

Practice Fusion Whitepaper Leveraging the Power of Clinical Data

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Introduction

Clinical data is extraordinarily powerful and has the potential of dramatic and profound impact on the health care landscape. The vast majority of organizations do not have the funding or systems in place to leverage the exceeding value of this data. This whitepaper explores how Practice Fusion is able to present the appropriate kind of data that is needed by key stakeholders, including practitioners, groups (Payors, MCOs, RHIOs and Hospitals) and regulatory interests.

Hosted vs. locally-stored data

The Practice Fusion approach to clinical data is that it is best deployed in a centralized, hosted fashion, rather than separately stored in local practices. There are multiple advantages to this. Traditionally, Electronic Medical Record (EMR) vendors offered solutions to physicians built on the idea that the system would be purchased (at significant cost to the practice) and stored in local servers. Conceptually, the physician's office chart rack – which is really a paper database – would be replaced by its electronic counterpart, but the distribution of medical data across the landscape would be basically unchanged. Patients would have records in multiple practices, and data sharing between clinicians would remain challenging. This is an improvement over staying in paper, but does not address the need to share medically relevant information between clinicians, and does not solve the problem of needless duplication of services that are rendered

as a result. Clinical data stored enterprise-wide, rather than locally, has significant advantages, as noted below.

Data safety

One advantage of hosted data over locally stored data is the issue of data safety. Locally stored data, whether it be paper charts or locally-housed EMR systems, are susceptible to natural disasters. Gulf-coast physicians can attest to this. If a disaster occurs, and your office is destroyed, your paper is gone, your in-house computers are rendered useless – if you had an always-on, hosted location of your data, then all you would need would be an internet-connected computer (for instance, a cell-phone linked laptop) and you would be back in business (as far as data access is concerned).

Another issue with hosted data is the ability to provide more robust security and safeguards against unauthorized access, using technologies and physical plant design that are not likely to be matched with a locally installed system. Yes, one can argue that a centralized data repository is a bigger target that might attract the attention of data attackers, but the safety measures that can be systematically deployed in a centralized hosting environment can match the potential threat. Because of the overlay of HIPAA compliance requirements, medical data is even more secure (by design) than other kinds of personal hosted data, such as banking information.

Clinical data sharing among providers

Apart from data safety advantages, perhaps the most compelling benefit to hosted clinical data is the ability to actually achieve appropriate clinical data sharing. Health care is delivered to patients in a team fashion, where many practitioners with different skill sets are called upon to participate in a given patient's care. Sometimes these care-delivery networks are formal, such as in a group setting or IPA, and in other cases they are more informal (physicians simply knowing their colleagues from hospital staff or other local medical society associations) – but some sort of coordinated care is the desired outcome. In a paper world, clinical records are shared by faxing copies of chart notes, sometimes supplemented by phone calls. In a world of separate EMRs, there is the issue of interoperability – the hoped-for ability of each EMR to export clinical Continuity of Care Records (CCRs), transmit them to a recipient system, and have that recipient system be able to import the clinically relevant information. In the absence of such interoperability (and such desired interoperability is mostly a “holy grail” at this stage of software development), records simply drop to paper and are faxed. All of this involves staff being “live” at each end of the referral process in order to send and receive clinical data needed for continuity of care between specialties.

With centralized, hosted data there is finally the reality of true, real-time clinical data sharing. The principle of “one patient, one chart” is possible. A given patient would have a single chart that everyone delivering care to that patient would be able to share and use – though the actual content of chart notes would be visible based on case-by-case permissions between practitioners, the fact of each other’s visits are visible to all who are appropriately-credentialed. Lab test results would be visible to all (with the potential to mask specific results as directed by patient-centered permissions), so that needless duplication is minimized – the cardiologist is aware of what labs the family practitioner ordered, and vice-versa. Medication lists are visible to all as well, so that conflicts and interactions of medications prescribed by different prescribers can be more reliably caught.

The beauty of this arrangement is that the data is available at-will. In other words, a clinical record can be available to an emergency room physician on a Saturday night in a neighboring state, given the proper permissions. The results of the nephrologist’s blood tests are visible to the family practitioner, regardless of whether the nephrologist is in the office when the family practitioner sees the patient. The clinical notes of a primary care physician are available to the specialist, so that the reason for the referral and the background information are available at the time of the referral visit, allowing the encounter to have maximal meaning and usefulness.

Data reporting needs

In addition to individual-patient clinical data sharing between practitioners involved in that patient’s care, centralized clinical data can be used for analysis and reporting in ways that help look at entire populations. And the data-extraction tools that can be used centrally can be far more robust than could be afforded at a local practice location.

Implementing evidence-based decision support at the point of care

Dramatic advances in clinical research and evidence-based treatment recommendations have emerged over the past 30 years, yet their implementation at the point of care has been sadly uneven. The Institute of Medicine’s 2001 report (“Crossing the Quality Chasm”) calls for a far more effective infrastructure needed to apply evidence to health care delivery.

Data-analysis engines are complex, but can deliver specific recommendations to the practitioner at the point of care. In the Practice Fusion model, these ever-evolving recommendations can be delivered in a way not possible with a locally-housed EMR system that needs ongoing updates. Using a hosted product, a practitioner can call upon two powerful features: (1) diagnosis support, and (2) treatment recommendations. Diagnosis support is a feature whereby the clinical information captured in an EMR (the chart notes, the lab studies, etc.) can render a list of most-likely diagnoses (in descending order of probability), and deliver suggested next-steps to distinguish between the possibilities. Treatment recommendations can

then be pushed out to the practitioner for any diagnosis, either linked to the Diagnosis Support engine's results, or in a stand-alone fashion responding to ad-lib diagnosis search entry.

