

## **Response to DOL / ODEP RFI – Early Intervention Centers**

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### **INTRODUCTORY COMMENTS**

We recommend the RFI comment period be extended another 60 days and a letter inviting comment be sent to the heads of the agencies in all 50 states that oversee the Medicaid program, the public health system, the healthcare delivery system, human services, employment services, and workforce development. To date few states appear to have responded to this RFI – and the people most likely to be involved in the states may not even be aware of it. This may be in part because of the fragmented nature of the problem it is trying to solve! The people in each state's government with the responsibility to scan the Federal Register might not have recognized the relevance of this RFI to them – for reasons stated in the pre-amble to the RFI!

### **INTERVENTION ELEMENTS**

#### *1. Are there potential issues with the treatment elements?*

We have three general comments:

- A. We recommend that the RFP specify that the relative emphasis of the effort in the project heavily favor those treatment elements at the "front end" of episodes – meaning those delivered during the first few weeks. Especially if the implementation grantee is

accustomed to providing traditional services for work-finding and vocational rehabilitation, it will be easy to pay most of the attention and devote most of the resources to individuals who have been out of work for a prolonged interval, rather than assuring that the near-immediate response to workers with on-going medical episodes is optimized. The data is quite clear that it is events in the first twelve weeks have the most profound impact – because they are occurring while the affected individual is still formulating their own view of their situation and their strategy in responding to it.

- B. If the demonstration project is to be successful, it needs to be implemented very carefully. The original model we proposed went beyond the rather mechanistic view that many have described of a COHE to its intangible but powerful activities. The international scientific evidence verifies the need for this other dimension: all the players need to be brought on board and acting in concert. This requires active directing and orchestration by the COHE staff and its medical directors.

It takes a lot more than simply exchanging factual information among the stakeholders to prevent the adverse secondary consequences of injury/illness, especially prolonged and needless work disability. In fact, it is what the various stakeholders DECIDE to DO with the information that makes the difference. A deep familiarity with the human-to-human dynamics INSIDE the clinical care, claim management and SAW/RTW processes by which iatrogenic (healthcare and system-induced) harm is created or avoided MUST undergird the project.

Unless the demonstration project has expert clinical input into its design and implementation, and unless there is expert clinical oversight and support for project operations, we predict the demonstration project will fail to achieve its potential impact.

Based on the UK's experience trying to implement something similar, a critical success-or-failure factor will be the competencies of the contractor (and its staff). A cautionary tale is offered by the experience of the UK, where the Fit for Work Service was contracted out to a contractor that, on paper, appeared to have the required understanding of what was required to implement the service. Sadly, the contractor was given an inadequate budget to provide the right level of training for its staff (case managers), and to provide the required support to workplaces and healthcare practitioners. The outcome is that the performance of the service being delivered is definitely suboptimal.

If the intention is that this US demonstration will achieve what is desired, we strongly advise that time and money are invested at the outset into:

- (a) training the service delivery teams concerning the principles that underpin the project as a whole as well as their role – and
- (b) providing them with the practical tools and methods they need to deliver an intervention that gets all players onside.

These things carry some cost, but there is no doubt that these are necessary investments to get the expected benefit. Such training is not simply a matter of process and procedure, it is a matter of transferring a complex skill set, and needs to be developed and delivered by people who have a deep understanding of the subtleties of the work disability prevention

model. This can be done relatively easily (much relevant training material and tools already exist) but it needs to be recognized as an essential element from the outset to underpin the project design.

- C. The vital role of the provider relations function in the success of the COHE program appears to have been overlooked. Without physician support, the EICs will not succeed. In fact, the EIC model is going to be even more dependent on good medical community relations for referrals and cooperation than the COHE because it will not be tightly linked to one payer organization – in actuality with regard to information systems, as well as in the physician’s minds as a major source of medical income. The COHE provider relations staff members actively recruit, provide initial education in the best practices and how to interact with the HSC. They also maintain good working relationships with both clinical practitioners and the business end of the healthcare delivery system.

2. *What should be the required and optional roles of the healthcare service coordinator in implementing the treatment elements?*

In order to understand the many tasks a good HSC performs in more detail, see pages 4 and 5 of Appendix iii of our proposal for a Community-Focused Health & Work Service. This Appendix describes the COHE, including the role of the different COHE staff members.

