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CONSIDERATIONS IN IMPLEMENTING A NEW MEDICAL CLAIMS PROCESSING SYSTEM

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- What is state-of-the-art in packaged software?
- What are the requirements of such systems?
  - -- Processing
  - -- Information
  - -- Customer reporting
- Current and future health care developments that must be addressed:
  - -- Provider reimbursement mechanisms
  - -- Utilization review control and evaluation
  - -- Data required for actuarial analysis

MR. C. NELSON STROM: Today our topic of discussion will be considerations in implementing a new medical claims processing system. To kickoff our topic,

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I would like to tell you about our experiences at Allstate regarding our new medical claims processing system. We at Allstate feel that if one is to be a viable force in the group insurance market, you need an up-to-date and efficient medical claims processing system. At Allstate, we have just put in a new system with its major advantages being: (1) it can handle most of the new cost containment options, and (2) it will greatly improve the productivity of our medical claims examiners. We are almost at the end of the road in the development of our new system. The only thing left is to complete the last couple of conversions. We believe that the system we have developed is the best in the group insurance industry. However, we finished its development about a year ago and since then many things have changed. Therefore, we have put a couple of things on the drawing board to enhance our system even before it has been fully implemented.

The dramatic changes taking place in the group insurance industry can be very exciting in some respects; however, for those of us involved in the administrative side of the business, it can be very frustrating. One way to alleviate these frustrations is to buy your claims system from a top notch vendor who will keep it up-to-date. We believe today's three speakers will be the top vendors of medical claims processing systems. From Advanced System Applications, Inc. (ASA) we have Mr. David A. Pedersen. Mr. Pedersen is the vice president of their research development division. Although he is from ASA, he is not an associate in the Society of Actuaries. He has worked for ASA for five years and he's been in insurance data processing for eleven years. Next we will have Mr. Stephen R. Carlin of Resource Information Management Systems, Inc. (RIMS). Mr. Carlin, not a member of the Society, is their marketing consultant. Prior to joining RIMS, he spent six years with McDonnell Douglas. Finally we will have Mr. William Robertson from ERISCO. Mr. Robertson, not a member of the Society, is their director of new product marketing. He just joined them in April of this year. Bill spent 20 plus years in the insurance industry. He said, walking around the hallways here at the meeting, he has seen some old friends that he has worked with at U.S. Life, Mutual of New York, New England Life, and a few other places. Without further adieu, let's get started.

MR. DAVID A. PEDERSEN: As Nelson mentioned, the topic is a challenging one and one on which I think you will see some different viewpoints, although with some common threads. When you consider implementing a new medical claims processing system, you need to review first, where you are today; second, where your products are targeted for the future; and third, what the best way is to bridge the gap from where you are to where you would like to be.

In packaged claims software, the automated functions of eligibility verification and creation -- the basic editing, automatic calculation and payment with associated checks, and explanation of benefits -- are becoming pretty routine. Even major variables in plan differences are accommodated by most vendor packages today. Today's systems for claims and administration handle the benefits of the traditional indemnity plan quite well. Tomorrow's claims and administration systems need to be able to handle emerging products and benefits which have significantly different characteristics than those of today.

The demands within the health care industry and the medical care delivery systems are rapidly moving through new features in precertification and preauthorization, ambulatory care processing, second surgical opinion processing, concurrent review, preferred provider organizations (PPOs), diagnostic related groups (DRGs), alternate funding arrangements, flexible reporting, and much more. Claims systems are even determining appropriateness of care and medical necessity conditions through advanced medical logic edits. This would then trigger a claim review for the patient and the physician's charges. These changes are here today and are dramatically affecting how we will treat information tomorrow. ASA is addressing these changes with the release of CAPS II, a system which combines advanced processing with advanced technology to increase productivity and provide additional reporting needs in the future.

