Community Stroke Rehabilitation Program
Annual Report – October 2021
Fiscal Year 2020/21

This annual report provides an overview of the Community Stroke Rehabilitation Program (CSRP) since service inception in 2009 and reflects the most recent fiscal year (FY) data (April 1, 2020 – March 31, 2021). With this program, eligible stroke survivors following their hospital discharge to either community or long-term care (LTC) receive the appropriate level of therapy to support their ongoing rehabilitation through the provision of: Physiotherapy (PT), Occupational Therapy (OT), Speech-Language Pathology (SLP) and Social Work (SW). Services are provided through Home and Community Care Support Services South East (formerly the South East Local Health Integration Network) with the exception of PT in the LTC Home (LTCH) setting which is provided by the LTCH. Additionally, patients discharged from acute care are referred to the Rapid Response Nurse (RRN) Program. Patients discharged from a rehab setting may also be referred to the RRN depending on their needs.

For patients leaving hospital and going to the community, rehabilitation care plans focusing on the patient's goals are developed with the patient and their family/caregivers, hospital interprofessional stroke team and the Home and Community Care Support Services South East Care Coordinator. A Community Rehabilitation Planning (CoRP) meeting may occur between the hospital team, community provider and patient/family prior to the patient leaving hospital. For patients leaving hospital and going to a LTCH, an interprofessional care planning conference is organized following admission to the LTCH, and involves the patient, their family, community therapist and members of the LTCH care team as determined by the Director of Care or designate.

KEY FINDINGS 2020/21

- ✓ An **11% increase** in CSRP patients for this fiscal (n=58)
- ✓ Over the **past five years**, there has been a **73% increase in number of annual admissions** (from annual volumes of 329 to 568).
- ✓ Median number of days to first therapy visit remains **stable at 4 days**
- ✓ **Average number of visits** per patient: PT 7.0, OT 6.0, SLP 3.9 and SW 3.5. This is a decrease in average visits from last fiscal for PT, OT and SLP; SW experienced an increase.
- ✓ Average number of visits per patient **after acute** care: PT 6.5; OT 5.1; SLP 3.8; and SW 3.5. This is a **decrease for PT, OT was relatively stable and SLP and SW saw increases.** Average number of visits per patient **after rehab**: PT 7.3, OT 7.9, SLP 4.4 and SW 3.7. This is a **decrease for PT but increases for OT, SLP and SW.**
- ✓ **Annual visit totals increased** for this fiscal for PT (↑96) and SW (↑40). OT and SLP remained relatively stable.
- ✓ Pecent of patients **receiving at least one virtual visit** during this fiscal year was 25% for PT, 26.5% for OT, 25.6% for SLP and 56.9% for SW.
- ✓ Percent of patients receiving **only virtual visits** was PT 0.8%, OT 1.9%, SLP 6.7% and SW 12.2%

- **Social Work Services are frequently underutilized** (18% of CSRP patients received SW services).
- Patients in **large population communities** received **higher average PT visits** and those in **medium population communities** received **higher average OT visits**
- The largest age category for **females admitted to the CSRP was 80 to 89 years of age while for males it was 70 to 79 years of age.**
- **Decreased number of referrals to LTC** for this fiscal.

What's New?

The onset of in-home visit restrictions in March 2020, in response to the COVID-19 pandemic, resulted in a new in-home visit model being introduced – the virtual visit. This report includes data on virtual visits.

Note: Glossary of acronyms can be found on page 12

Annual Review of Community Stroke Rehabilitation Program

TABLE 1 - Number of Patients Admitted to Community Stroke Rehabilitation Program

Fiscal Year	Total # of Patients Admitted to CSRP	Year-Over-Year Percent Change (↑ or ↓)	# Discharged to Community	# Discharged to LTC
2009/10	173	-	145	28
2010/11	182	↑5%	153	29
2011/12	236	↑30%	226	10
2012/13	242*	↑2%	228	13
2013/14	271	↑12%	256	15
2014/15	270	-	260	10
2015/16	281	↑4%	276	5
2016/17	329	↑17%	320	9
2017/18	376*	↑14%	364	11
2018/19	447*	↑19%	432	14
2019/20	510*	↑14%	480	28
2020/21	568	↑11%	561	6
TOTALS TO DATE	**3,885**	**↑228% relative increase from 2009/10 to 2020/21**	**3,701**	**178**

***One unknown destination for FY 2020/21**

There was an increase in patient volumes again in this FY (n=58).

Note: Analysis of subsequent data within this report **was reported on 12 weeks of CSRP services (standard length of CSRP program)** during the FY (n=507).

TABLE 2 – Community Stroke Rehab Program Admissions/Acute Stroke Unit Admissions

Fiscal Year	Volume of stroke/TIA patients admitted to acute care hospital	# Admitted to CSRP	% Admitted to CSRP
2016/17	950	329	**34.6**
2017/18	1,100	376	**34.1**
2018/19	1,148	447	**38.9**
2019/20	1,236	510	**41.3**
2020/21	1,231	568	**46.1**

The percentage of patients being admitted to the CSRP from hospital has increased over the previous three fiscal years.

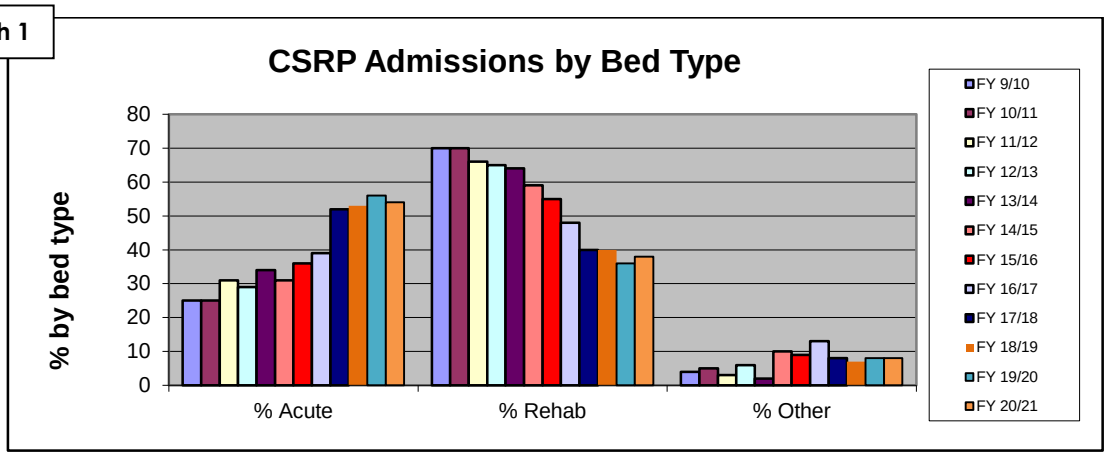
PATIENT DEMOGRAPHICS

AGE

The median age (74) for this FY remained the same as the previous FY. When examined by sex, males had an average age of 70.8 years (median 72), and females had an average age of 74.6 (median 78). Males comprised 53% of the cohort. When age range is examined by sex, there are differences observed. The largest category for females is 80 to 89 years of age while for males, it is 70 to 79. Between the ages of 50 and 79, males admitted to the CSRP exceed females. (Appendix A, Table 1A & Graphs 1A, 2A & 3A).