<http://ssdisolutions.org/document/christian-burton-and-wickizer-appendix-iii.html>

Among other responsibilities, we recommend that the healthcare service coordinator be tasked to:

- A. Perform initial triage to identify those with the kinds of conditions / situations that are most likely to qualify for the intensive intervention arm
- B. Administer risk screening using standardized instruments to identify those who are definitely in need of the type of services offered by the grantee (as well as relevant services offered elsewhere in the community).
- C. Conduct interviews with a subset of those identified as needing more in depth evaluation in (ii) and review any available written documentation to collect more detailed information that will identify the specific issues needing intervention.

3. *Where should the role of the HSC be housed in order to most effectively achieve the goals, including an ability to maintain neutrality?*

The HSC must be affiliated with/housed in an organization that is perceived by the patient and the treating physician as trustworthy. In order to get physicians to refer their patients and cooperate with the HSC, and in order to get patients to agree to participate and go along with recommendations, the HSC cannot be perceived as part of an organization that has a potential interest in saving money at the expense of the patient.

Practically speaking, that means the HSC cannot appear to be affiliated with either the claims payer’s or employer’s operations – now or in the recent past. By claims payer, we are including health, workers’ compensation, and disability benefits claims organizations and their vendors.

Here is an example of what can happen if there is a perceived relationship to a payer: Dr. Christian interviewed two general practitioners who attributed the low referral rate to the UK's Fit for Work Service to the identity of the contractor selected to run the program. That contractor had become highly visible on social media with a reputation for being hard on / unfair to applicants for benefits while under contract to the UK government to perform functional capacity evaluations to support the benefits eligibility determination process of the Department of Work & Pensions (akin to the US SSA). Patients were asking their doctors NOT to refer them to the Fit For Work Service because of the company's negative reputation as harmful. Thus, the contractor's name alone had been sufficient to create suspicion about the Fit For Work Service among both patients and their physicians.

Additionally, though, the HSC must be visibly affiliated with/ sponsored by a type of organization that is highly visible in the community, familiar to all stakeholders, and perceived by them all as operating based on objective with professional expertise and neutral demeanor. In order to garner the cooperation of employers, unions, and payers, the organization housing the HSCs cannot be perceived as favoring or hostile to any of the stakeholders. Therefore, an organization with a perceived advocacy agenda would not be effective either.

We believe that the best solution is to house the HSCs and their medical consultants within the healthcare delivery sector, ideally a well-respected organization that has a reputation for playing well with others.

4. *Should there be educational and/or experience qualifications for HSCs such as vocational counseling or public health backgrounds?*

Health Service Coordinators (HSCs) were a key element in the WA COHE pilot. The demonstration should place great weight on hiring individuals who are well trained clinically and knowledgeable about issues related to employment retention and the effect of work disability on employment.

On the face of it, the "official" COHE program – as originally designed and described in L&I communications – is simple and straightforward, almost mechanistic. From the outside, all the COHE program "officially" consists of is a very limited repertoire of four simple "best practices" for physicians paired with similarly basic information exchange interventions by the healthcare services coordinators. The COHE protocols do not call for identifying people (and situations) with significantly increased risk for poor outcomes and taking special action. There is no protocol for skillful interpersonal negotiations and no handbook of suggested solutions.

However, replicating it as officially described would simply be inadequate. For one reason, the COHEs were ACTUALLY marketed, positioned, and staffed incredibly well -- as a trustworthy, expert, neutral, and thus credibly higher quality and "better mousetrap" in the community. And in day-to-day operations, both COHE medical directors and HSCs that they HAVE BEEN doing much more than that, although informally. For example, experienced healthcare service coordinators said they know how to recognize difficult ("at risk") situations from the get-go, and allocate their time and effort accordingly. If they don't know how to solve a problem themselves, they ask the COHE medical directors for informal consultation and ad hoc intervention. The medical directors tend to be

occupational physicians with experience and expertise in managing minor to moderately complex problems that crop up in the SAW/RTW process.

Interventions by BOTH the HSC's and the medical directors' usually involve LISTENING and TALKING PERSUASIVELY to someone – the coordinator, the patient, the treating doctor, the employer or the claims handler -- with the goal of changing how they see their role in the situation and what they will do about it. It is probable that informal, ad hoc information sharing and counseling by HSCs and Medical Directors changes thinking or behavior, which, in turn, may contribute to reducing entry onto SSDI. If that process were systematized and the interventions were evidence-informed, structured, and consistently delivered when needed, that is likely to be the secret sauce that will make the demonstration project a success.

