but were amplified by pandemic implications. Innovative modifications to our traditional program related to maintaining flow, outbreak management, delivery of rehabilitation, and supporting the patient experience and transition to the community ensured that rehabilitation goals and performance targets continued to be met. This highlighted the importance of a highly functioning and flexible team in the face of uncertainty. Key findings and future recommendations are as follows:

Increased access to internal ALC/Surge capacity for patients awaiting retirement homes, long-term care, and gapped service plans would improve outflow. This would avoid bottlenecks affecting rehabilitation capacity and improve flow from acute care.

Early identification of rehabilitation candidates via phone triaging would avoid reliance on traditional referral processes if acute care is overwhelmed.

Caregivers of high-risk patients (cognitively impaired, mood disorder, high care needs) who are PPE-trained should be allowed to visit in person to support patient care and delirium management.

Table 1. Characteristics of GRS patients and team

GRS inpatient Admission criteria	**GRS Team Members**
Age 65 and over Community dwelling (home or retirement residence) Medically stable Sitting tolerance of at least two hours and ongoing help required with transfers, ambulation, stairs, daily self-care Identified role for comprehensive geriatric assessment and rehabilitation in supporting discharge and preventing re-admission (e.g. falls and mobility concerns, cognitive change, mood, incontinence, polypharmacy, multimorbidity) Willing and cognitively able to participate, follow directions, and tolerate daily therapy Realistic goals with anticipated ability to make progress within their allotted LOS	Care of the Elderly Family Physicians Nursing staff (registered nurses, advanced practice nurse, registered practical nurses) Pharmacist Physiotherapy Occupational Therapy Rehabilitation Assistant Social Work Dietitian Speech and Language Pathology Porter Neuropsychology Spiritual Care Clerk Unit Clinical Manager

Table 2. Interviewees for Geriatric Rehabilitation Service Environmental Scan

Group	Individuals Interviewed (N=33)
GRS patients (N=6)	Patients, patient caregivers
GRS clinical staff (N=12)	Physicians, Nursing, Physiotherapists, Occupational therapists, Social workers, Unit Support Workers
EBH Administrators (N=2)	Admissions coordinators, Infection control, Unit clinical managers
Senior management (N=3)	Departmental senior managers and executives
Referring partners (N=6)	Acute care and community physicians, acute care administrators, geriatric consult services, Geriatric Assessment Outreach Team staff
Provincial organizational representatives (N=3)	Rehabilitative Care Alliance, Regional Geriatric Program of Eastern Ontario
Community service representatives (N=1)	Student-led community support service

Table 3. Admissions metrics of pandemic period to date (April-September 2020) vs. 2019-2020 fiscal year

Fiscal year	% Occupancy	Average length of stay (LOS)	% Discharged to community	Average wait days from accepted to admission	% Alternate level of Care days (ALC)
2019-2020	95.2%	26.1 days	83.3%	2.98	3.1%
2020-2021	92.6%	26.2 days	84.8%	12.8	4.3%

Table 4. Monthly average length of stay (LOS) of pandemic period to date (April-September 2020) vs. 2019-2020 fiscal year (MDS excluded)

	April	May	June	July	August	September
2019-2020	27.4	23.7	26.2	23.2	23.8	24.1
2020-2021	25.2	25.5	25.9	23.7	29.1	28.1

Table 5. Monthly occupancy rates of pandemic period to date (April-September 2020) vs. 2019-2020 fiscal year

	April	May	June	July	August	September
2019-2020	95.9%	96.8%	93.9%	86.0%	93.4%	91.5%
2020-2021	85.3%	97%	99.9%	95%	86.4%	89.6%

Table 6. Total monthly admissions of pandemic period to date (April-September 2020) vs. 2019-2020 fiscal year

	April	May	June	July	August	September
2019-2020	53	70	50	60	57	59
2020-2021	23	34	38	59	42	41

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