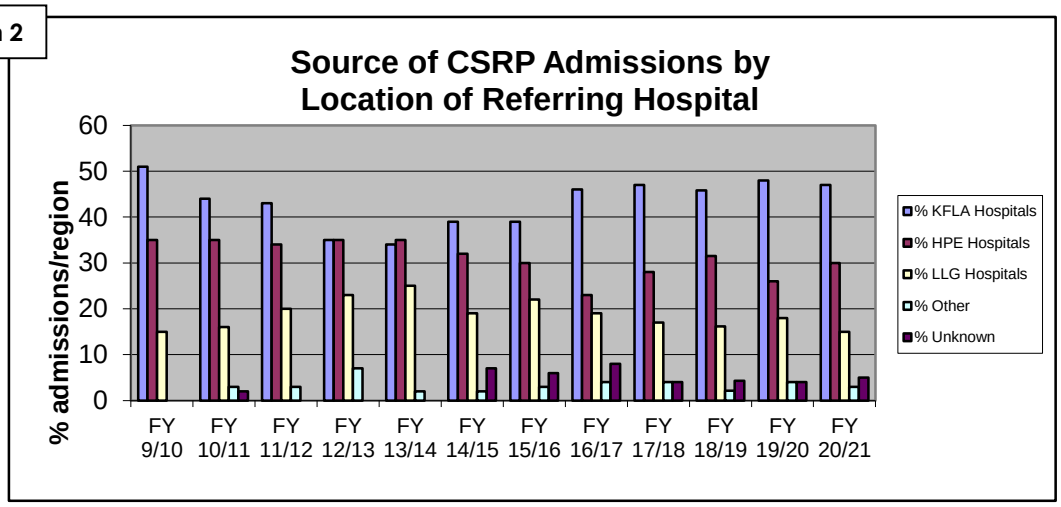
ADMISSION SOURCES

Graph 1



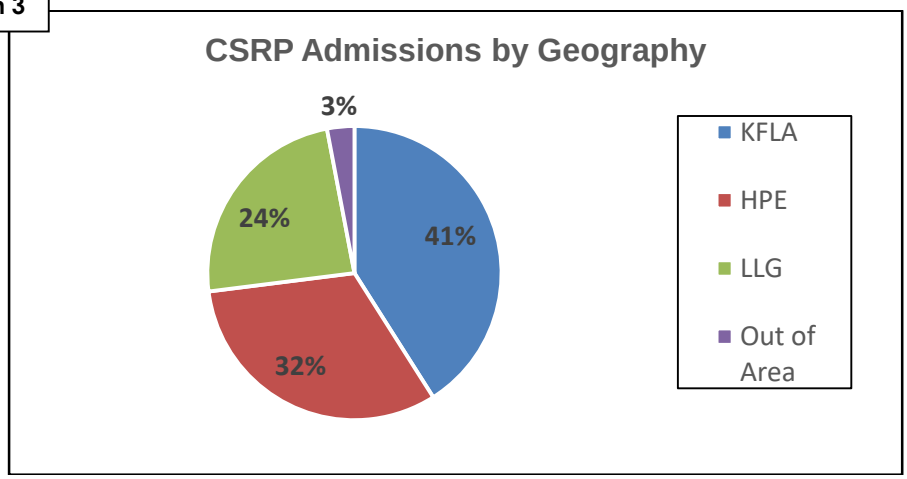
Community Stroke Rehab Program admissions from acute care beds constituted the majority at 54% (a very slight decrease from FY 2019/20) with 38% coming from rehab (a very slight increase from last FY). The increase in admissions from the acute setting over the last four years is likely reflective of new hyperacute treatments (i.e. EVT and tPA) which result in more stroke survivors going directly home from acute. Currently, one in four individuals experiencing a stroke receives hyperacute treatment. A limitation of these findings is that data for rehab versus acute admissions for Lanark, Leeds and Grenville (LLG) and Hastings Prince Edward (HPE) are estimated based on historical trends which negatively impacts on accuracy. Data for Kingston, Frontenac, Lennox and Addington (KFLA) use Kingston Health Sciences Centre (KHSC) and Providence Care Hospital (PCH) identified sites. CSRP admissions from other sources remained relatively stable at 8%. (Graph 1)

Graph 2



Distribution of admissions by referring hospital location demonstrated a slight increase in HPE and a decrease in LLG. KFLA remained relatively stable. (Graph 2)

Graph 3



KFLA has the highest percentage of admissions to the CSRP. (Graph 3)

HOSPITAL DISCHARGE DESTINATION

Most CSRP patients receive service in the community (versus LTC). Hospital discharge destination has remained relatively stable over the previous ten fiscal years with admissions to community from hospital constituting 98% of the total for this FY. (Appendix A, Graph 4A)

WAIT TIMES

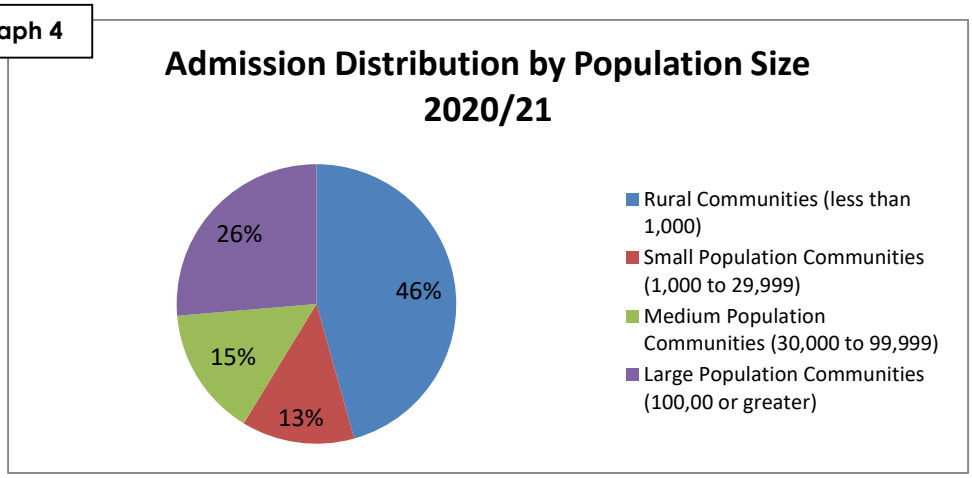
TABLE 3
Average & Median Days Waiting to First Scheduled Rehabilitation Visit

Time – Hospital Discharge to First Scheduled Rehabilitation Therapy Visit (days)	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
Average Days Waiting	4.9	4.6	4.4	4.3	4.3	4.5	4.1	4.7	4.15	4.6	4.8
Median Days Waiting	5	4	4	4	4	4	4	4	4	4	4

This FY, both the median and average wait times remained stable. (Table 3)