So, if the contractor who wins the bid to the conduct the demonstration project – and the contractor who wins the bid to provide technical assistance -- employs staff without awareness of the CENTRAL ROLE that expertise in PERSUASIVE human-to-human communications and identifying/implementing PRACTICAL solutions to common SAW/RTW issues (many of which are psychological and interpersonal) plays, the demonstration project may not produce the desired outcomes.

Washington L&I has also seen the need for an organized and enriched program for at-risk cases. That is why they are now testing one.

- 7. Employment services are an important part of the proposed demonstration program. What is the optimal time to provide employment services, such as needs assessments, skill assessments, accommodations, job coaching, job search assistance? During the same time window as the health care services/coordination or afterwards? How can the RTW service coordinators best facilitate the effective use of employment services?*

Sometimes it is obvious immediately after onset of an injury or illness that a worker will have a permanent and significant change in their functional capacity – for example, after the loss of an eye, an amputation, or a spinal cord transection. In those cases, helping the person start thinking about a future of continued but possibly modified employment can and should begin as soon as the person is medically stable – so they don't shift their self-concept from "worker" to "unemployable". The HSCs should be able to immediately identify and refer these individuals for prompt initiation of appropriate employment services.

For many conditions, it is clear at the beginning of a medical episode that, unless other risk factors become manifest, full functional capacity will return. These are conditions with low variability in outcomes, such as injuries like lacerations, bruises, minor burns, and uncomplicated simple fractures; procedures such as hysterectomies and appendectomies; or illnesses such as allergic asthma and hypertension. There is no need to intervene with these cases **unless and until delays in medical or functional recovery have occurred**. (See Question 14 below).

Musculoskeletal conditions, especially those initially considered sprains and strains, have highly variable outcomes. Those that appear minor can gradually morph into catastrophes. At the outset, it appears to most of the professionals that the person will be able to go back to work but the affected individual may be starting to wonder. Alternatively, the physician may think continuing to

work is “too much to expect” of a person who really would like to stay working. Also, the doctor and patient may both believe the worker should keep working, but the employer isn’t of the same mind. These scenarios exemplify the reason why this early intervention service can change things – by changing how the parties see the situation, the information they have at hand, and how they interact with each other.

9. *What is an appropriate health care provider payment or fee structure to incentivize the specific occupational health best practices and to encourage a focus on employment as a health outcome? Are there models other than fee for service that would be appropriate and feasible such as basing payments on process and / or outcome metrics? How would these models operate in the context of managed-care organizations?*

Few efforts at incentivizing physicians have been made other than the simple and straightforward flat fees for specific behaviors/services that the COHE model implemented. This incentive scheme departs significantly from the usual pay-for-performance schemes, which provide an incentive payment at the end of some designated period (quarter or year). We recommend against this type of incentive scheme. The data show such schemes have little effect, and don’t serve to reinforce desired practice patterns or provider behavior. Moreover, the value of the COHE approach is that the payments are unconditional and immediate. There is no arguing about whether payment is due. Physicians and their business office gets a simple message: do these specific things right and you’ll get paid.

As far as we are aware, other efforts have been isolated, limited to workers’ compensation, and fraught with difficulty. In the early 1990’s in California, some efforts were made to do this by workers’ compensation payers.

One organization chose an unfortunate method: paying a fee per case when the patient returned to work. Because this can be construed as a “bounty per head” which effectively puts the physician’s economic interest at odds with his/her patient’s, it was poorly received.

Others came up with the idea of paying flat bundled fees for all medical care necessary for an injury with the injury episode ending as of the date of return to work. This provided a clear incentive to simultaneously provide only necessary care and speed the return to work. However, this method proved problematic from an actuarial perspective. One organization offered the same fee for all low back injuries, failing to remember the high variability that characterizes these injuries. They ended up vastly overpaying for many minor problems that required only one doctor’s visit, and catastrophically underpaying for the few cases that ended up requiring surgery eventually totaling more than a hundred thousand dollars. This led to efforts to tie the payments to various degrees of severity of the injury, which often turned into data manipulation and gamesmanship exercises on both sides.