The need to offer a triple option product is rapidly developing. The products are indemnity insurance plans, PPO plans, and health maintenance organization (HMO) plans. The products move from the least managed to the most managed in health care arrangements. Our research and development division is working toward completing an extensive HMO system which can interface to our existing advanced systems to meet our clients' needs.

Within the indemnity products, which may be either insured or self-funded, the process requires administering a wide variety of benefit plans. When necessary, deductibles, coinsurance and other provisions are utilized to manage health care cost. This product is the least managed and the relationship is primarily between the insurer and the group. There is little involvement or management of the providers or the insureds. Today's systems are capable of handling this product.

Within the PPO arrangements, the insurer, the group, and the PPO physicians or networks are involved in the product and the goal is to provide quality care for reduced costs. The insurers and the groups are part of managing the health care delivery process. Selecting PPO physicians or hospitals is provided as groups direct their employees to these providers. Financial management of the PPO is necessary to assure cost effective services in comparison to your indemnity products. The incentives or disincentives applied for the insured to use the PPO physicians will have an impact on use. Additional information to effectively track, report, and manage this kind of relationship requires much more from your claims and administration systems. ASA developed systems have had extensive changes made to incorporate the PPO requirements as an integral part of benefit calculation and payment processing. The data collected from PPO payments will serve to support the PPO network management and help better negotiate PPO contracts for renewal.

Finally, within the HMO products, the group, the employee, the HMO provider and the insurer are all involved in managing the effective use and controlling the costs of health care. The HMO products mandate provider selection and generally provide the highest level of managed care. Issues of quality of care and managed wellness may affect the financial incentives of the HMO. It is critical to evaluate all the relationships and manage the providers, the insureds, and the level of benefits being used and at what cost. That's why ASA is devoting a significant effort to develop an HMO processing system which can meet the growing and changing demands for HMO administrators.

As you can see, new product opportunities are rapidly emerging in the health care industry. In addition to managing benefits, we will need to be significantly involved in managing the health care delivery and utilization

relationships and their equivalent costs. Claims and administration systems need to support these new products so that true comparisons can be made between the various options. System capabilities are critical to your product development and management. The client, customer, or users of this information will demand a reliable base from which to make decisions. When all of these options are happening together, it's vital to know and understand the patterns of selection by age groups and by medical trends. For pricing or for advising clients on projected experience, your staff must have the data and the system which provide the ability to measure results within and across these products.

With a variety of financial arrangements such as holdbacks, risk pools and discounts, the true costs of medical services and comparable care is more difficult to evaluate. Therefore, it's critical for underwriting and actuarial staffs to know the products and their use versus the overall experience. The need for broad based national norms and statistics increases. The timeliness of such information becomes critical when setting rate or expectation levels for large groups. That's why ASA is working with our clients to develop a common data base of claim history which is used to calculate normative and comparative data, yet which provides specific claim history which is used to meet the policyholder requirements for reporting. As an online, real time system reports and graphics are immediately available for ever changing needs. This service, called the health information center, should be a significant source of claims and statistical data for our clients in the future.

Your need for this information increases as the price of medical coverage within a selected option and its utilization has a more direct relationship in the new triple option environment. Adverse selection among products may shift your anticipated cost versus premium relationship. It will be important to determine whether the assumed savings of cost containment will be really there or whether it will be increased or shifted. In addition, current product structures which rely on varying benefits like stop loss and coinsurance may actually increase use because of how the plan is reimbursed. Your requirement of categorizing treatments to services has become more complex as you must remap the value of and the effect of a changing medical service delivery system.

Tomorrow's claims systems need to be the entry point of detailed encounter or claim level data. That data must feed multiple processes which allow uniform claim and experience processing and reporting. The system must integrate that experience data back to your administrative systems which handle your financial functions of billing, provider reimbursements, holdbacks or risk pools. It's critical that true experience costs and financial breakdowns are matched at the proper levels to evaluate the actual financial cost of services. The traditional premium to claim match-up is more complicated and requires greater sophistication.