RURAL/URBAN

Graph 4



Graph 5

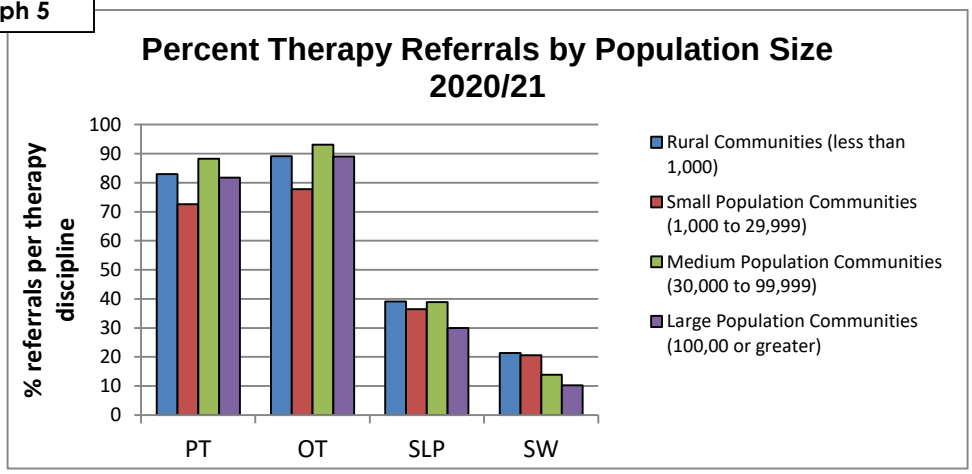


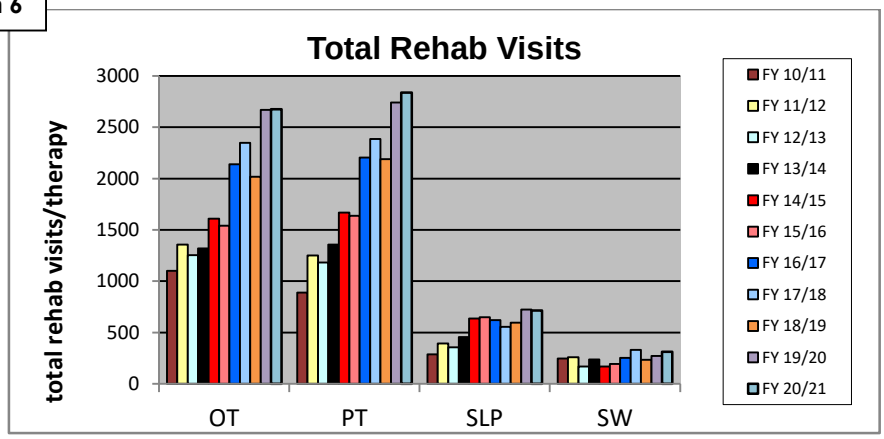
TABLE 4 - Wait Times and Average Visits by Population

	Large Population Communities (n=127)	Medium Population Communities (n=72)	Small Population Communities (n=63)	Rural Communities (n=220)
Median Wait Time to First Visit (days/average)	4 (4.7)	3 (4.7)	4 (5.1)	4 (4.5)
Average PT Visits	8.5	6.4	6.7	6.4
Average OT Visits	6.4	7	5.3	5.8
Average SLP Visits	3.5	3.4	3.1	4.4
Average SW Visits	3.8	2.8	3.4	3.6

Many admissions to the CSRP are for patients identified as living in rural communities (46%). Services received from the four therapy disciplines, saw some variation with patients in large communities receiving higher average PT visits and those in medium centres receiving higher average OT visits especially compared to those residing in small and rural communities. Wait times (medium and average) were variable. (Graphs 4, 5 and Table 4).

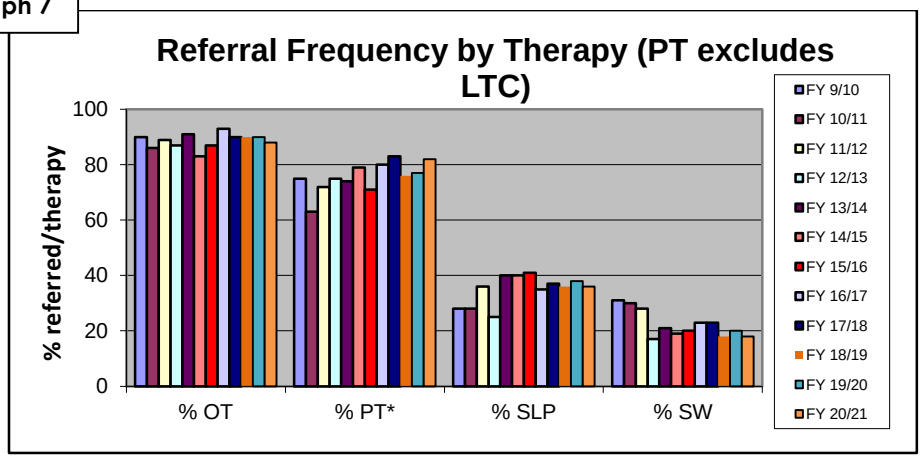
REHAB VISITS AND REFERRALS

Graph 6



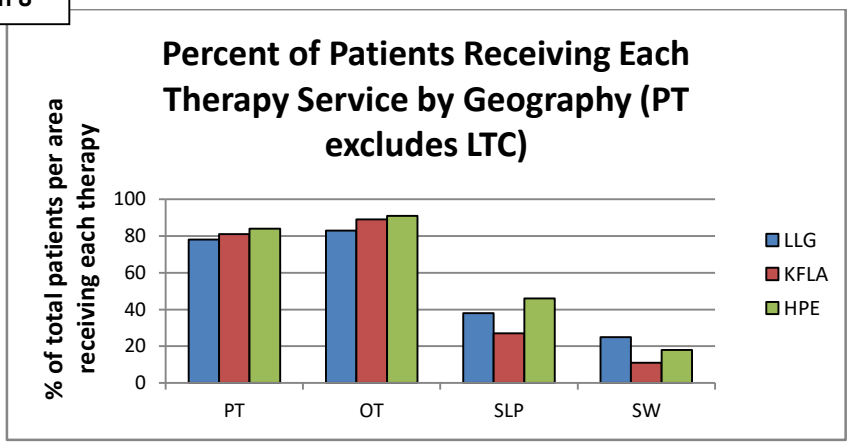
There has been an increase in the number of visits within this fiscal year for PT and SW. (Graph 6) Average total visits per patient was 13 which is a decrease of 1 visit from last FY. Virtual visits are included in totals.

Graph 7



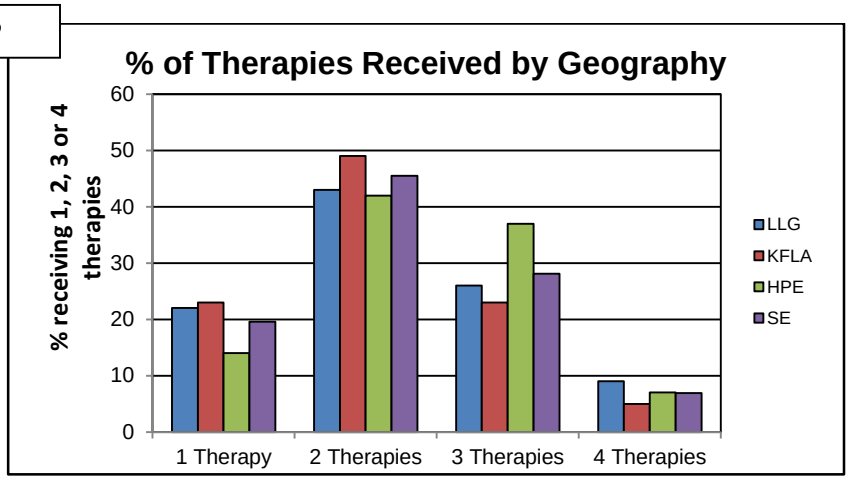
The percentage of individuals referred to each of the disciplines saw a slight increase to PT referrals and slight decreases for OT, SLP and SW. The increase in PT referrals may be partially reflective of the lack of outpatient services this FY due to COVID. (Graph 7)