The provider incentive that Dr. Christian designed in the mid-1990’s for ManagedComp, a managed care workers’ compensation company, paid a flat \$60 fee per case referred to the treating physician. It was designed to cover extra effort required to manage the entire situation, beyond that required for the medical care itself. The physician received the payment for all referred cases, but was given the discretionary authority to decide which cases did require any extra effort and what actions they

would take. However, the only physicians who qualified for these payments were those who had previously been recruited to serve as Primary Occupational Physicians (POP) based on their reputation, their clinical philosophy and their SAW/RTW track record, as well as their willingness to participate in training in the POP program and abide by the POP program's service protocols. The overall philosophy and business purpose for the POP program were both made explicit: ManagedComp intended to start viewing like-minded physicians as members of the recovery team, to direct as many patients to them as possible, and rely on them to work collaboratively with ManagedComp's case managers to help achieve optimal outcomes. Those physicians who did not do their part would be removed from the program. The POPS were expected to:

- A. achieve the resolution of medical conditions as promptly as possible by utilizing effective and evidence-based diagnosis and treatment methods, and
- B. reduce medically-unnecessary lost time from work as much as possible by promoting recovery on the job and actively assisting in removing obstacles to return to work.

## **Target Population and Sites**

*11. What is an appropriate age range of participants to target for this demonstration project? For example, 25-54?*

Why not start at 18? If someone is already working at age 18, why would they not deserve the support of this program? People at 18 may be more adaptable than other workers, but they also have less experience at dealing with major difficulties and challenges.

We should extend the age range to 65 for people with average or better underlying health and vitality, and give them guidance on how to adapt to new circumstances and provide them with expert support in finding a way to keep working.

In the last thirty years, millions of Americans in their 40's and 50's have been suddenly dislocated and forced to "reinvent" themselves vocationally due to the loss of their jobs through layoffs coupled with reduced market demand for their occupations. Although these losses are very painful at first, many of them report ending up content with their new situations.

A surprisingly large fraction of Americans today are finding ways to continue to earn money beyond the traditional "retirement age," often by working less than full time, working for themselves, or doing a different type of work entirely.

People who become injured or ill at age 54 are faced with simultaneous challenges to both their health and to their careers. At the beginning they are at somewhat greater disadvantage due to uncertainty about the extent of recovery to expect and the permanency of their impairment. They are also likely to be at a disadvantage in the job marketplace due to constraints on the number of options open to them imposed by their functional limitations. Therefore, it seems as though this population deserves the kind of timely extra support for achieving a successful adaptation to loss that the EIC services exemplify. The screening process should identify which individuals in this group appear to be most likely to benefit from the EIC's intensive efforts.

14. *Are there specific functional risk assessments you recommend using for the project? Benefits and limitations of those instruments? How might they be used to identify the target population here or form the basis for a RTW plan?*

It is important to distinguish between the concepts of triage, risk assessment, diagnostic assessment, and progress/outcome assessment.

Initial triage is short and simple-appearing process, but will need to be overseen by a professional with both clinical and vocational expertise and familiarity with the local medical system and business community. The triage process divides large groups into those who do not need intervention, those who obviously need it, and those who may need it but must be evaluated in more depth to determine what is actually going on and thus what is needed.

Triage is not as simple as it seems on the surface because important clues must be recognized. Triage is best done by a highly trained person familiar with the local environment who will know how to interpret the implication of basic facts. One telling example: a seasoned HSC in Washington commented that she often could tell whether a case needed intervention as soon as she saw the name of the physician and/or the name of the employer.

It is important to re-triage under some conditions – such as when more time has passed. This will be an important step in the EIC program, because elapsed time without resolution is by itself a key indicator of risk – and may be the only or most important one. Evidence-based, clinically-sound, and diagnosis-specific disability duration guidelines will be a useful way to identify medically-unnecessary delays in return to work. See for example [www.MDGuidelines.com](http://www.MDGuidelines.com).

Preliminary risk assessments can be done rapidly and at low cost by using screening instruments -- typically pen and paper instruments that can be administered by people with minimal training. The risk screening instruments that have received the most research attention are intended for use early in medical episodes. They screen for the affected individual's attitudes, beliefs, expectations (ABEs). Some also screen for their perceptions of their external situation. These risks are particularly important to identify and address since they have been associated with poor outcomes due to their profound impact on the individual's response to their predicament. There are at least 10 competing risk screening instruments (questionnaires) that have been validated and shown to have predictive accuracy. To my knowledge, they have as a group never been compared head-to-head in terms of practical usability, suitable for varied populations, predictive accuracy, cost, and so on. Well-known examples include the Oswestry and StartBack questionnaires. The less well-known PRICE inventory asks the individuals about issues in three domains: the individual's ABEs, the tangible workplace environment, and workplace culture.