Not only will you as actuarial professionals be requiring this data, but your clients will be demanding it as well. As health care costs continue to be a significant portion of employee benefit plans, corporations are becoming increasingly knowledgeable and involved in controlling those costs. The fundamental question is, with all the reduced rates and discounts, how much are my savings? And if there are savings, how much are they in the different areas? Your groups will want to see the same detail which you require as you share the task of keeping rates and costs in line. Your task of matching products to detailed use and of determining where your money is being spent is a growing challenge. Your success will be measured by your ability to effectively evaluate and manage the process that produces results, and those results are cost effective, quality health care.

Advanced System Applications, through its ten years of growth, has placed us as a leader in providing health insurance systems; and for us it's just the beginning. Our challenge is to provide solutions, not just systems, to help you meet the evolutionary and the near revolutionary changes which you are facing. It is that challenge that we are developing new software products for and are continuing to refine and enhance our existing software products. The information age is here and we're committed to developing systems' solutions to meet your requirements in today's rapidly changing health care industry.

MR. STEPHEN R. CARLIN: This panel has been asked to provide its observations on considerations in implementing a new claims system. My fellow panel members and I have specific points of view which probably will differ based upon our own experiences and our own corporations' backgrounds. That's how it should

be. There is no definitive solution for all situations. Flexibility and variety are the key elements which we as software vendors are obliged to provide.

Specific questions that we're dealing with today include: What is the state-of-the-art in software packages? and what are the requirements of such systems? They are current and future health care developments that must be addressed, looking specifically with emphasis on provider reimbursement, utilization review and control, and data required for actuarial analysis.

Well, what are the current capabilities of packaged software as they relate to health claims? Today's applications are mere reflections of concepts that were initiated in the 1970s and implemented in the 1980s. Cost containment which was a major "hot button" a few short months ago has spawned the growth of PPOs, exclusive provider organizations (EPOs), preferred provider associations (PPAs) and other forms of discounted contractual arrangements between providers of service and employers. HMOs, an older concept than that of the PPOs, have gained more acceptance as a means of managed care which is cost containment taken to it's next logical level. The emphasis then on automated claims systems has shifted from the simple payment of claims to the acquisition of meaningful data; data that we can use to evaluate that elusive quality of care issue.

Software vendors such as Resource Information Management Systems have a dual problem. First, we have to keep up with the latest concepts in health care delivery methodologies and second, we must maintain an up-to-date understanding of the tremendous strides that are being made in technological advances with regard to hardware and software development -- one of the most recent ones being the new 386 chip, which I saw an advertisement for just yesterday. What does that do then to the small compact or personal computer capabilities?

The current fourth generation of computer technology has allowed the vendors to develop claims systems with very large scale integration, what we call VLSI. The next generation of hardware and software will be capable of learning from its successes, as well as its failures, in reasoning through problems. Software specialization will occur in certain elements of the health care field.

You will find that the industry will be handled by mainframe, and mini and microtechnology. As an example of this particular type of specialization, there's capability of inserting a specific diagnosis code and having that diagnosis code then matched with appropriate procedure codes.

Information derived from the next generation of systems will tend to migrate from the episode of illness data, which has been the primary means of evaluating health care, toward a more integrated information systems approach. By using hard knowledge, that which is known, coupled with soft knowledge, how to proceed to make a decision, a new and more objective reporting structure will become more defined, specifically looking at employer based reports, provider management reports and ultimately, administrative reports for internal use. Each element of reporting, whether taken singularly or integrated, will yield detailed information on the success of managed health care.