Graph 8



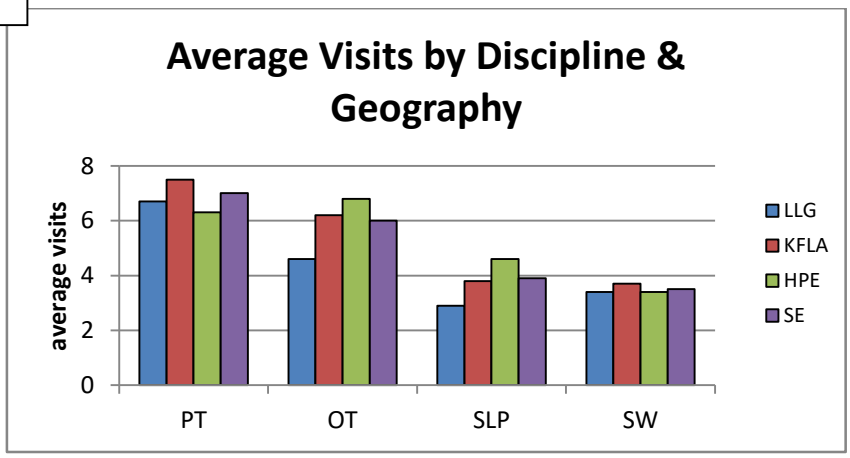
When looked at by geography, KFLA had lower rates for SLP and SW. LLG was slightly lower for PT & OT. (Graph 8)

Graph 9

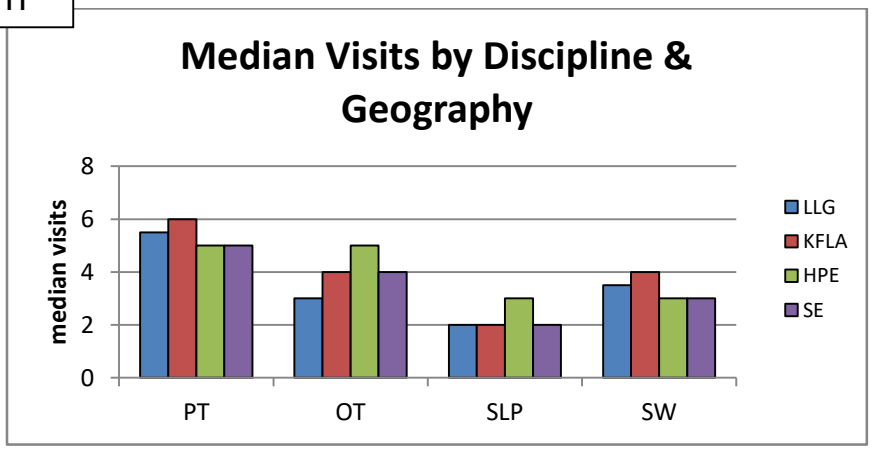


In reviewing the percentage of patients receiving 1, 2, 3 or all 4 therapies by geography, HPE has the lowest percentage of patients receiving only one therapy and the highest receiving 3 therapies. LLG had the highest percentage of patients receiving all 4 therapies and KFLA and LLG both had a higher percentage receiving only 1 therapy. (Graph 9)

Graph 10

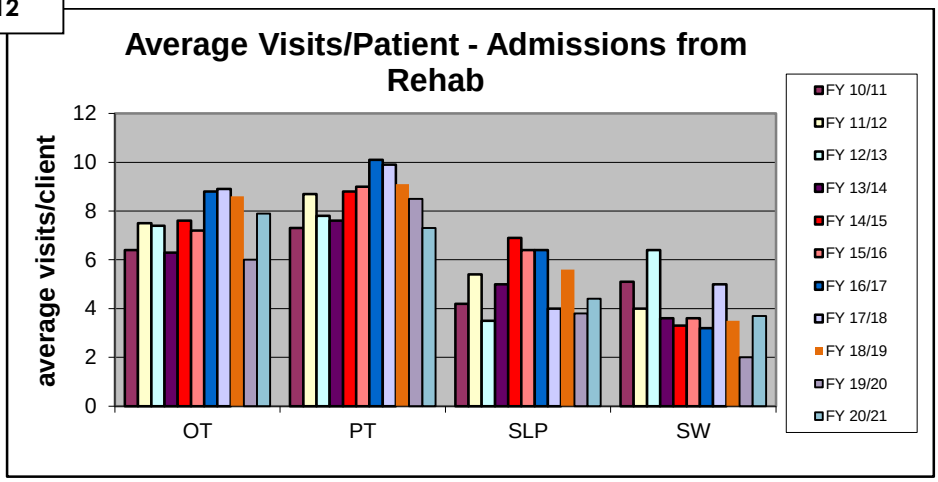


Graph 11

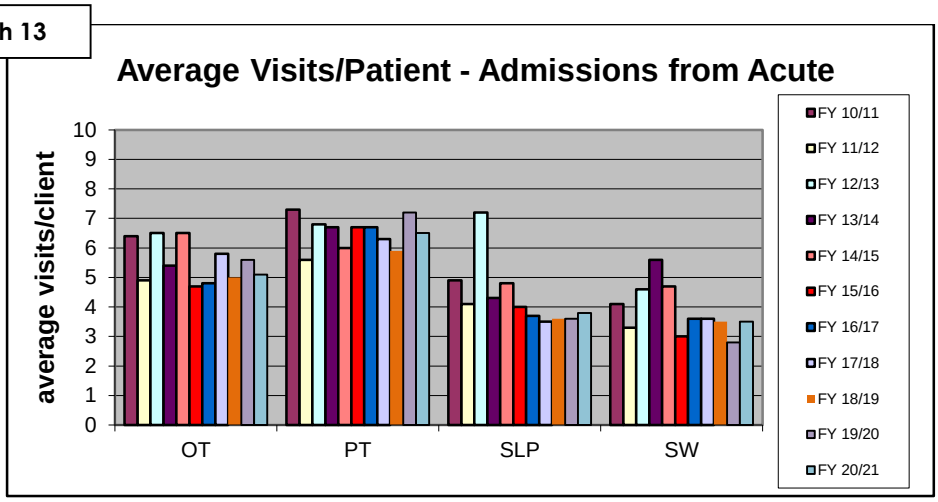


Looking at average and median visits across the region, KFLA had the highest average PT & SW, HPE the highest OT & SLP. (Graphs 10 &11)