Commissioning a review of the screening instruments with recommendations for the best one(s) to use in this project would be a worthy preparatory project. The goal would be to settle on one or more to use in the demonstrations.

More definitive risk assessments are best accomplished through semi-structured interviews that feel spontaneous and individualized to the patient but allow collection of data in an organized manner. In order for these assessments to deliver value, they must do more than identify risk: they should be seen as the source of a treatment plan, identifying potentially remediable issues that need to be addressed. Thus, the detailed risk assessment drives the design of the treatment plan.



Over time, progress and outcomes of treatment should be gauged in a variety of ways -- by repeated administration of the risk screening instruments, review of the initial treatment plan and noting accomplishment of milestones, as well as semi-structured patient interviews.

*16. Should the target population be limited to individuals with certain types of medical conditions, such as MSK conditions and chronic health conditions? Why or why not?*

The POINT of this project should be to have the Early intervention Center sort the wheat from the chaff instead of asking the community to do it. If we ask the community to send us the wheat, then we are just perpetuating the status quo. The POINT is that it is hard for them to identify the wheat at the start and unrealistic to expect them to do a better job -- but it is only at the start that intervention has the biggest impact. So, we must ask the community to send us all of the grain.

The people who are referred to the Early Intervention Centers should not have to appear in person for the triage assessment. That is an inconvenience.

Every single person who is referred to the service MUST get something they consider to be valuable out of the interaction. If not, the stream of referrals will dry up because of the informal grapevine. The person will tell their family and friends that they didn't get anything out of participating -- or even worse that they had a bad experience. They will tell the professional who referred them to the EIC who will decide to stop referring any more candidates to the EIC.

A large on-going project now underway has a similar design. It is designed to identify and treat depression beginning with an on-line depression screening tool. The project casts a wide net looking for candidates, and relies on employers to market its availability. EVERYONE who comes on-line gets the assessment and a report with recommendations. Those who have little risk for depression are offered a simple on-line intervention which is primarily educational. Those with significant symptoms are referred for more intensive professional counseling. It is not obvious to a participant that they have been offered the "control" intervention. Everyone feels like they get something.

## **Eligible Applicants**

*23. COHE has centralized participant controls, service management, and data collection? How could other types of organizations/states be able to do so -- particularly w/r/t data collection?*

Key to the long-term success of HSCs (and thus the EICs) will be a well-functioning patient tracking or case management system that provides comprehensive and timely information about the services being received as outlined in the medical treatment and SAW/RTW plans.

That said, the staff that implemented the first COHEs reported at a conference earlier this year that during the first pilot -- the one that showed a strong benefit of the COHE's involvement -- they were simply faxing information back and forth. Washington L&I would fax the COHE a list of new claims with basic information (the date and nature of the injury along with the names and contact information for the worker, physician and employer, and claims handler. The COHEs took it from

there. At the beginning, each COHE improvised their own case management system. This all required a lot of data entry.

It took a while for Washington L&I to realize they wanted the COHEs to be able to access L&I's claim system, and to use a uniform case management system – and to get it all funded. All of the COHEs now use a portal to access L&I's system directly (on a daily basis). And L&I paid for development of the case management system all of the COHEs are now using.

## **Evaluation and Design Issues**

### **GENERAL COMMENTS ON EVALUATION AND DESIGN**

This demonstration project is very unusual and involves a multitude of moving parts, including:

- Establishing collaborative working relationships and everyday communications channels among disparate public sector organizations,
- Building new relationships and everyday communications channels between the private sector healthcare delivery system and public agencies.
- Exchanging actionable information among parties that are unaccustomed to sending it and/or responding to it.
- Instilling a sense of playing “beat the 12 week clock” as well as teamwork, and collaborative problem solving into information exchange and administrative processes in separate organizations -- that have heretofore neither collaborated nor been sensitive to elapsed time.

Therefore, we believe another RFI should be issued that:

- (a) asks parties with a serious interest in later implementation grants to declare themselves, and
- (b) asks what kind of technical assistance they would need to prepare to respond to a future RFP.