System capabilities in the future are being discussed today. Provider reimbursement methodologies could take on regional characteristics. Diagnosis and procedures which are performed in San Francisco may be far different for similar activities in Boston. Provider reimbursement will follow local norms and automated systems will have to maintain extreme flexibility to meet those requirements. The potential exists that those present here today will be involved in the next evolution of automation known as artificial intelligence (AI); actuaries could be involved in the development of utilization and review/control through knowledge engineering to develop rule-based or knowledge-based AI shells. This future methodology will expand on the current episode of illness data and develop these new specialized systems. The new systems will evaluate the level of services being rendered and eventually reimbursement to providers in accordance with negotiated contractual schedules. Through recommended diagnosis and treatment schedules which reflect such things as length of stay and severity of illness, cases may be reviewed because they lie outside the regional norms or the established norms for that particular group. What can be established then are definable, statistical quality of care norms (SQCs), as well as the potential for the development of a clinical quality of care (CQC). Those providers which have acceptable SQC and CQC quotients would then be compensated accordingly.

A few questions come to mind. Is data that is currently being captured by today's systems sufficient to meet the policy development, health care, and for an aging population needs during the next decade? Are changes in refinements needed in the statistical methodologies used in both policy analysis and in planning an administration of products and programs? These questions are yet to be answered. I think that the president of Family Health had these questions in mind when she said, "Insurers must develop new approaches. They have to throw out their old actuarial systems."

We have looked at the state-of-the-art in software and found it to be a reflection of past ideas. We have looked at the requirements of new systems and have found them to be dynamic and partially shaped by technology. And finally, we have looked into the future, as far as we are able, and anticipate an increased dependency upon automation to provide guidelines for the next level of appropriateness and necessity of care issues. Key components of success will reside in accuracy, consistency and completeness of data.

MR. WILLIAM ROBERTSON: I've been traveling around the country talking with insurance companies, employers, and providers about the alternate health care delivery systems which are emerging and what the impact of those are on the selection and implementation of claims systems.

First, what does managed health care mean to the insurance industry? Well, it means that it's changing. The world is changing and as the president of Opinion Research suggested at the Health Insurance Association of America (HIAA) convention earlier this year, "The train has already left the station, so hop on board fast."

Second, what does it mean for employers? The key issue seems to be the demand for more data -- for employers, specific data. What does it truly cost? Does it truly cost less if the employees are in an HMO? How can I measure the quality of care that they are getting in an alternate delivery system?

From the provider's point of view the same issues are emerging, and they're getting into our business just as you're getting into their business. As the famous philosopher, Yogi Berra said, "The future ain't what it used to be."

The considerations in implementing a new medical claims processing system are the same for you as it is for us, the vendors of services to that industry. That is, we've got to make some of the right guesses on what the strategic direction of the future is. One conclusion is, it isn't getting any simpler out there. No sooner have we mastered some of the three-letter words of the past, than we're having to learn some new three-letter words. Someone suggested there should be another one up there in addition to HMOs and PPOs and that is Other Weird Arrangements (OWAs).

There clearly appears to be a trend however, away from traditional fee-for-service indemnity reimbursement for medical care to some alternate delivery system and reimbursement system. A survey that we had done of major corporations and mid-sized insurance carriers, which is about a year old now, showed that the latest numbers were that 50% of major employers were doing hospital precertification. As you probably have observed, the insurance industry has been more readily adopting the PPO, preferred provider alternative than what was once a competitive HMO alternative. However, there are some insurers that are trying to put the three of these together in the so-called triple option plan.

There do seem to be economic reasons for this. If it costs a dollar for the insurer, the employer and the employee to buy a certain level of medical services in a traditional fee-for-service indemnity plan, you can probably save 10 cents by putting in the traditional, commonly used cost containment methods: hospital precertification, second surgical opinion, mandatory outpatient surgery and the like. In a discount arrangement with a PPO, you could probably squeeze another 15 cents out of that dollar and that reflects the fact that many of those have included the cost utilization programs. The comparable number, which is hard to get because you are comparing different levels of services, between those services delivered on an HMO basis seems to be quite a bit less.