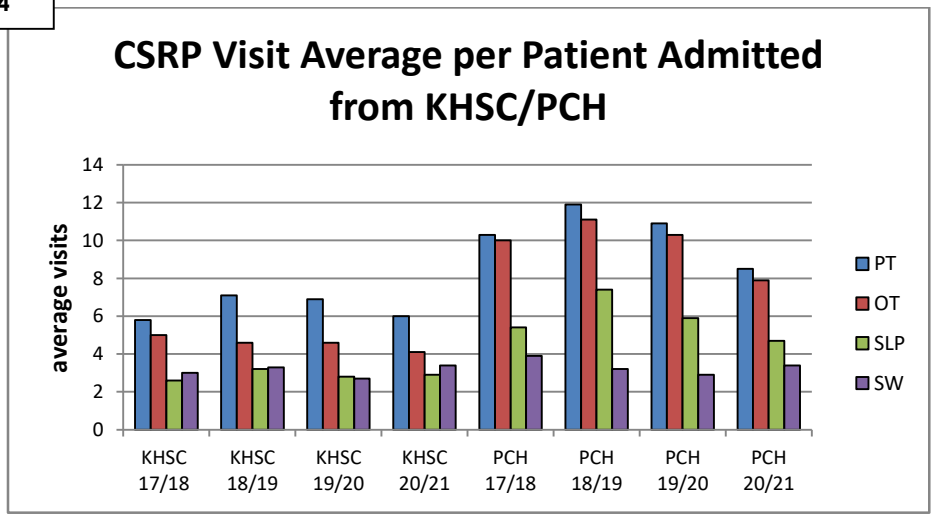
Graph 12



Graph 13

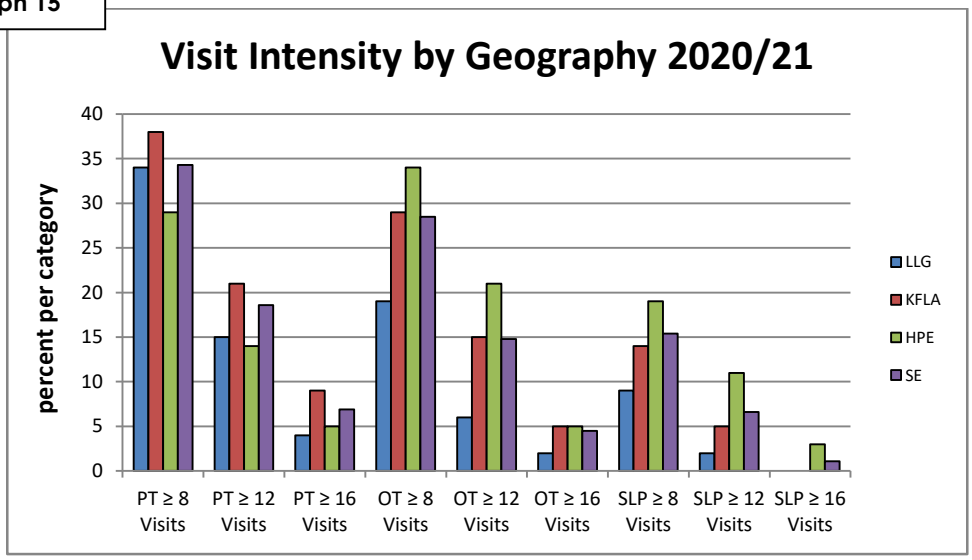


Graph 14



Data for average visits for admissions from rehab for LLG and HPE are estimated based on historical trends of the relative proportions referred from rehab and acute. Data for KFLA use KHSC and PCH identified referral sites. For admissions from rehab, increases were seen for OT, SLP and SW with a decrease for PT. For admissions from acute, SLP and SW saw increases while PT and OT had decreases. Virtual visits are included in totals. (Graphs 12, 13 & 14)

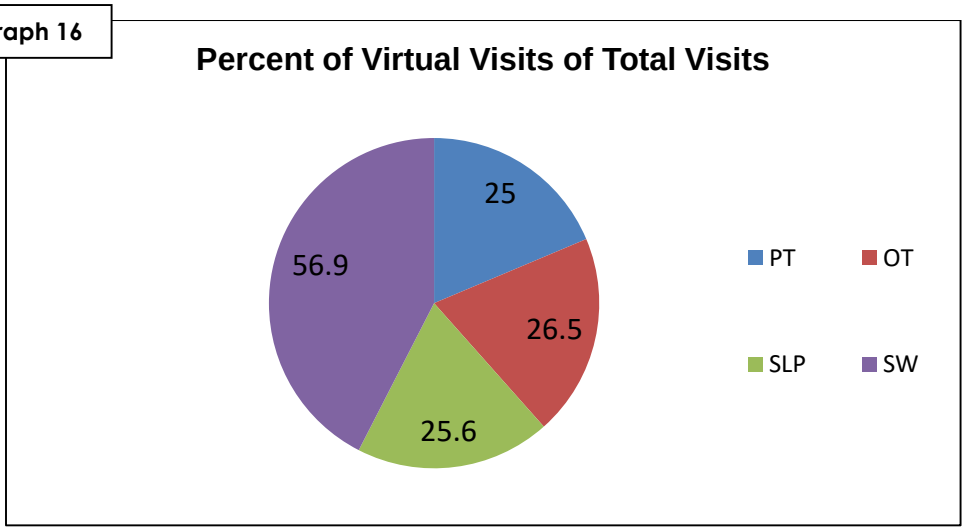
Graph 15



Best practice recognizes that rehab intensity early in the recovery period positively impacts patient outcomes. When looked at by geography, it might be hypothesized that for Belleville and Perth Smiths Falls areas some intensity is picked up by available outpatient neuro rehab services. LLG had the lowest intensity for OT and SLP across all three intensity categories. For PT, HPE was lower for ≥ 8 visits and ≥ 12 visits while LLG had lowest for ≥ 16 visits. Visit intensity decreased for this fiscal as compared to previous FY for all categories. Virtual visits are included in totals. (Graph 15).