Another possibility is to go ahead and issue a call now for applications for technical assistance grant money to parties that declare a serious interest in subsequently applying for implementation grants. Allow them to use the technical assistance grant money to figure out how their operational design will successfully tackle several of the critical success factors originally addressed in our proposal for a Community-Focused Health & Work Service, some of which have already been confirmed as stumbling blocks by the UK's early experiences in implementing its Fit For Work Service. For more details about important service features and critical success factors see page 16 in our [main proposal](#) as well as the pages 2 through 5 in [Appendix I: Important Details](#).

*25. Are there other research questions that could be answered through the demo project which would improve understanding of ways to better serve and increase employment and labor force participation of individuals with work disabilities?*

- C. We recommend that the definition of a successful outcome of the Early Intervention Service be expanded to include changes in self-concept among the sub-group that was originally identified as high risk for a poor outcome. The outcome of the process should also be empowered,

engaged, and activated people – individuals who feel more like they have the power to influence/minimize the impact of his/her injury on their lives and livelihood, and feel more prepared to play a significant role in creating a positive overall outcome of their health-related employment predicament.

- D. We recommend that considerably more thought be given to how best to incentivize the EICs to deliver the intended results. Incentives may be direct or indirect, explicit or unstated. The grantees may vary in their configuration and funding/payment strategies, so a potential research question should be to consider which methods work best. Although the COHE program focused the “best practices” discussion on what they were expecting the physicians to do, the tasks assigned to the COHE staff should also be considered “best practices” as laid out in the chronic care model: case monitoring, care coordination, information sharing, communication, and so on. To see how the COHEs have been incentivized, see pages 5-8 in [Appendix iii](#) of our proposal.
- E. The investment in Early Invention Centers represents the Federal government’s initial foray into avoiding preventable entry onto long-term public disability benefits by turning attention to the front end of medical episodes and avoiding needless work disability from the outset. Other than the COHE program in Washington State, there has been no other public sector experimentation with this idea. Therefore, the pioneering projects funded by this initial investment should realistically be viewed as feasibility projects rather than “final tests” of an established public work disability prevention model. Based on the RFI, it appears that ODEP plans to ask the implementation grantees to develop, prototype, operationalize, do feasibility testing and demonstrate the efficacy of that model under the constraints imposed by their jurisdiction and marketplace – all in one project!

As a society, it is imperative that we do find a way to bridge the upstream gaps that produce unnecessary work disability. But the essential capability to collaborate and communicate efficiently across organizational boundaries, benefit systems, and sectors of society is very weak today. That is precisely why the gaps exist.

What each implementation grantee will be setting out to do is to establish an intangible and dynamic infrastructure in society that does not exist today – that will bridge gaps in the social fabric. They will be establishing relationships and channels that enable regular information sharing and collaboration in problem-solving among parties that do not systematically interact that way today. This invisible infrastructure will establish new patterns of multi-stakeholder interactions and reinforce new practices that over time can become regular habits. Needless to say, this will involve hard work in often-unfamiliar territory for whatever party takes it on – and it will be a very valuable achievement.

We have been part of innovative development projects involving multiple stakeholders that are similar to this in many ways -- although less broad. We do not want to see the taxpayers’ money wasted on overly-rigid projects driven by premature and unrealistic demands for a simple “yes or no” answer regarding improvement of employment outcomes. In particular, the private sector knows that flexibility is a mandatory feature of early stages of development and testing. Planning is never perfect and unexpected problems always come up, sometimes profound ones.

Solving them through rapid identification, revision, and refinement cycles is an essential part of successful development.

It is essential to begin by thinking through fundamental issues as logically and as thoroughly as possible from the start, so that as many predictable difficulties as possible can be anticipated and solutions to them incorporated in the design and implementation plan. To that end, we recommend that each implementation applicant be asked to:

- Explicitly articulate to their hypotheses and working assumptions; to lay out in a simple diagram and set of sentences the conceptual causal chain of events in their model for the demonstration project that they expect will produce the desired outcome; to describe the specific things they believe are going to happen that will improve employment outcomes. The causal chain must start at the very beginning – and must include the adequacy, capability, readiness and responsiveness of the system they will have set up before the first injured/ill individual arrives. Each of the major items on the conceptual causal of events then can become the basis for both operationalization tasks and research questions. For one example, a sentence early in the causal chain might read something like this:

*“Because we have (a) identified many potential local sources of referral (b) who interact with many potential candidates for our service, and (c) have developed good working relationships with those sources (d) so they trust us, and (e) we keep them aware of us and our service through regular communications, and (f) we have provided them with referral criteria they can easily understand, and (g) have provided them with a quick and easy way to make a referral, and (h) have provided them with persuasive information about our service to give to the patient, (i) we are getting an adequate volume of appropriate referrals ..... “*

- Predict the intervals between the key events in that chain (based on administrative turnaround times, intervention durations, biological healing times, etc.).
- Build a quantitative model that predicts volumes of those key events over the project’s calendar, and have a plausible basis for those estimated volumes.
- Set up a method of testing whether each item in the chain occurred as expected and had the impact predicted.