We've been talking about triple options as if there were nice clear cut choices between a traditional indemnity plan, a preferred provider arrangement and an HMO. What's really happening out there is a whole lot of choices along a spectrum. Each one is starting to take on some of the characteristics of the

other. There may not be too many pure freedom of choice indemnity plans left out there. Someone has predicted, however, a resurgence of individual health insurance in those companies that force employees into an HMO, for example, in their first year of service which has happened in several companies. This also requires new systems' requirements and information requirements for those of us who have been providing traditional claims systems over the years. We have now got to worry about what kind of financial arrangement there is with the provider of the services, whether or not a "gatekeeper" physician, a primary care physician who is responsible for the medical services, may be financially responsible in the risk sharing arrangement.

In the so-called point of service plan, which is the ultimate of the triple option plans, employees, although they are enrolled in a HMO, get to choose each medical service. Whether they behave according to the rules of the system and get paid something close to 100% of benefits or they take themselves outside the system and get a somewhat reduced benefit level means keeping track not only of the provider arrangements, but also whether or not that particular service required a referral or an authorization. That would be a factor in determining the level of claim payment.

There are multiple levels of accounting arrangements to worry about. Not only the traditional ones of whether it is the insurance company's money or the employer's money, but also is it the medical group's money, or the provider's money?

Finally, all the data we have traditionally provided to employers needs to be sliced a different way and looked at from the point of view of provider practice patterns. For example, are the providers in the system practicing medicine differently in their HMO environment, versus their PPO, versus their fee-for-service? In California, I'm told, the average physician is a member of two PPOs and one HMO. That could mean having them in the claims system four times.

So there are some new processing requirements (referrals, authorizations, bulk data entry, remote provider input, third party collection, EFT), some new control requirements (managed provider rules, matching authorizations/

referrals/service prospective/retrospective review, concurrent review, provider auditing, quality of care evaluations) and some new financial requirements (capitation accounting, capitation payments, bonus payments). Not all of these may be implemented day one, but some of them are necessary if you are going to offer a triple option plan today.

How are insurance companies and employers dealing with this issue of offering multiple options and trying to compare the data for the cost effectiveness and the quality of care in each one of those alternatives? Most of them are using separate organizations and consequently separate systems to administer each one of these programs. Other options include adding PPO, HMO capabilities to an existing indemnity claims system or making or buying an integrated triple option system. Typically, the HMO people are outside of the claims system.

There are advantages and disadvantages to each one of these approaches. The disadvantage of having separate systems is that it is a real problem putting the data together while adding to the existing system may mean a lot of time and money. In making or buying a triple option system, you may find it difficult to come across insurance knowledge or claims expertise.

Administering an HMO requires administrative, software, and data requirements, such as appointment scheduling, accounting, medical records and drug inventory. There are some of you that may be confronted with those issues. From our point of view, from a mega bi-solution that's primarily a bi-solution, there are many items such as bulk data entry, encounter processing, capitation payments, etc., that represent the needs of organizations that are primarily third party payors for medical care, even in an alternate delivery system. The feeling is that you need to have complete utilization data, even on those services which are paid for on a capitation basis. We can't wait for the ultimate solution of somehow hooking up to the doctor's PC. We've got to find some simple way to get encounter data into the system today so we can start to prepare answers to the questions that employers are asking: What would these services have cost me if they were obtained on a fee-for-service basis? How much am I really saving with a capitation arrangement? It may even mean doing some quasi pricing of capitated services.

If you look at the history of the development of claims systems, you will find that I think we all started from what was essentially an indemnity system base and added some cost containment features to it: second surgical opinion, outpatient surgery, some medical logic in terms of appropriateness of procedure code with diagnosis, and the ability to deal with, what I call first generation of preferred providers. That is where who you went to see made a difference in whether you got paid by payment schedule A versus payment schedule B. We're in the process now of adding to that a software module which would integrate a hospital precertification system, allowing you to look at normative data, determine length of stay and have that available to the claim processor as part of the ultimate claims processing.