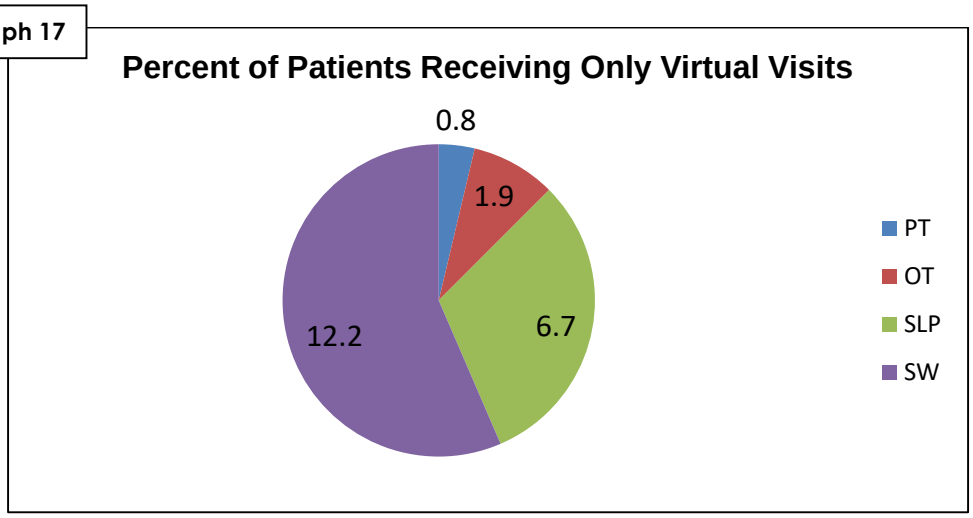
VIRTUAL VISITS

Graph 16



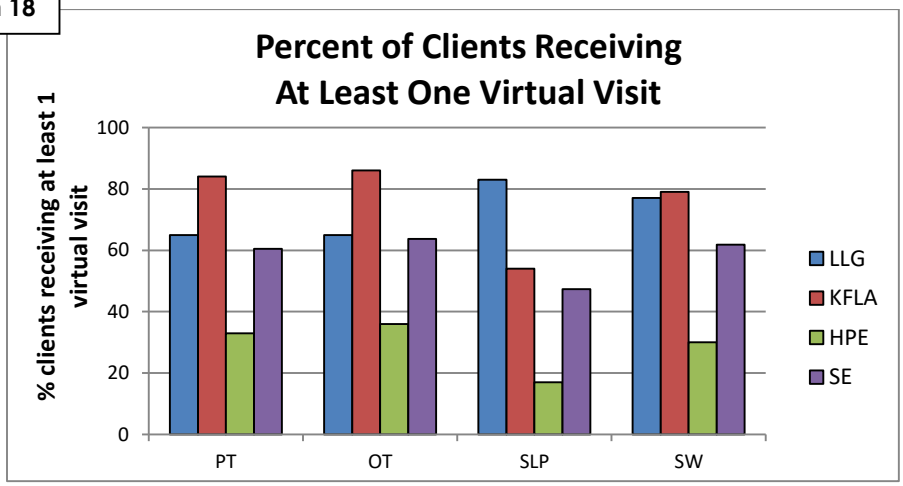
This is the first CSRP annual report that has included data on virtual visits. Given the prominence that this visit model has assumed during COVID, an exploration of virtual visits has been initiated. As a percentage of total client visits, all therapies were at about 25% with the exception of SW which was closer to 60%. (Graph 16)

Graph 17

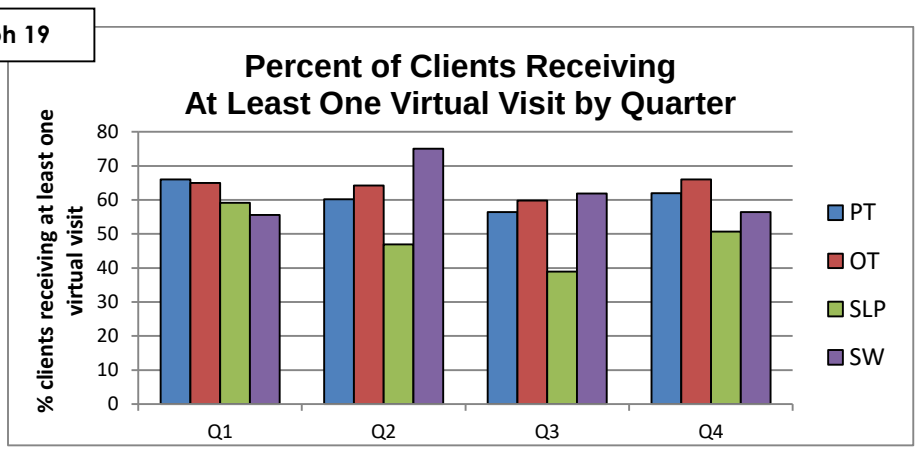


The percent of patients only receiving virtual visits was small for all disciplines. SW had the highest percent which is reflective of that discipline's capacity to provide effective interventions in a virtual environment. (Graph 17)

Graph 18

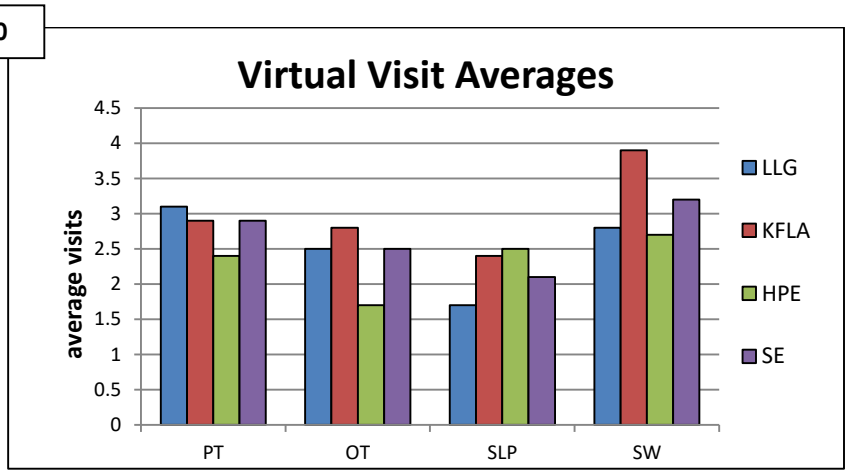


Graph 19



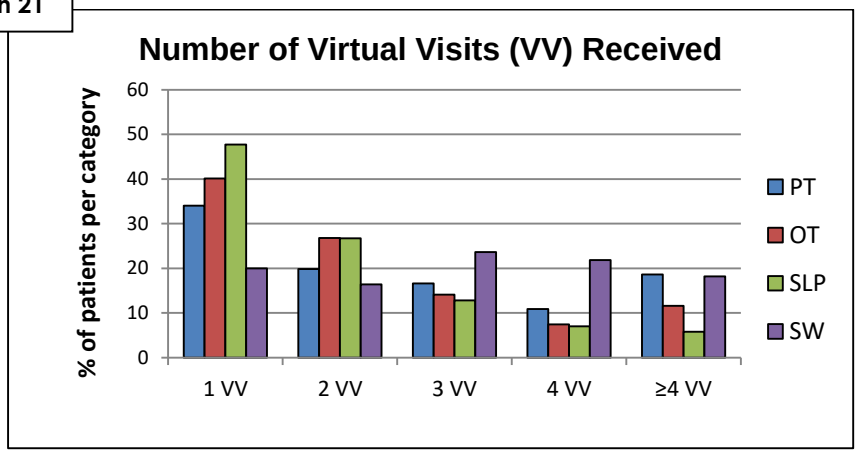
In looking at frequency of virtual visits by geography, KFLA had the highest percentage of clients who received at least one virtual visit for PT, OT and SW and LLG had the highest for SLP. HPE the lowest for all therapies. (Graph 18). It should be noted that 50% of those patients received only 1 or 2 virtual visits. When looked at by quarter for the region, there are some variations between the quarters with SW showing the greatest variation however there are a smaller number of clients receiving SW services so that can produce greater variations in percentages. (Graph 19)

Graph 20



In looking at virtual visit averages, there is variation across geographic areas with HPE having the lowest averages for PT, OT and SW; LLG the lowest for SLP. (Graph 20)

Graph 21



With respect to the number of virtual visits received by patients, the majority received only one virtual visit for all therapies with the exception of SW. (Graph 21)

COMMUNITY REHAB PLANNING (CoRP) MEETINGS

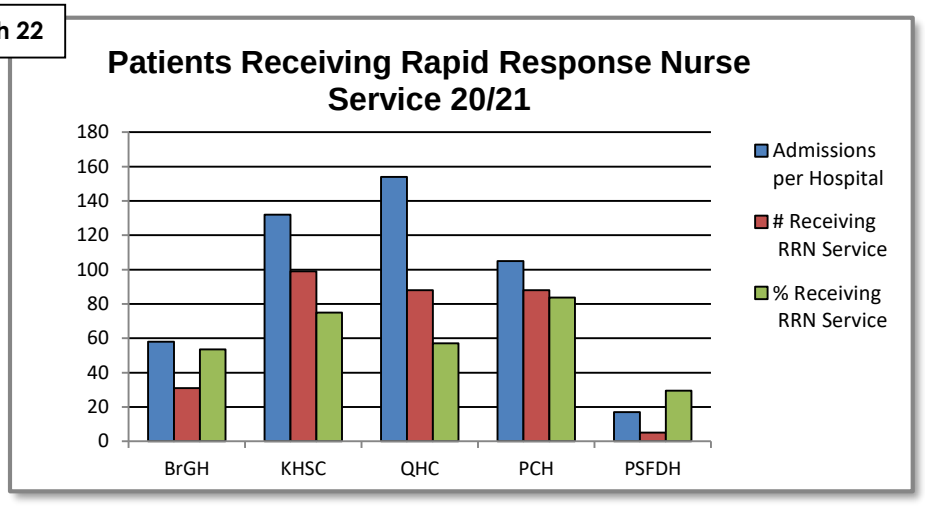
TABLE 5 - Total Community Rehab Planning Meetings/Total Admissions by Hospital

