**Introduction**

In its submission to the Kaplan Arbitration Board on Primary Care, the Ministry of Health and Long-Term Care (MOHLTC) raised a series of concerns about receiving value for money from its investment in the Family Health Organization (FHO) model. The OMA has responded that the claims data that the MOHLTC used to measure, capture and assess services and activities of FHO physicians is not accurate because many FHO physicians do not submit all of their shadow claims and because many activities such as virtual care are not recorded in the claims system. The OMA further argued that complementary data sources, such as electronic medical records (EMR), needed to be used to fully appreciate the scope of services that FHO physicians provide. However, no representative EMR data were available at the time of Arbitration to support the OMA argument.

More generally, there is a wide recognized need to supplement the available claims data with the EMR data to better understand, capture and assess services that physicians in non-traditional FFS models provide, not just in Family Medicine but also in all other Specialties.

**Proposal**

The SGFP proposes to collect data from the EMR records for a representative sample of physicians practicing in the Family Health Organizations and Family Health Groups.

As noted above, though, that this project has the potential to support all Sections, Specialties and physicians who use EMR regularly in their practice.

**What Can EMR Data Tell Us?**

The SGFP has obtained a complete EMR data from a physician, excluding any confidential patient and physician information, and have asked the OMA Economics, Policy and Research to analyze and summarize these data for the purposes of both illustrating what kind of information is available in the data and to use this information to develop a request for the data extraction from the vendors. A visual concept for a TELUS EMR Data Extraction Tool is provided in Appendix A by Dr. Adam Stewart.

Examples of the detailed data analysis is presented in Appendix B based on the available data from a single physician and summarized below. As mentioned, the purpose of this analysis is to illustrate what type of information can be harnessed from the EMR data, not that this specific data set is representative of the entire population. With a representative sample of sufficient size, decisive statements could be made with respect to the population of FHG and FHO physicians.

A. Virtual Care

A.1 Communication

* 609 individual e-mails per year (12 per week) and 3,063 batch emails per year
* Over 11,500 patients messages per year (over 960 per month and over 30 per day)

A.2 EMR Activities

* 4,630 prescriptions per year faxed or printed
* 4,609 patient records per year emailed, printed or faxed
* 442 searches run per year[[1]](#footnote-1)
* 265 reports printed per year

A.3 Patient Activities

* 61,683 patient viewings – this is includes opening a patient chart for any reason. As demonstrated [here on (pages 17-18)](https://www.stewartmedicine.com/wp-content/uploads/2019/04/EMR-Data-Extraction-Proposal.pdf), this is a potentially simple yet accurate surrogate marker that represents true clinical work.
* 37,125 progress note – any time the clinician enters a note in the chart. Again, this would be a reliable representative marker for clinical work.
* 21,296 custom forms – these have a variety of implications. “Custom Forms” are a type of tool in TELUS EMR charts that functions like a “fillable PDF” in many ways. For instance, inputting and completing lab or imaging requisitions would fall under this category. Diabetic flowsheets or pediatric Rourke forms are other common examples.
* 16,577 labs – this includes any time a new lab report comes in and acknowledging the results (It does not include any work that may follow from dealing with those results).
* 11,620 letters sent – These would typically be referral letters to consultants, letters to patients, letters pharmacies. The types and uses of letters sent to patients varies greatly.
* 5,564 medical reports – this includes reviewing and signing off an any reports that come into a patient’s chart, most often a consultant’s letter or a diagnostic report.
* Over 10,000 other activities (e.g. pending tests, past health, problem list, etc.)

B. WORKLOAD INDICATORS

A main challenge with measuring workload based on the EMR data is that an activity recorded in the EMR may not correspond to an actual face-to-face visit. This is essentially a debate about what constitutes a day worked. The SGFP has argued previously that a good measure of a workload activity is a patient viewing, and that further, this indicator can be further differentiated by the number of viewing per day (e.g. a day worked is a day with at least 1, or at least 5, or at least 10 patient viewings). The summary below builds on this definition of a day worked.

