

Lifting the Load : Utilizing University Students in Primary Care for Programming and Quality Improvement Initiatives

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BACKGROUND

With the Canadian government increasing the need for standardization, utilization of EMRs, Quality Improvement (QI) and data management in primary care, the London Family Health Team (LFHT) employed university students as Program Planners to manage these demands. The Program Planners' responsibilities have extended far beyond a typical student's administrative and data collection duties. This role serves as a project management position; overseeing the development of chronic disease programs, collecting and analyzing data, participating in community collaborations and developing QI initiatives for the LFHT and their 14,000 patients in London, Ontario.

THE ROLE

Programs: One of the primary responsibilities of the Program Planner is to create standardized, user-friendly programs under the supervision of the LFHT health professionals. Each program is designed to target a specific chronic disease population. Research is done on evidence-based guidelines to allow for the Program Planners and health professionals to develop standardized programs to suit the LFHT. Each program model includes process maps, logic models, computer templates, spreadsheets and other resources. The programs are used for daily clinical practice, QI and teaching tools. The programs are evaluated on a monthly basis; as a result, they are constantly evolving to meet the changing needs of the health care system.

Data Management: After the programs are designed, the Program Planners aid with program sustainability, evolution and maintenance. The Program Planners create custom spreadsheets to identify process, outcome and balance measures chosen by the LFHT. The spreadsheets are used as a tool to extract information entered into the EMR templates and to simplify data management. Once individual patient measures are collected, the Program Planners summarize physician and team data on a monthly basis for review. The Program Planners consult "one-on-one" with each health professional on a regular basis to review the validity of the data and use it as a motivator for QI.

Project Management: The Program Planners are also responsible for completing general organizational duties associated with chronic disease management, QI and community collaboration. These organizational duties include attending, planning and minute taking for monthly committees. The Program Planners also assist in organizing community collaborations and CMEs, such as working with pharmaceutical companies and specialists. In addition, they create resources for the LFHT, including multipurpose patient handouts, PowerPoints for educational purposes, weekly email blasts, quarterly newsletters and patient surveys for feedback.

CHANGE CONCEPTS & EVIDENCE

By using the Plan Do Study Act (PDSA) evaluation model the Program Planners are constantly helping to refine the LFHT's existing programs. This student and health professional collaboration has resulted in numerous change concepts, which have enhanced efficiency and QI. Some examples of change concepts adopted by the LFHT are:

CHANGE CONCEPT #1

In order to create standardized recording, the Program Planners create original templates in the LFHT's EMR for each chronic disease population. After the templates are created, the physicians test them to ensure they are compatible with daily assessment processes. In "one-on-one" meetings with the health professionals, the Program Planners review the template's layout to ensure they are accommodating, user-friendly and standardized. From here, the Program Planners track the physician's usage of the templates to ensure maximum compliance and standardization. These "one-on-one" meetings have shown an increase physician EMR understanding and template usage (Fig. 1).

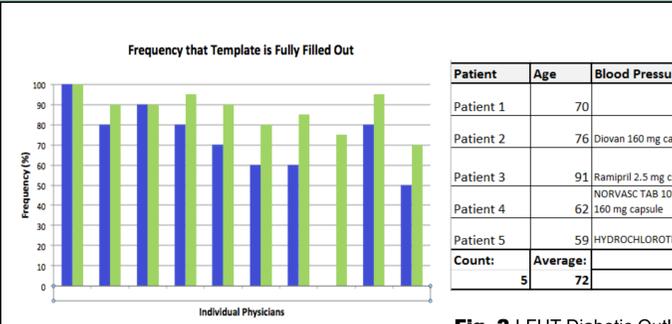


Fig. 1 Percentage of Completed Templates from 2011-2012 (green) and 2012-2013 (blue)

CHANGE CONCEPT #2

Once programs are established, the LFHT health professionals monitor patient populations through data management. This often results in the identification of outlier patients who are not reaching their ideal targets through the use of EMR reports and individual patient spreadsheets. The health professionals can look closely at their outlier patients and decide what changes they want to make in order to better manage this patient population. An example of managing outlier populations occurred when the LFHT looked at their diabetic patients whose blood pressures were far enough out of target to warrant an additional drug treatment. By using the patient spreadsheets, the Program Planners identified which patients were out of target and pulled a list of their current drug treatment plan (Fig. 2). By having these records, the physicians were able to review the patients individually and make appropriate prescribing changes. In addition, the LFHT held a CME with a specialist, where the Program Planners presented these reports to the physicians and specialist so they could collaborate together to help with prescribing changes.