	Total Admits 16/17	# (%) CoRP Meetings 16/17	Total Admits 17/18	# (%) CoRP Meetings 17/18	Total Admits 18/19	# (%) CoRP Meetings 18/19	Total Admits 19/20	# (%) CoRP Meetings 19/20	Total Admits 20/21	# (%) CoRP Meetings 20/21
BGH	56	0 (0)	49	3 (6)	59	2 (15)	69	5(7)	58	5(9)
PSFDH	7	0 (0)	15	1(7)	12	1(8)	13	0(0)	17	4(24)
QHC	75	29 (39)	100	43 (43)	95	46(48)	119	48(40)	154	55(36)
PCH	78	28 (36)	88	41(47)	80	52 (65)	88	59(67)	105	78(74)
KHSC	72	0(0)	83	2(2)	78	0(0)	124	4(3)	132	3(2)

The CoRP meeting is an integral component of the CSRP, particularly for more complex patients transitioning to the community with a focus on those patients being discharged from a rehab setting. Perth Smiths Falls District Hospital (PSFDH) and PCH had increases in the number/percent of CoRP meetings while the other hospital sites remained fairly stable. PCH, as a standalone rehab setting, had the highest percent receiving a CoRP meeting. Virtual options previously established for the CoRP meeting enabled these to continue seamlessly during COVID. (Table 5)

RAPID RESPONSE NURSE SERVICE

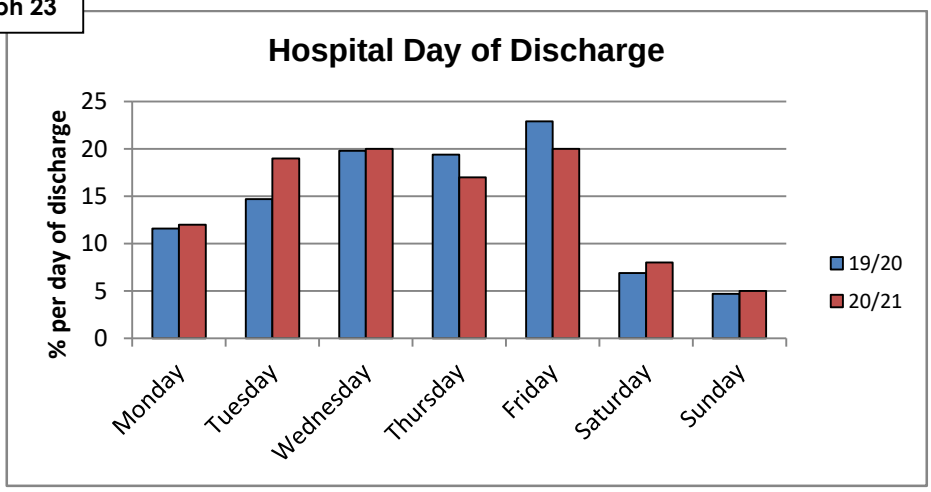
Graph 22



Data for patients receiving an RRN visit have been reported by referring organization. (Graph 22)

HOSPITAL DAY OF DISCHARGE

Graph 23



The highest percent of admissions to the CSRP occured on Fridays and Wednesdays. Friday admissions can produce resource challenges for community providers and may impact on how quickly they receive their initial therapy visit. (Graph 23)

LONG-TERM CARE (LTC) ADMISSIONS

TABLE 6 - Total CSRP Patients Receiving Services in LTC by Fiscal Year

FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
23	8	12	15	10	5	9	11	14	27	9

There was a significant decrease in CSRP patient volumes in LTC this FY as compared to last FY but more in line with the previous FY.

TABLE 7 - Admissions to CSRP for Patients Transitioning to LTC

Referring Organization	# Patients Referred	Total # Visits OT	Total # Visits SLP	Total # Visits SW
QHC	5	44	8	0
BGH	2	3	1	0
KHSC	1	1	0	0
PCH	0	0	0	0
Other/Unknown	1	0	2	0

GLOSSARY OF ACRONYMS

ALC	Alternate Level of Care
BGH	Brockville General Hospital
CC	Care Coordinator
CIHI	Canadian Institute of Health Information
CoRP	Community Rehab Planning Meeting (formerly Discharge Link Meeting)
CSRP	Community Stroke Rehabilitation (Rehab) Program
ED	Emergency Department
FY	Fiscal Year
HPE	Hastings Prince Edward
KFLA	Kingston, Frontenac, Lennox & Addington
KHSC	Kingston Health Sciences Centre
L&A	Lennox & Addington
LLG	Lanark, Leeds & Grenville
LTC	Long-Term Care
LTCH	Long-Term Care Home
OT	Occupational Therapy
PCH	Providence Care Hospital
PSFDH	Perth Smith Falls District Hospital
PT	Physiotherapy
SLP	Speech Language Pathology
SNSEO	Stroke Network of Southeastern Ontario
SW	Social Work
VV	Virtual Visit

RESOURCES & REMINDERS

1. All patients who have experienced a new stroke should be considered for referral to the CSRP prior to discharge including patients transitioning to LTC. **Hospital teams need to complete the Home and Community Care Support Services South East Referral Form a minimum of 24-48 hours prior to discharge.** The form should clearly indicate **"**Community Stroke Rehab Program**"** and include suggested therapy plan with focus of interventions. For all patients discharged from acute, or for more complex patients, a referral to the RRN should be included. The table below outlines CSRP therapy services. Note that for LTC, PT is provided by the LTCH.

Community Stroke Rehab Program		
	Weeks 1-4	**Weeks 5-12**
OT	**Up to 12 visits over 4 weeks**	**Up to 16 visits over 8 weeks**
PT	**Up to 12 visits over 4 weeks**	**Up to 16 visits over 8 weeks**
SLP	**Up to 8 visits over 4 weeks**	**Up to 8 visits over 8 weeks**
SW	**Up to 4 visits over 4 weeks**	**Up to 4 visits over 8 weeks**

2. A Community Rehab Planning (CoRP) meeting should be **considered for all discharges from rehab**. The CoRP ideally occurs within 72 hours of discharge but planning for this meeting could start as early as two weeks prior to discharge. Note that it may take 4-5 days to arrange the CoRP meeting. The Hospital OT typically coordinates the CoRP meeting however another therapist may be more appropriate in some circumstances. The most appropriate therapy discipline supports the Care Planning Meeting in LTCH in lieu of the CoRP meeting.

3. **Virtual visits** have been included in the CSRP model in response to COVID. Find virtual resources here www.rehabcarealliance.ca/tele-rehab-and-covid-19.

4. An extended stay in hospital (e.g. waiting for LTC) does **NOT** preclude the patient from being eligible for the CSRP.