Moreover, because this is everyone’s initial foray into this arena, the grantees should be given the freedom to innovate both at the beginning and during the project. They must be encouraged to keep thinking deeply, logically, and rigorously, and to keep sharing what they are learning “real time” during initial implementation and on-going operations with others (including other implementation grantees as well as the technical support and evaluation contractors).

During this project, some but more likely all of the grantees are going to encounter unanticipated roadblocks and obstacles or will realize they have made unrealistic assumptions or have under-resourced an area that turns out to be vitally important. Substantial difficulties should be viewed as these pioneers’ hard-won and very valuable discoveries: the practical knowledge of what doesn’t work due to front-line realities that became clear only during

implementation. As Thomas Edison said after many failed attempts -- and just before his success: "Now I know 999 ways NOT to make a light bulb." The contributions made by these pioneers should not be wasted because they each will be pointing the way forward to more efficient and effective models in the future.

The implementation contractor should be required to assess their progress against their original causal chain hypotheses and assumptions at specified milestones or by certain calendar dates. Whenever something is not going as expected, the implementation contractor should be able to get assistance from their local advisory board and/or technical assistance and evaluation contractors to analyze their situation (based on information available at that time) to figure out what is happening and identify the problem. Is it:

- In the hypotheses: flaw(s) in the conceptual chain of events or a key unrealistic assumption(s)?
- Weakness in the operational implementation that was inadequate to address a predictable obstacle(s)?
- A combination of both?

Then the local advisory board and/or technical assistance team should be expected to collaborate with the implementation team to identify what is missing or what needs to happen to correct the shortfall now to improve the process or outcomes. Those specific suggestions for improvement will be a valuable outcome of this project.

Without the freedom (and access to supplementary funding) in order to revise their models, causal chains, volume expectations, and operational procedures as the projects unfold, those encountering substantial difficulties will be doomed to fail -- and the taxpayers' investment wasted. It would be silly to spend all this money and have nothing to show for it simply because the state-based demonstration projects were so focused on suitability for rigorous evaluation that they were doomed as soon as problems or fatal flaws appeared. Again, viewing this first set of demonstration projects as prototyping and feasibility studies is probably the most accurate way to go.

At the end of the project, if the final outcome is not what was expected, the evaluation contractor must be expected to collaborate with the technical assistance contractor in a similar manner to analyze very specifically where the faults lay and what was missing that would have improved the process or outcomes.

For additional thoughts on the way to develop and launch the capability to deliver an effective early intervention service, please see pp 15 – 17 in our main proposal for a Community-Focused Health & Work Service.

*27. Do health systems and/or health care providers utilize risk predictors to target specific types of services? If so, which predictors are used and for which services? Are any employment or SAW-RTW related?*

Use of risk predictors is very common in some specialties, for example, pre-natal and cancer care, and in some populations, such as infectious disease among travelers or immigrants. Risk predictors

influence selection of diagnostic and treatment methods, intensity of follow-up monitoring, and to predict outcomes.

To our knowledge, there are no clinical risk predictors in common use for employment or SAW/RTW outcomes except among a very small number of leading edge workers' compensation and disability management operations. They use basic triage and risk assessment instruments described above. They have difficulty persuading the claims organizations to change the way they manage claims based on the risk scores, however.

Incidentally, the use of "big data" derived from medical service data to predict high medical utilization, especially hospitalization is increasingly common among health payers. And the increasingly sophisticated use of "big data" from a variety of data bases (including credit scores, driving records, criminal records, etc.) is spreading rapidly among workers' compensation claims management operations to predict the likelihood of fraud and other kinds of high cost cases.

*28. Are there evaluations designs (other than cluster-randomized) that would be more feasible (e.g. quasi-experimental?) If so how could a potential comparison group be identified?*

A randomized design would produce the most valid outcome information. If such a design is used, group randomization will likely be necessary, probably at the clinic or treatment site level.