Another thing which we have recognized and need to do to stay current in the emerging health care industry is to adjudicate claims by DRGs. Although that isn't nationally accepted it's strong in some areas of the country. We also need to deal with some other issues including a more sophisticated level of preferred provider arrangements. We're seeing providers out there who have different arrangements with different plans, different arrangements that vary by year, even arrangements that vary by size; that is, put more people in the hospital and get a lower rate.

Finally, there are those things that we think we need to add to the system to serve a triple option offering. We need to be able to enter in a medical treatment plan and adjudicate claims against it; perhaps determine whether or not an authorized referral was obtained for a specialty service -- this would be used in determining the level of benefits paid; look at "gatekeeper" physicians' referral patterns; deal with encounter processing and provide the data needed to pay physicians, hospitals, and medical groups, on a capitation basis. We're now working with a small group of companies to define a more specific set of requirements and generate a set of standard software for as wide a market as possible in this area.

MR. STROM: A lot of us, when we think of claims systems, think of it mainly on our group side of the shops. Maybe each one might comment a little bit about what you have to offer as a vendor. Does it also pertain to both personal and group?

MR. PEDERSEN: For a lot of the clients, they use the group side for basically the individual processing, setting up a policy master that they can go against and treating it as a, if you will, minigroup. We do not have an individual side of the system that deals with the individual health insurance processes, but it works basically the same on the group side.

MR. CARLIN: Our solution is basically the same as ASA's; you set up a specific policy and then assign the individual members to that particular policy.

MR. STROM: Another question I might ask is regarding buying your claims system from a vendor versus doing it yourself. I know when we went for a system, we looked at building it inside, and also going outside to see what we could get, and obviously the cost worked better going out and buying somebody else's product. What are your estimates, approximately, of the difference between trying to do it yourself, recreating the wheel so to speak, versus maybe coming and getting your services to develop a claims system? Does anybody have a feeling of costs that they can share?

MR. CARLIN: That ranges up and down the spectrum. First of all, you must define what the element is and then try to build the various modules that address that. Generally, it takes between 18 to 24 months to develop a workable system. That 18 to 24 months could relate into $1.5 to $2 million. Then you could look at a system that's already been developed. All that development time has been exercised, it's been tested, it's been evaluated by several other vendors or clients, and the cost for that is in the hundreds of thousands of dollars.

MR. ROBERTSON: Having relatively recently moved over from the insurance world to the software world and having had an opportunity to look at what the true cost was of developing a claims system internally at one of my former employers, I'd guess that it is something on an order of magnitude of 10 to 1.

MR. STROM: I know that our numbers came out a lot higher, trying to do it inside. The other key thing that you brought up was by the time you put it up, things would have changed so much you might have had to start over.

MR. DONALD M. PETERSON: Nelson, what were your productivity gains after you got the system up? In other words, in the way in which you measured, how many claims did a processor get out before the new system and how many claims did that processor get out after the new system and how many processors did you have to add? Were there additional periphery problems?

MR. STROM: The key point of the whole thing here is the kind of system we were on before. Were we doing it manually or what were we doing? Well, we basically had a quasi, maybe mechanized system, where it was basically a data collector and check writer. It didn't have many adjudication features within size. It kept some accumulators and things like that, but basically our claim examiner had a calculator next to her desk and used that quite a bit. So knowing that, to get this system we proposed to management that we would get a 50% productivity improvement. We put in a learning curve of 17 weeks. We didn't get the productivity in 17 weeks. It turns out, we're getting nearly 60% from the people that have been up almost a year. Did it take an extra month or two to get to the curve?

MR. ROBERT J. HOYT: We looked at about a 30-week learning curve to get to our expectations. It took a little longer, but the goal was certainly reasonable.

MR. STROM: Everybody counts their claims differently. We were doing approximately 33 bills before, and now we're doing over 50. We're really happy with what's happened. We're still in the throws of conversion, and it was very expensive to do, but we will more than get our money back in a very short period of time.