5. Referral to SW should be considered during discharge planning **and throughout the patient's recovery journey.** SW can assist with psychosocial supports, links to vocational support services and assistance with applications for financial support **at any time** post-stroke.

6. Consider referral to **Stroke Survivor and Caregiver Support Groups**, **Stroke Specific Exercise Programs** and **Aphasia Supportive Conversation Groups** and to other community exercise programs and supports when appropriate. A community visit may be used by the community provider to connect the patient with any community support/program prior to discharge from the CSRP.

7. Information on various community programs is available through Stroke Network of Southeastern Ontario's website under Community Supports and through the South East Health Line under Stroke Resources**.** A Patient Journey Map co-developed by stroke survivors and caregivers is a recommended education and navigation resource**.** Additional resources include Driving After Stroke, Return to Work and Navigation and Transition Toolkits.

8. Funding for education is available through the Stroke Network of Southeastern Ontario (SNSEO) in the form of Shared Work Days to link with stroke experts and through a new Professional Development Fund.

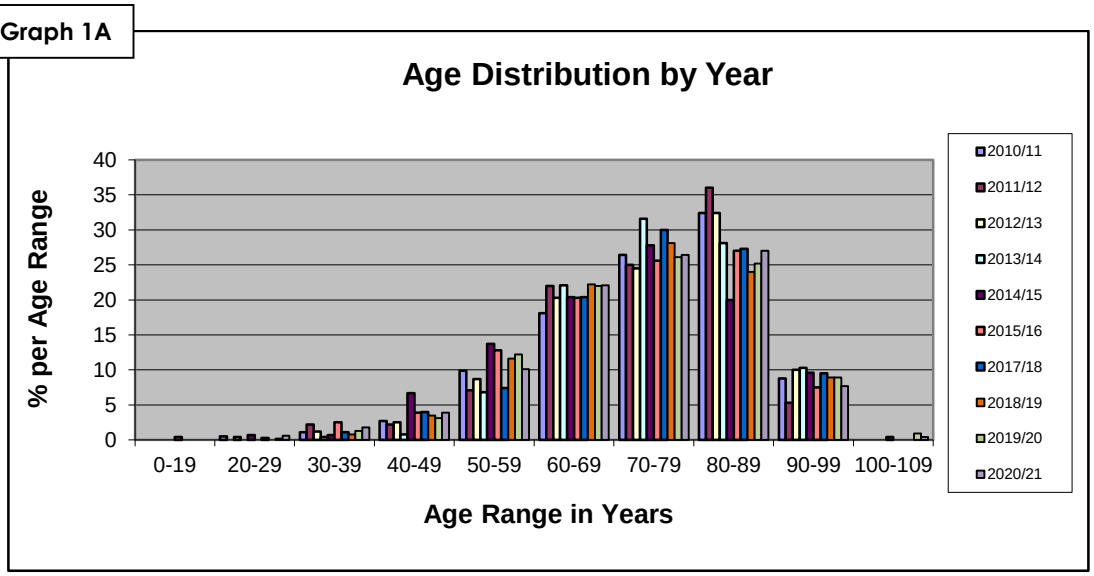
Need additional information? Please contact:
Catherine Nicol, Home and Community Care Support Services South East at 613-544-8200 ext. 4156 or catherine.nicol@lhins.on.ca **OR** Shelley Huffman (SNSEO) at 613-549-6666 ext. 6841 or shelley.huffman@kingstonhsc.ca

APPENDIX A

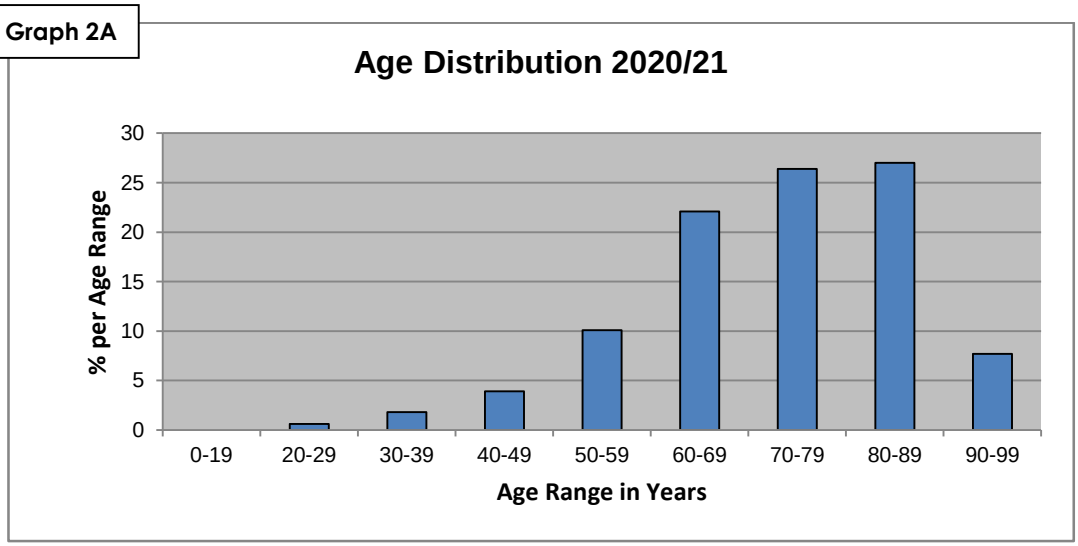
TABLE 1A - Average & Median Ages of Patients Admitted to CSRP

	FY 10/11	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21
Average Age (years)	74	74	74.5	75.5	70.7	71.6	73.6	73.8	72.9	73	72.6
Median Age (years)	76	77	77	76	72	73	76	75	73	74	74

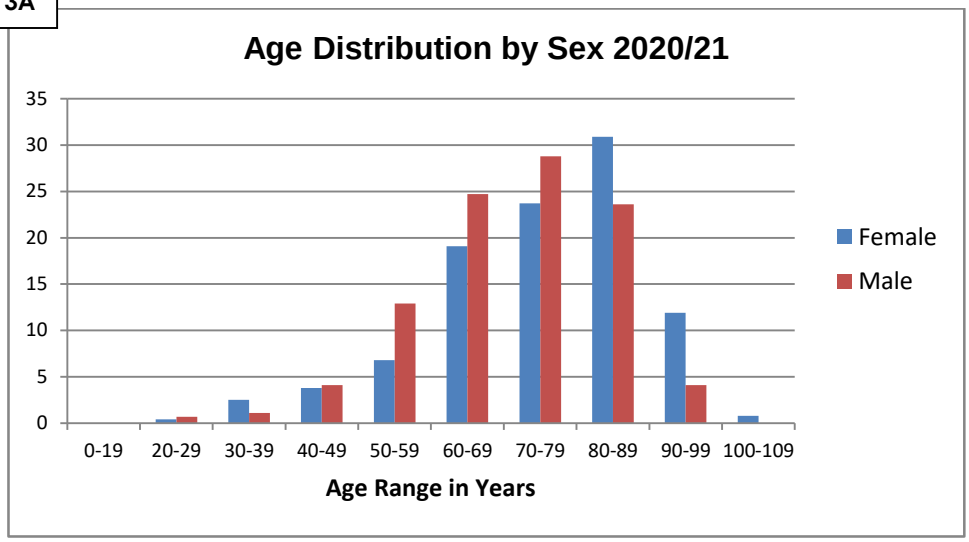
Graph 1A



Graph 2A



Graph 3A



Graph 4A