* 273 to 310 annual days of work
  + 307 days worked per year (1+ patient viewings per day)
  + 287 days worked per year (5+ patient viewings per day)
  + 273 days worked per year (10+ patient viewings per day)
* 5.3 to 5.9 days worked per week
  + 5.9 days worked per week (1+ patient viewings per day)
  + 5.5 days worked per week (5+ patient viewings per day)
  + 5.3 days worked per week (10+ patient viewings per day)
* About 13% of work conducted after-hours (weekday 5PM to 7AM, weekends, and holidays)

**Some Limitations**

EMR data does not perfectly represent all the work the physicians do, but it illustrates the workload, the hours, and the times of work much better than is captured by OHIP billings alone.

It is important to note that current EMR data is not structured in such a way to accurately track telephone calls to patients. For instance, most physicians would simply document a telephone conversation an any other “progress note” in the EMR. That said, tracking progress notes still documents this type of non-billable work that would not otherwise be captured in OHIP billings.

It will need to be explored if TELUS can build a tool that may also be able to pull OHIP billing data and/or appointment data (free of Personal Health Information). This type of data would be ideal.

**Cost Implications**

Estimating the cost of obtaining a data extract for a representative sample of FHG and FHO physicians depends on three factors: (1) the cost of data extract per physician, (2) the number of physicians in the sample, and (3) the number of years included. Clearly, increasing the number of physicians increases cost but also statistical reliability, hence the importance of knowing the minimum required sample size to be able to draw valid inferences. Given the population size, the confidence level of 95% and the margin of error of 5%, the absolutely minimum sample size is about 700 physicians. In addition, increasing the number of years increases cost but again improves inference and allows for trend comparison. The most critical part, the cost per physician of data extraction, is at this time the factor with most uncertainty because formal negotiation of the contract is hindered by not knowing a specific budget. As a very preliminary and informal estimate, the cost per MD per month is about $25. Clearly, the SGFP is hopeful to engage the OMA internal expertise to negotiate the best deal possible. Based on these consideration, the SGFP has developed the following four options for Board’s consideration:

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| --- | --- | --- | --- | --- | --- |
| Option | Cost/Month/MD\* | MDs | Years | Cost | Notes |
| 1 | $25 | 1,200 | 2 | $720,000 | More than minimum sample size improves inference, two years allows for trend comparison |
| 2 | $25 | 1,200 | 1 | $360,000 | More than minimum sample size improves inference, does not allow for trend comparison |
| 3 | $25 | 700 | 2 | $420,000 | Minimum sample size, two years allows for trend comparison |
| 4 | $25 | 700 | 1 | $210,000 | Minimum sample size, does not allow for trend comparison |

**Motion**

That Board approves a budget to allow the SGFP to engage into a contract negotiations with TELUS for the purpose of obtaining a data extract for a representative sample of FHG and FHO physicians.

**Timelines and Next Steps**

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| **Timeline** | **Activity** |
| Sep 11, 2019 | Board approves the financial support for the project |
| September | SGFP to negotiate the data extract contract with TELUS, with assistance from the OMA Finance |
| September  /October | SGFP to obtain a representative sample of potential participants in collaboration with OntarioMD |
| September  /October | SGFP to work with OMA Legal to develop consent forms for participating physicians |
| October/  November | SGFP, in collaboration with OMA, to obtain consent from physicians in the sample |
| November | SGFP to provide the list to TELUS |
| November | TELUS to extract data |
| December | OMA EPR to analyze the data extract and prepare a summary report |
| January 2020 | The summary report to be provided to SGFP, OMA Board, OMA Negotiations committee, and other parties as required, such as Multi-stakeholder Primary Care Working Group |

1. Searches are often used from a recall or population management perspective. Their use will very from clinic to clinic, and between physicians. Often, it may be hired STAFF running searches, especially in FHTs, where the data is mandated. In the data presented in Appendix B, this data was restricted to just work done by the physician personally. Some common examples of searches used by this physician include: Identifying patients who are overdue for certain tests or care; simply checking on roster size; identifying patients who may be on a certain medication; Identifying patients whos metrics are not to target (i.e. high blood pressures); pre-emptively identifying patients who may fall due for opioid prescriptions when I am away on vacation the following week; etc. [↑](#footnote-ref-1)