Treatment recommendations can come from various sources. Numerous emerging content sources (such as the Cochrane Collaboration, the *ACP Journal Club*, and the Evidence-Based Practice Centers supported by the Agency for Healthcare Research and Quality) can be leveraged and included in a hosted EMR product. Preferred workup and treatment algorithms developed by a specific patient's health insurance payor can also be overlaid onto this, which helps the practitioner better navigate the authorization course for a given patient's workup.

Wellness and chronic care prompts for providers and patients

Besides diagnosis support and treatment recommendations, which are features of care involving the patient at-hand being seen today, wellness and chronic care prompts can alert the practitioner to patients needing intervention who may have "fallen through the cracks."

Wellness prompts (e.g. all those patients due for a mammogram) can be delivered as a list for a practice to review, in order to reach out and pro-actively remind patients of health screenings that are due. They can also be placed in individual patient's charts, so that on a patient "home page" the wellness interventions that are due will be visible when the patient's chart is opened. With a robust patient interface – a Personal Health Record (PHR) that is populated by the physician-created EMR data – those prompts can be delivered to the patient directly as well, improving compliance with evidence-based recommendations from a patient-demand basis (in addition to the physician-advised basis).

Chronic care prompts (e.g. glycohemoglobin and LDL cholesterol results for diabetic patients) can also be delivered through the same mechanism. A list of patients with a specific condition constitutes a Disease Registry, and a population (e.g. all the diabetics in one's practice) can be reviewed to look at who has achieved a desired outcome (e.g. glycohemoglobin results of <7.0%), and who needs more focused attention. Care management prompts can be part of the patient's record, like the wellness prompts described above, so that when a diabetic patient comes in for a visit, the practitioner can see at-a-glance that he/she is due for an annual urine microalbuminuria screen, for example. Similarly, these prompts can be delivered to the patient directly, and placed on the patient's PHR page.

Clinical outcome measurement and profiling

More and more, health care is moving in the direction of rewarding physicians based on clinical outcome metrics, rather than traditional fee-for-service. Pay-for-performance mechanisms have struggled when individual practitioners "on the front lines" do not have the tools needed to systematically assess their own performance. That is why groups and sophisticated IPAs have done better, since group-level Information Technology (IT) infrastructure can be developed to

help member physicians in this way. An example of a clinical outcome measurement might be “of all my diabetic patients, what percentage of them have glycohemoglobins <7.0%?”

When physicians have at their disposal Disease Registries, wellness prompts and chronic care management prompts, as described above, then they can systematically take steps to improve on these. The focus of practice becomes more a pro-active management of populations, rather than what one otherwise is left with, which is more of a reactive “trying to do the best thing for the patient at hand.”

With the Practice Fusion model of providing a robust, centralized, hosted, no-cost EMR into the hands of clinicians at the point of service, there now exists the potential that true and measurable change in the health of entire populations can be achieved. Guided by evidence-based treatment recommendations, and bringing together resources not previously available to rank-and-file physicians, the chaotic variation in care rendered across the current landscape can at last be improved upon in a meaningful way.

Data reporting audiences

As centralized, hosted data is accumulated, the power of reporting from that data becomes staggering. Numerous audiences can make use of this data reporting, having different interests and needs. Clinical practitioners, patients, communities (medical groups and IPAs, local regional data-sharing organizations), payors (health plans, employers), and researchers (clinical research, health policy groups) are all different kinds of audiences for this data

Practitioners

As described above, clinicians have a need to look at patient-specific data concerning their own practice. Disease Registries, population lists needing wellness and disease-specific interventions, and clinical outcome metrics (with the ability to drill the list down to specific patients) are all of interest to practitioners.

Patients

Patients have a different data need, and would involve looking at their own patient-specific data, such as through a patient portal or PHR. They may also want to look at de-identified data concerning populations with a disease they may also have or are interested in. Access to patient-centered health information can also be made available through a PHR.

Communities

Communities have interest in larger multi-practice data, depending on what kind of community one is considering. An IPA can be a community, and will be interested in data about participating practices. A health plan can be a community, and will be interested in patient outcomes by practitioner for their enrollees. A Regional Health Information Organization (RHIO)

might be interested in regional data, such as immunization registries or disease-incidence demographics or geographies.

Payors

Health plans, as noted above, have an interest in information about their enrollees. They also have an interest in pushing-out to practitioners preferred algorithms and protocols, and the use of formulary medications and devices. Employers, health-purchasing consortiums, or government payors also have an interest in aggregate de-identified data on the populations they enroll.

Research

Health care clinical research is traditionally costly and labor-intensive, involving chart review and compliance with test protocols. Enrolling patients and deploying clinical-research prompts using the wellness prompt engine described above, reviewing chart data on a patient-specific-permission basis, and developing reports on population outcomes are all possible using the Practice Fusion data model. More passive review of de-identified population metrics are useful for large-scale retrospective research, as well as for those involved in health care policy development.

Conclusions

To access the physician and patient data across your community you first need to acquire it. Practice Fusion's Instant Physician Network enables you to distribute our free EMR that captures the key critical data needed to power your initiatives.

Once in use by your community, you will have **instant access** to all of your physician and patient data. Practice Fusion accomplishes this at **no cost** to you and with **no integration**.

With this data you will have the power to implement evidence-based treatment recommendations, clinical decision support, wellness prompts to clinicians and patients, outcome reporting, as well as disease management and wellness programs.

To learn more about Instant Physician Network and the Practice Fusion EMR visit www.practicefusion.com/communities.htm

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