Patient	Age	Blood Pressure Reducing Agents	0	1	2	>= 3	ACEI	ARB	BB	CCB	Diuretic
Patient 1	70		1								
Patient 2	76	Diovan 160 mg capsule; HYDROCHLOROTHIAZIDE TAB 25MG			1				1		1
Patient 3	91	Ramipril 2.5 mg capsule; METOPROLOL-50 TAB 50MG;			1			1		1	
Patient 4	62	NORVASC TAB 10MG; HYDROCHLOROTHIAZIDE TAB 25MG; Diovan 160 mg capsule				1			1		1
Patient 5	59	HYDROCHLOROTHIAZIDE 50 mg; lisinopril;			1			1			1
Count:			5	0	3	1	2	2	1	1	3
Average:	72		20.00%	0.00%	60.00%	20.00%	40.00%	40.00%	20.00%	20.00%	60.00%

Fig. 2 LFHT Diabetic Outlier Patients' Medication Breakdown

Date	Number of DM Patients	HbA1c<7 (>60%)	HbA1c in Past Year (>90%)	Self Management Goal in Past Year (>70%)	BP < 130/80 (>55%)	ACE or AARB (>60%)	LDL< 2 (>65%)	Retinopat hy (>75%)	Foot Exam in Past Year (>90%)	ACR (>70%)	ECG in Past 3 Years (>80%)	PHQ9 (70%)
Sep-12	643	61.34%	84.62%	79.48%	54.01%	63.91%	66.60%	53.73%	62.81%	55.65%	60.07%	37.63%
Oct-12	643	63.29%	84.46%	79.94%	52.81%	62.72%	66.08%	54.06%	64.00%	59.03%	60.97%	40.86%
Nov-12	662	64.35%	85.00%	82.29%	51.56%	63.47%	66.37%	55.96%	66.34%	59.23%	61.56%	43.05%
Dec-12	662	64.70%	87.27%	83.96%	51.43%	62.73%	66.68%	55.54%	66.93%	59.20%	63.84%	39.39%
Jan-13	657	64.59%	90.46%	88.44%	52.52%	62.51%	66.08%	61.14%	70.32%	62.08%	67.74%	42.55%
Feb-13	651	63.83%	92.04%	90.69%	51.19%	64.47%	65.84%	65.19%	71.82%	63.63%	72.11%	46.20%
Mar-13	647	64.14%	92.03%	90.83%	49.85%	66.07%	64.39%	65.57%	74.46%	65.70%	72.96%	46.80%
Apr-13	644	62.88%	93.44%	91.47%	50.32%	67.33%	65.03%	68.00%	76.98%	69.04%	77.17%	49.55%
May-13	651	61.20%	93.17%	91.66%	55.27%	69.12%	65.54%	69.16%	79.38%	71.31%	79.35%	50.12%
Jun-13	647	61.62%	94.00%	93.30%	56.34%	72.47%	65.38%	73.63%	81.96%	74.73%	82.05%	53.35%
Jul-13	655	63.79%	93.27%	92.78%	57.55%	72.95%	66.36%	73.93%	83.08%	76.72%	82.82%	53.49%
Aug-13	654	64.31%	94.94%	94.55%	61.14%	73.71%	66.34%	77.29%	86.57%	79.65%	84.79%	52.11%

Fig. 3 LFHT Diabetes Summary Spreadsheet

Patient	SYS	DI A	BP <= 130/80	BP <= 137/87	BP <= 144/94	BP <= 151/101	Date BP Taken
Patient 1	121	85	0	1	1	1	17-Jul-13
Patient 2	115	58	1	1	1	1	18-Jul-13
Patient 3	145	90	0	0	0	1	22-May-13
Patient 4	106	52	1	1	1	1	24-Jul-13
Patient 5	125	69	1	1	1	1	26-Jun-13

Fig. 4 Blood Pressure Breakdown Excerpt from LFHT Diabetes Patient Spreadsheet

CHANGE CONCEPT #3

In the LFHT programs, each chronic disease population has targets and measures that are compiled into two spreadsheets. First, the Program Planners create an individual patient roster spreadsheet followed by a summary spreadsheet for the whole population. Once the values are entered into the summary spreadsheet, they are colour coded based on whether they achieve the target; green suggests the population is within target, yellow suggests the population is within ten percent of the target and red suggests the population is out of target (Fig. 3). By reviewing the colour coded spreadsheets every month, the LFHT is able to identify gaps in the program. These gaps are interpreted as either health professional or Program Planner gaps. An example of a LFHT health professional gap occurred when a health professional recorded relevant medical information outside of the chronic disease template. This information was not clearly relayed to the Program Planners, and as a result, they could not accurately locate it. The health professionals and Program Planners decided to enforce standardized recording techniques for each template to ensure the data is accurately placed. An example of a LFHT Program Planner gap occurred when the diabetes spreadsheet was not accurately highlighting the degree of patient deviation from target. Therefore, the spreadsheet was modified such that blood pressures targets were broken down into increments (Fig. 4). This allowed for the physicians to better identify how close the patient was to target and encouraged appropriate changes in patient lifestyle or drug management. Together the Program Planners and health professionals use the spreadsheets to identify different types of gaps in their programs and implement effective changes.

CONCLUSIONS

Overall, the student Program Planner role has been instrumental in capacity building within the LFHT. The Program to assist other FHTs across the province in adopting this role. Planners have served as leaders in EMR, data management, programs and QI culture. This role is a mutual relationship that benefits the health professionals, as their time and resources are lightened; at the same time, the students are given opportunities that will foster promising future careers. The model of the student Program Planner position can be applied to any Family Health Team who wishes to engage in QI, as this position is Ministry of Health funded. In the future, the LFHT hopes to assist other FHTs across the province in adopting this role.

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